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Certificate

This is to certify that

Mohammad Bakhriansyah

as a **Oral Presenter** at

52nd Asia-Pacific Academic Consortium for Public Health 2021 Conference
Conducted by Faculty of Public Health
University of Airlangga, on October 27-28, 2021

No. SKP 481/IAKMIPUSAT/SKP-VII/2021

Participant : 3 SKP, Speaker : 5 SKP,
Moderator : 3 SKP, Committee : 3 SKP

No. SKP 044/PPPAMI/SKP-IX/2021

Participant : 1 SKP, Speaker : 1 SKP,
Moderator : 1 SKP, Committee : 2,5 SKP

No. SKP 70/KEP/PP-PERSAKMI/C/VII/2021

Participant : 6 SKP, Speaker : 6 SKP,
Moderator : 6 SKP, Committee : 6 SKP

No. SKP 0135/DPD-JATIM/A/VII/2021

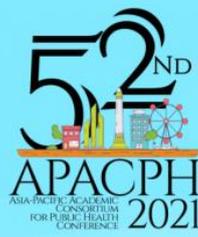
Participant : 3 SKP, Speaker : 3 SKP,
Moderator : 2 SKP, Committee : 2 SKP



Dr. Santi Martini, dr., M.Kes.
Dean Faculty of Public Health



Dr. Nyoman Anita Damayanti, drg. M.S.
Chairman of APACPH 52nd



**“ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL
REVOLUTION 4.0 AND THE COVID-19 PANDEMIC”**

PROGRAMME BOOK & ABSTRAK BOOK

October, 26th-28th 2021

FACULTY OF PUBLIC HEALTH UNIVERSITAS AIRLANGGA



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Programme Book Dan Abstract Book

52nd Asia-Pacific Academic Consortium for Public Health (APACPH) Conference
*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0 AND
THE COVID-19 PANDEMIC*

Pre-Conference : October 26, 2021

Faculty of Public Health, Airlangga University, Surabaya, Indonesia

Conference : October 27-28, 2021

Shangri-La Hotel, Surabaya, Indonesia





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Welcome Messages

52nd Asia-Pacific Academic Consortium for Public Health (APACPH) Conference
*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0 AND
THE COVID-19 PANDEMIC*

WELCOME MESSAGE FROM APACPH PRESIDENT'S



Dear colleagues and friends,
Greetings and *Selamat Datang!*

On the advent of the 52nd APACPH Conference, I am honored to welcome you as the president of this internationally recognized organization. The conference, for which we have gathered to be held for the next two days, is graciously hosted by the University of Airlangga, here in Surabaya. My heartfelt congratulations goes to the host for organising a very significant event. The theme this year is “Enhancing Public Health strategies during Industrial Revolution 4.0 and the Covid-19 Pandemic”, and we are expecting participants from a broad range of health related backgrounds. We hope this conference will promote and bring positive benefits to the locality and also to the community, not just in Surabaya but throughout the world of healthcare.

This is a meeting of hearts and minds, between physicians, public health officials, researchers, students and teachers. It’s an auspicious prospect and a great opportunity, not only to consider the evolution of public health, but to contribute to it. If expectation runs high, it is with good reasons. In the course of the last decades, APACPH has developed into an organization which has raised the bar for public health standards and community awareness worldwide. Having been launched in 1984 with only five executives, APACPH now boasts representatives from a hundred of the largest and most influential public health institutions in this part of the world.

The goal of the Consortium is to achieve the highest possible level of health of the respective populations of all the nations of the Asia-Pacific region. Ideally, through research, education, strategic actions, as well as gatherings like this - APACPH can help improve the quality of life for thousands by addressing major public health challenges throughout the Asia-Pacific region; including to face threats from the newly emerged Covid-19 pandemic. Among the many challenges, we need to make sure health to be provided to all people, regardless of their social and financial conditions.

While the goals of this organization include striving for widespread improvement in public health, APACPH itself continues to evolve; the spirit of cooperation being an integral aspect of its effectiveness. APACPH has been working hard to be an organization that helped expand communities’ knowledge in public health and through its annual conference, knowledge is shared between member countries. With that being said, the role to educate and spread the awareness of adapting the new normal is crucial. The practice of the new normal is indeed vital and timeless, and a significant factor in the evolution of public health.

My most sincere gratitude goes to all members, supporters and sponsors for all the activities that have been going on in the past, present and future. I do hope, APACPH can aim higher, particularly in this new era. I would like to appreciate every member’s effort for the prosperity of APACPH and I wish your active participation for the future of APACPH. I look forward to a successful, enjoyable meeting in this lovely setting and wish all the delegates and participants fruitful deliberations, knowledge and experience sharing. Once again, a warm welcome to you all, and thank you for participating.

Kind regards,

A handwritten signature in black ink, appearing to read 'Wah Yun Low', written over a white background.

Professor Wah Yun LOW, PhD

President, Asia Pacific Academic Consortium for Public Health (APACPH)

WELCOME MESSAGE
FROM THE RECTOR OF UNIVERSITAS AIRLANGGA



I feel so proud to welcome you all in Surabaya for attending the 52nd edition of the Asia-Pacific Academic Consortium for Public Health (APACPH) conference. It is such a tremendous recognition for Universitas Airlangga (UNAIR) to host a very prestigious international event. Since a long time ago, inequalities in many aspects of our lives have been open secret problems which are faced by many countries in the world especially in developing countries.

These problems are occurred by many factors that chain each other. For example, people who come from poverty society suffer malnutrition. To solve these problems, we need to see them holistically. In other words, trans-institutional and international efforts are needed to overcome these problems.

Universitas Airlangga as an education institution provider has a great spirit to give hand solving the problems. We tried to bring up immense awareness to our academic communities for doing research, publication and social services on the latest issue. On the other hand, we also cooperate with domestic and international organizations to defeat those problems holistically.

As we know, APACPH is an organization that focuses on health problems (APACPH is one of the international organizations that we have joined). This Conference aims to discuss the latest issue in the public health arena especially on what has worked and what are the lessons we have learned. The aim of APACPH meets our goals. Taking part in this international conference is just one of our baby steps to manifest our goals.

I hope all of you have a great time during this conference and build strong networking with the other participants.

Prof. Dr. Mohammad Nasih SE., M.T., Ak., CMA

Rector
Universitas Airlangga

WELCOME MESSAGE
FROM THE DEAN OF FACULTY OF PUBLIC HEALTH
UNIVERSITAS AIRLANGGA



It is an enormous honor for faculty of public health Universitas Airlangga to host the 52nd Conference of the Asia-Pacific Academic Consortium for Public Health (APACPH) 2020 in Surabaya. We are very glad to welcome you here in Surabaya.

This conference has been well prepared, by presenting Speakers from various countries in the Asia Pacific. This forum will discuss many aspects related to multi-disciplinary analysis in the field of public health and emphasize on preventive efforts. Conference accommodates all components, ranging from lecturers, students, government, industry and other stakeholders. This conference has been prepared with a fairly tight schedule, covering plenary sessions, several symposiums, oral and poster presentations, and photography exhibitions. The committee appreciated the participants in the form of awarding the best presenters, the best photo exhibitions and other criteria. We are hoping that this conference will gather the highest possible level of public health information which can benefit not only the Asia-Pacific nations but also the international arena which can learn from this event. Dissemination of knowledge of current emerging and re-emerging public health issues will be reorganized by professionals in their field of expertise to benefit all participating guests.

Dr. Santi Martini, dr., M.Kes

Dean Faculty of Public Health

Universitas Airlangga,

Surabaya, Indonesia.

**WELCOME MESSAGE
FROM THE STEERING COMMITTEE**

52nd of the Asia-Pacific Academic Consortium for Public Health (APACPH)



Greetings from Public Health Faculty of Universitas Airlangga.

It is a great honor to host the 2021 Asia-Pacific Academic Consortium for Public Health (APACPH) 52nd Conference, especially during this difficult period.

We are very glad to welcome you here in Surabaya.

This conference has been well prepared, by presenting Speakers from various countries in the Asia Pacific. This forum will discuss many aspects related to multi-disciplinary analysis in the field of public health and emphasize on preventive efforts.

Due to the unforeseen situation that occurred owing to the COVID-19 Pandemic, the conference is arranged via virtual and offline platforms. It accommodates all components, from lecturers, students, government, industry, and other stakeholders. It has been prepared with a fairly tight schedule, including plenary sessions, several symposiums, oral and poster presentations, and a photography exhibition.

The committee appreciates the participants in the form of awarding the best presenter, the best photo exhibition, and other criteria. We hope that this conference will gather the highest possible public health information that can benefit not only the Asia-Pacific countries but also the international arena that can learn from this event. Dissemination of knowledge about emerging and re-emerging public health issues will now be reorganized by professionals in their fields of expertise to benefit all participating guests.

Prof. Dr. Tri Martiana, dr.,M.S.

Steering Committee,

52nd APACPH Conference.

WELCOME MESSAGE

FROM THE CHAIRMAN OF ORGANIZING COMMITTEE

52nd of the Asia-Pacific Academic Consortium for Public Health (APACPH)



As the chair of the committee, I am delighted to welcome you to one of the most prestigious conferences of the Asia-Pacific Region. Resembling to the previous conference, this one will be attended by 95 universities from 19 countries in the Asia Pacific. Therefore, it can be the best forum for academicians, researchers, students, practitioners, and lecturers to share experiences and knowledge to find solutions to public health problems. This year's theme is "Improving Public Health Strategies During the Industrial Revolution 4.0 and the COVID-19 Pandemic".

The past year has been a tough one for governments and healthcare practitioners all over the world due to the COVID-19 pandemic. We are taking up this issue for the conference because the world is still trying to solve this problem. More than one hundred million people have been exposed to this virus and more than two million have died. As part of a health institution, we are committed to taking baby steps in overcoming this problem by providing various topics related to the COVID-19 to discuss.

Regarding our government policy and the Covid-19 protocol, only 400 participants are allowed to attend this conference in person. We expect 800 attendees will join via the virtual platform. Hopefully, all participants get fruitful results from the discussions during this conference and find solutions to overcome the problems.

I would also like to express my deep gratitude to the APACPH organization for entrusting us to host this conference. Finally, a big thank you to all the organizers who have given their best efforts to make this conference a success.

Dr. Nyoman Anita Damayanti, drg., MS.

Chairman Of Organizing Committee,

52nd APACPH Conference.



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52nd Asia-Pacific Academic Consortium for Public Health (APACPH) Conference
*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0 AND
THE COVID-19 PANDEMIC*

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52nd APACPH
ORGANIZING COMMITTEE

52nd Asia-Pacific Academic Consortium for Public Health (APACPH) Conference
*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0 AND
THE COVID-19 PANDEMIC*

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APACPH Award Laurates

52nd Asia-Pacific Academic Consortium for Public Health (APACPH) Conference
*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0 AND
THE COVID-19 PANDEMIC*



APACPH AWARDS

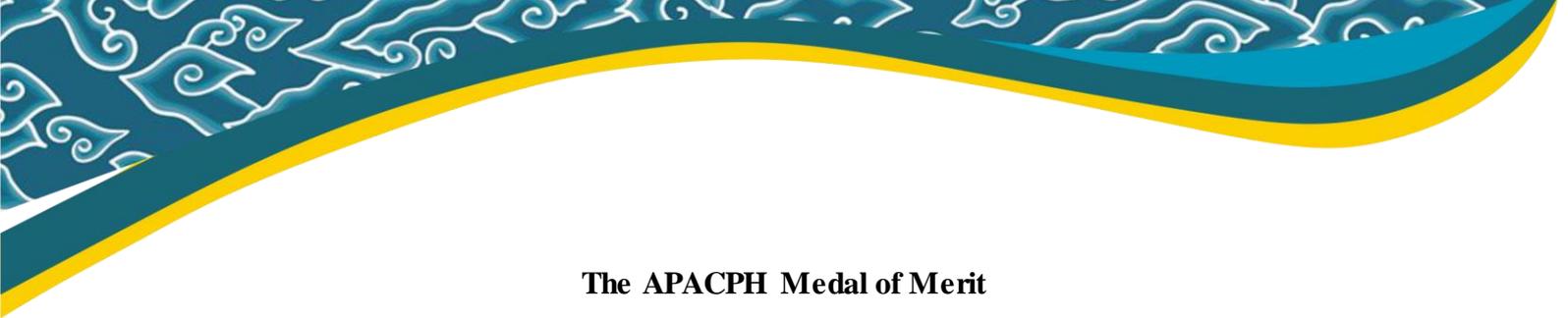
The APACPH Excellence in Leadership Medallion

The APACPH Excellence in Leadership Medallion recognizes leaders within legislative bodies whose actions have significantly influenced the health of the public.

APACPH Excellence in Leadership Medallion Award :

1. Dr. (HC). Tri Rismaharini, Ir. MT (Mayor of Surabaya in 2011-2020)
2. Prof. Dr. Mohammad Nasih, SE., MT., Ak. (Rector of Universitas Airlangga)





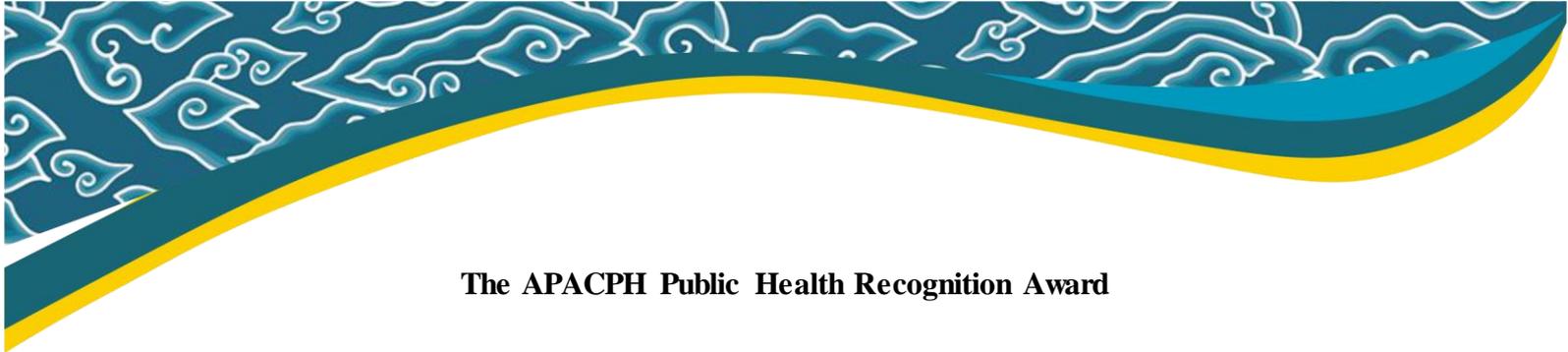
The APACPH Medal of Merit

The Medal of Merit recognizes individuals who have performed outstanding service consistent with the APACPH mission of enhancing professional education for public health.

APACPH Medal of Merit Award :

1. Prof. Rika Subarniati, dr., S.KM. (Universitas Airlangga)
2. Prof. dr. Roziani Nasution, S.KM. (University of North Sumatera)
3. Prof. Dr. Andi Zulkifli, drg., M.Kes (Hasanudin University)
4. Dr. dr. Bagoes Widjanarko, MPH., MA. (Diponegoro University)





The APACPH Public Health Recognition Award

The APACPH Recognition Award acknowledges the contributions of special individuals who have served as role models for other health professionals and have gone on with their careers to serve humankind with distinction in the field of public health.

APACPH Public Health Recognition Award :

1. Alissa Qotrunnada Munawaroh Known as Alissa Wahid (National Coordinator GUSDURian Network Indonesia)
2. Dr. Agus Harianto, Sp.B (Airlangga Floating Hospital – Alumni of Universitas Airlangga)
3. Prof Bruce Maycock (Secretary-General of APACPH)



The Prof. Kazue K. McLaren Leadership Achievement Award

The Prof. Kazue K. McLaren Leadership Achievement Award is presented to individuals who have demonstrated outstanding leadership in promoting the quality of life and health of the peoples in communities of their nations or region.

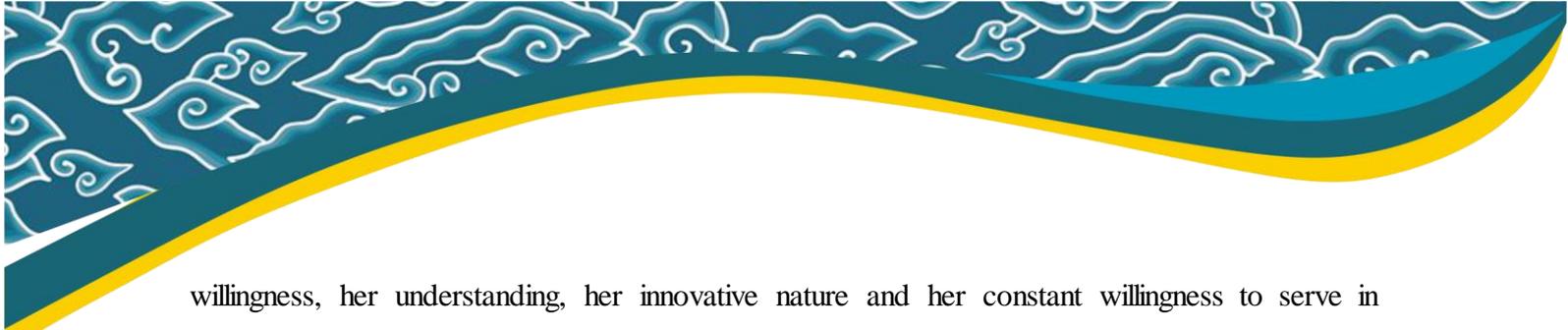
An important aspect of their efforts has been to promote the goals of Child Survival and Health for All movements and ensuring the distribution of health services reach the unreached, stimulating intersectional coordination and health partnership, and importing academic quality in schools of public health and departments of community medicine. More so, their work reflects the spirit and philosophy of the person in whose name this award was established.

The Prof. K. McLaren Award of the Asia-Pacific Academic Consortium for Public Health was created to honour the work of the late Prof. Kazue Kimura McLaren, who made significant contributions to the advancement of public health throughout her 46-year record of service as a distinguished member of the Asia-Pacific public health community.

For 30 years, Professor McLaren served as a member of the Hawaii State Department of Health, rising to the position of Chief of Public Health Nursing. Having completed that period of service, she joined the School of Public Health, University of Hawaii, in 1975 as a member of the International Health faculty where she developed innovative teaching programs in Hawaii, Asia, and the Pacific Basin, with a focus on public health management, primary health care and health leadership.

In 1979 she assumed responsibilities for initiating a Special Educational Opportunity Program at the School to provide access to graduate training in public health for underserved ethnic populations. Herself a member of a minority, as a Japanese American, she had a spirit of personal understanding in instituting programs, which assisted hundreds of people from Micronesia, the Native American Indian and Alaska Native Communities, Native Hawaiians and other minorities to achieve their graduate credentials in public health.

Professor McLaren was one of the founders of the Asia-Pacific Academic Consortium for Public Health. She served as its first Program Officer on the University of Hawaii faculty to direct, in concert with the Secretary-General of the Consortium, the operational phases of this union of public health faculties across Asia and the Pacific. Her dedication, spirit of



willingness, her understanding, her innovative nature and her constant willingness to serve in extraordinary ways endeared her to all members of her chosen profession. Her spirit continues to energise the Consortium in carrying out its mission to enhance professional education for public health.

APACPH The Professor Kazue K. McLaren Leadership Achievement Award :

Prof. Hasbullah Thabrany, MPH. Dr. PH (University of Indonesia)





General Information

52nd Asia-Pacific Academic Consortium for Public Health (APACPH) Conference
*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0 AND
THE COVID-19 PANDEMIC*



52nd APACPH CONFERENCE 2021

BACKGROUND

The APACPH Conference is an Annual International Conference initiated by the Asia-Pacific Academic Consortium for Public Health (APACPH) to accentuate public health concerns and share innovation and updated public health knowledge and related disciplines.

APACPH members consist of around 100 universities throughout the Asia-Pacific region which are devoted to solve public health problems through academic training, research and community services. Rapid growth of non-communicable diseases, pandemic preparedness, and global health security, including the threat of antimicrobial resistance are some of our latest issues. APACPH strives to solve these issues by developing health policies and laws, optimizing global health finance and a political commitment to make health a priority.

Therefore in the 52nd APACPH Conference 2021, we focus on Enhancing Public Health Strategies during Revolution Industry 4.0 and Pandemic of COVID-19. We expect around 1200 participants to engage with the conference which is hosted by Universitas Airlangga at Shangri-La Hotel Surabaya. Those participants include researchers, decision makers, health professionals, students and lecturers.

The 52nd APACPH will be the first to select a paper to publish in Scopus-indexed journals. Therefore this event is going to be a big opportunity in Indonesia public health institutions to join forces making the event successful.



HOST COUNTRY

APACPH Committee has chosen the ethic and shimmering island of Java to commemorate its 52nd conference. This conference has always served as a pulpit for all the public health personnel from Asia Pacific and global arena to discuss the challenges and contemporary researchers in public health. It would be our honor to meet you at Universitas Airlangga and conference venue; The Shangri-La Hotel as a presenter/ participant /delegate and hope you'll treasure your visit to "Land Below the Winds".

At the most eastern end of the photogenic island of Java lies the province of East Java . It's famed as the secluded paradise of Australian surfers, some stunning beaches lies around the splendid National parks, and the unique crater of Mt. Ijen, delightful sunrise view, national parade, etc. Another popular destination in East Java is the apple-growing city of Malang. With its cool climate, mountain scenery and refreshing breezes.

SURABAYA CITY MAP



Source: <https://www.eastjava.com/map/eastjava.html>

The City of Kota Surabaya



Surabaya is the capital city of East Java Province,- the second-largest city in Indonesia after Jakarta. It is home to the longest bridge ever built in the country: the **Suramadu Bridge**. Suramadu spans the distance between the city of Java and adjoining Madura island. More importantly for tourists, Surabaya has some of the most delicious cuisine, historical buildings, and places. Surabaya also Called the City of Heroes since Surabaya there was the biggest war against the Dutch colony. Getting it is easy. Fastest take the plane, which takes about an hour from Jakarta. The executive train is your second alternative. It is comfy but of course takes longer, or else travel by car or overland by bus. If you take the long journey it will give you the advantage to take in the rhapsody of nature that unfolds its most scenic sides through your window.

CONFERENCE VENUE

Shangri-La Hotel, Surabaya

A refined oasis of quietude right in the heart of the city, Shangri-La Surabaya presents a traditional sense of luxury with an endless Javanese style and warm Indonesian hospitality. Featuring 380 elegant guest rooms and suites with stylish ambiance in its unique contemporary, yet culturally relevant room décor, as well as in the exquisite dining venues. From business to leisure, Shangri-La Surabaya is the ideal home away from home.



PRE-CONFERENCE VENUE

Airlangga University



Universitas Airlangga is one of the most famous and high qualified state universities in Indonesia. It has a strong commitment to creating compatible and human resources which meet the university's take line "excellent with Morality". Universitas Airlangga has a deep attention to improving the student's skill and knowledge to achieve "World Class University" by making some research, inventions, social services, etc.



Management Office



Ulul Azmi Mosque



Unair's Hospital

SCHEDULE OF SCIENTIFIC PROGRAM

DAY	DATE	SCHEDULE	KIND OF ACTIVITIES
DAY-2	October, 25 th 2021 11.00 – 12.00 am	Pre Conference	1. International Cyber University of Health
DAY-2	October, 25 th 2021 01.00 pm - 04.00 pm		2. Executive Council Meeting
DAY-1	26 th October 2021 08.00-12.00 am		3. General Assembly
	26 th October 2021 02.00 – 05.00 pm	4. Dean Meeting	
	26 th October 2021	Workshop	5. Workshop
WORKSHOP RUNDOWN			
No.	Topic		
1	<p>Law and Ethics in Public Health</p> <p>Speaker :</p> <ol style="list-style-type: none"> 1. Prof. So Yoon Kim (Yonsei University) 2. Prof. Sunjoo Kang (Yonsei University) 3. Prof. Donghyun Lee (Yonsei University) <p>Time : 1.00-4.00 pm</p> <p>Venue : online zoom</p>		

<p>2</p>	<p>Scientific Writing and Publication</p> <p>Speaker :</p> <ol style="list-style-type: none"> 1. Prof. Dr. Colin Binns (Curtin University-Australia, APJPH Editor-in Chief) 2. Prof. Dr. Low Wah Yun (University of Malaya-Malaysia, APJPH Managing Editor) <p>Time : 2.00-5.00 pm</p> <p>Venue : online zoom</p>
<p>3</p>	<p>Health Promotion and Non Communicable Disease Prevention in The Asia-Pacific Region Forum</p> <p>Speaker :</p> <ol style="list-style-type: none"> 1. Dr. Kung-Yee Liang (President, National Health Research Institute, Taiwan) 2. Dr. Masamine Jimba (APACPH Immediate Past President, Director of The Department of Community and Global Health at The University of Tokyo) 3. Dr. Kee Seng Chia (APACPH Former First Vice-President, Professor and Founding Dean of the Saw Swee Hock School of Public Health National University of Singapore) 4. Dr. Chung-Yi Cheng (Director, Nephrology Division Taipei Municipal Wanfang Hospital) <p>Time : 2.00-5.00 pm</p> <p>Venue : online zoom</p>

4	<p>Early Career Network</p> <p>Speaker : Prof. Indika Karunathilake (Vice Chief APACPH, Professor in Medical Education, Faculty of Medicine, University of Colombo Sri Lanka)</p> <p>Time : 2.00-5.00 pm</p> <p>Venue : online zoom</p>
5	<p>Genomics, Bioinformatics, and Evidence Based Practice</p> <p>Speaker :</p> <ol style="list-style-type: none"> 1. Dr. Beben Benyamin (Senior Lecturer in Biostatistics, Australian Centre for Precision Health University of South Australia) 2. Prof. Dr. Cita Rosita Sigit Prakoeswa, dr., Sp.KK (K), FINS DV(Faculty of Medicine Universitas Airlangga) <p>Time : 8.00 am - 12.00 pm</p> <p>Venue : online zoom</p>
6	<p>Diet Study</p> <p>Speaker : Prof. Dr. Hazreen Abdul Majid (University of Malaya-Malaysia)</p> <p>Time : 9.00 am - 12.00 pm</p> <p>Venue : online zoom</p>
CONFERENCE (DAY 1)	
<p>Date : Wednesday, 27th October 2021</p> <p>Venue : Shangri-La Hotel, Surabaya</p>	
Time	Topic
07.30-08.30 am	Registration

08.30-09.00 am	Opening Ceremony
09.00-10.00 am	Keynote speeches Theme: “Healthcare Reform after COVID 19” Speakers: <ol style="list-style-type: none"> 1. Ir. Budi Gunadi Sadikin, CHFC, CLU. (Ministry of Health Republic of Indonesia*) 2. Dra. Hj. Khofifah Indar Parawansa, M.Si. (Governor of East Java, Indonesia*)
10.00-10.30 am	APACPH Awarding
10.30 – 11.00 am	Coffee Break + Press Conference + Poster Exhibition + Photo Exhibition
11.00 am -12.00 pm	Plenary Session 1 Theme: “The impact of COVID-19 toward the Fourth Industrial Revolution in Public Health” <ol style="list-style-type: none"> 1. Health Workforce Planning and Management in The Era of Fourth Industrial Revolution. Speaker: Prof. Cyrus Y. Engineer (John Hopkins University, USA) 2. Using Big Data and Machine Learning for Modelling Global Burden of Diseases. Speaker: Prof. Kuntoro (Universitas Airlangga, Indonesia)
12.00-12.30 pm	Walter Patrick Memorial Lecture : Speakers : Prof. Tomiko Hokama (University of The Ryukyus, Japan)
12.30-1.30 pm	Lunch (APACPH Editorial Board Meeting) Speakers : Prof. Collin Bin (Curtin University- Australia, APJPH Editor-in Chief)
1.30-3.00 pm	Oral Presentation 1 (5 room @ 10 minutes per room 9 presenter and 15 virtual room)
3.00-3.30 pm	Coffee Break + Poster Exhibition + Photo Exhibition

3.30-5.00 pm

Parallel Symposium 1

Sub-theme: “Digital Health – Solution in Improving Quality of Health Services in the Era of Fourth Industrial Revolution”

1. Reaching Small Island and Remote Communities through Digital Health.
Speaker: Prof. dr. Indika Karunathilake (University of Colombo, Srilanka)
2. Application of Artificial Intelligence for Health and Healthcare Services.
Speaker: Prof. Dr-Ing. Eko Supriyanto (Universiti Teknologi Malaysia, Malaysia)
3. Using Digital Technology in Daily Life to Improve Community Health.
Speaker: Prof. Dr. Retna Apsari, M.Si. (Universitas Airlangga, Indonesia)

Parallel Symposium 2

Sub-theme: “Challenges and Opportunities for Universal Health Coverage in The Era of Fourth Industrial Revolution”

1. Lesson Learned from Universal Health Coverage in Indonesia to Improve Healthcare System.
Speaker: Prof. Ali Gufon, Director of BPJS (National Health Insurance, Indonesia)
2. Use of Economic Evaluation for Universal Coverage to Improve Wellness.
Speaker: Prof. Maznah Dahlui (University of Malaya, Malaysia)
3. The Impact of Universal Health Coverage to Improve Wellness.
Speaker: Prof. Budi Hidayat, PhD (University of Indonesia, Indonesia)

Parallel Symposium 3

Sub-theme: “Transforming Gadget Addiction to Achieve Healthy Society and Nation Prosperity”

1. Promoting Utilization of Personal Health Passbook Leading to Effective Self-health Management.
Speaker: Prof. Chung-Yi Li (NCKU Taiwan)

2. Intelligence for Public Health during COVID-19 Pandemic : Australia's Experience
Speaker: Prof. Philip Baker (QUT, Australia)
3. SDG's on Ocean and Human Health and Its Implications for the Region in the Era of The Fourth Industrial Revolution.
Speaker: Prof. Bruce Maycock (University of Exeter, United Kindom)

**Parallel Symposium 4
(1.30-3.00 pm)**

Sub-theme: Interprofessional Collaboration Health Workers/Practitioner During and Post COVID 19 Pandemic in the Era of Fourth Industrial Revolution (PERSI)

1. Challenges to the health industry: current perspectives and strategic future after the COVID-19 outbreak
Speaker : dr. Dodo Anondo, M.PH (Chairman of PERSI East Java, Indonesia.
2. The immediate and subsequent effects of public health interventions for COVID-19 on the health industry
Speaker : Dr. dr. Widodo Jatim Pudjirahardjo, MS., M.PH. (Universitas Airlangga, Indonesia)

Parallel Symposium 5

Sub-theme: Learning in Era 4.0 (AIPTKMI)

1. Curriculum Redesign of the Undergraduate Public Health Education Program
Speaker : Dr. Besral (Chairman of the AIPTKMI Education and Training Division)
2. Adaption and Innovation on Public Health Education during distruption era in Indonesia : Indonesia, Taiwan, Australia

CONFERENCE (DAY-2)

Date : Thursday, 28th October 2021
Venue : Shangri-La Hotel, Surabaya

07.30-08.00 am	Registration
08.00-09.30 am	<p>Parallel Symposium 6</p> <p>Sub-theme: “E- Public Health for Detecting, Preventing and Responding Public Health Challenges”</p> <ol style="list-style-type: none"> 1. Establishing Laboratory information systems and managing data for priority diseases testing and beyond in Indonesia Speaker : Reshma Kakkar, MM. (Association of Public Health Laboratories) 2. Global Health Security Agenda in Pandemic COVID-19 Issue Speaker : Prof. Dr. Budi Haryanto, MSPH, MSc (University of Indonesia, Indonesia) 3. E- Public Health for Detecting, Preventing and Responding Diet Related Non- Communicable Diseases Speaker : Prof Sri Sumarmi (Universitas Airlangga, Indonesia)
	<p>Parallel Symposium 7</p> <p>Sub-theme: “Implementation E-Public Health in supporting Global Health Security”</p> <ol style="list-style-type: none"> 1. Health Information System for Supporting Global Health Security Speaker : Dr. Santi Martini (Universitas Airlangga, Indonesia) 2. Digital Technologies for Driving Inclusive and Sustainable Growth to Achieve the SDG’S Speaker : Prof. Masamine Jimba, PhD (University of Tokyo, Japan) 3. Society 5.0 in the Fourth Industrial Revolution Era in Supporting Global Health Security Speaker : Tara Singh Bam (Union Asia, Singapore)

Parallel Symposium 8

Sub-theme: Assuring Reproductive Health During Pandemic COVID-19

(IIK STRADA Kediri)

1. HIV-AIDS prevention program among women in pandemic era

Speaker : Ardi Bastian, S.KM., M.M., M.Kes (IIK STRADA)

2. Continuing essential sexual & reproductive health services for preventing maternal & neonatal mortality during covid-19 pandemic

Speaker : dr. Agustin Kusumayati, M.Sc., Ph.D (Chairman of the AIPTKMI)

3. Protecting Adolescent Reproductive Health & Eradicate Sexual Violence during COVID-19 pandemic

Speaker : Putri Eka Sejati, SST.,M.Kes (IIK STRADA)

Parallel Symposium 9 (AIPTKMI)

Sub-theme: Learning in Era 4.0

1. Study Materials in Epidemiology, Environmental Health, Health Policy Administration, Reproductive Health
2. Study Materials in the Fields of Biostatistics, Occupational Health and Safety, Health Promotion and Behavioral Sciences, Nutrition

	<p>Parallel Symposium 10 (PERSI)</p> <p>Sub-theme : Interprofessional Collaboration Health Workers/Practitioner During and Post COVID 19 Pandemic in the Era of Fourth Industrial Revolution (PERSI)</p> <ol style="list-style-type: none"> Hospital emergency management plan during the COVID-19 epidemic Speaker : dr. Hendro Soelistijono, MM.,M.Kes (Director of RSUD Soebandi Jember) Informed consent during covid 19 pandemic from human rights perspective in the era of Fourth Industrial Revolution. Speaker : DR. dr Ade Armada S, SH., M.KP (Secretary of PDUI East Java, Indonesia)
	<p>Parallel Symposium 11 (Universitas Indonesia)</p> <p>Sub-theme : Mental Health and Disability</p> <ol style="list-style-type: none"> Mental Health in Public Health Perspective Speaker : Professor Hans Pols (The University of Sydney) Disability Between Hopes and Realities Speaker : M. Joni Yuliyanto, S.Pd, MA, MPA (SIGAB) Designing Inclusive Learning in Higher Education : Universitas Indonesia's Experience Speaker : Dr. Dra. Rita Damayanti, MSPH (Universitas Indonesia)
09.30 - 10.00 am	Coffee Break + Poster Exhibition + Photo Exhibition
10.00 am - 12.00 pm	Oral Presentation 1 (5 room @ 10 menit per room 9 presenter and 15 virtual room)

12.00-1.00 pm	Lunch
1.00-1.30 pm	<p>Keynote Speech: Themes : Vaccination and New Strain of SARS CoV-2 Speaker : Dr. Shalala Ahmadova (Indonesia WHO Representative)</p>
1.30-2.00 pm	YITA & YIA Awarding
2.00-3.30 pm	<p>Plenary Session 2 Sub-Theme: “University and Leadership Role in an Artificial Intelligence Driven World during COVID-19 Pandemic”</p> <ol style="list-style-type: none"> View on COVID-19 Vaccine Acceptability: Result from an International. Speaker: Prof. Wah Yun Low (University of Malaya, Malaysia) University Support to The Development of COVID-19 Vaccine in Indonesia (Vaksin Merah Putih). Speaker: Prof. Dr. M. Nasih (Rector of Airlangga University, Indonesia) Role of Vaccine in the Past, Recent and Future of Pandemic/ Epidemic Speaker : Dr. Soetrisno, dr., Sp.OG (K) (Chairman of IDI East Java, Indonesia)
3.30-4.00 pm	Coffee Break + Poster Exhibition + Photo Exhibition
4.00-4.30 pm	<p>Award presentation :</p> <ol style="list-style-type: none"> Photo competition Oral presentation Poster presentation
4.30-5.00 pm	<p>Closing remark</p> <p>53rd APACPH Conference host presentation</p>

APACPH SPEAKERS

WORKSHOP SPEAKERS

1. Theme : Law and Ethics in Public Health

Speaker : Prof. So Yoon Kim (Yongsei University) + Speaker from HAKLI



So Yoon Kim is Professor and Director of Medical Law and Ethics, Division of Medical Humanities and Society, College of Medicine at Yonsei University. She is also Vice Director of Asian Institute for Bioethics and Health Law, which is designated WHO Collaborating Centre for Health Law and Bioethics since 2014. Her research areas include medical law, medical ethics, advanced biotechnology and clinical ethics, medical dispute, patient safety, international health law, elderly health, and mental health. Especially, since 2011, she has contributed in advanced biotechnology and bioethics area such as ‘Center for ELSI (Ethical, Legal, and Social Implications) Research on Genomics’ and ‘Research on Social & Ethical Basis for Precision Medicine’ as Principal Investigator.

2. Theme : Scientific Writing and Publication

Speaker : Prof. Colin Binn (Chief Editor Journal APACPH)



Emeritus Professor at Curtin School of Population Health, Faculty of Health Sciences, **Curtin University of Technology** Australia.

3. Theme : Health Promotion

Speaker : Prof. Betty Chiu (Taipei Medical University)



Prof. Betty Chiu has been devoting herself in establishing an academic network for cooperation on the international health policy. In order to achieve the above purpose, she has actively participated in and co-organized several bilateral or multilateral conferences with Asian-Pacific or European countries. The most significant accomplishment in 2006 was to assist Department of Health (DOH) to hold international Conference on Health Security: New Challenges & Policy Implications in New Deli, India.

4. Theme : Early Career Network

Speaker : Prof. Indika Karunathilake (Vice Chief APACPH)



Indika Karunathilake is the Head of the Department of Medical Education, Faculty of Medicine, University of Colombo, Sri Lanka. He also serves as the Head of the WHO Collaborating Centre for Medical Education based at the Faculty of Medicine. He has conducted extensive research and authored many publications in medical education and public health with over 50 publications in peer reviewed international journals and over 150 research presentations at international and national level. He is a recipient of President's Award for Scientific Publications (highest national level research award) for Scientific Publications. Prof. Indika Karunathilake has been a resource person in Medical Education for many national, regional and international forums and serves as the editor-in-Chief of the South East Asian Journal of Medical Education (SEAJME).

5. Theme : Genomic, Bioinformatics, and Good Clinical Practice (SKP from IDI)

Speakers 1 : Dr. Beben Benyamin (University of South Australia)



Dr Beben Benyamin is Senior Lecturer in Biostatistics at the Allied Health and Human Performance Unit and co-leader of genetics and genomics theme at the Australian Centre for Precision Health, University of South Australia. He is also a Senior Research Fellow at the South Australian Health and Medical Research Institute. He uses statistics applied to large-scale ‘omics’ data to dissect the genetic mechanisms underlying human complex traits and diseases.

He graduated from Bogor Agricultural University (IPB) Indonesia (BSc, 2000), University of Sydney, Australia (M.Agr, 2002) and University of Edinburgh, UK (PhD, 2007). He did his postdoctoral training at the Genetic Epidemiology Group, QIMR Berghofer Medical Research Institute (2007-2011). Prior to joining University of South Australia, he worked as Research Fellow at the Program in Complex Trait Genomics, the University of Queensland (2012-2017). He was an NHMRC Peter Doherty Training Fellow (2009-2012) and an NHMRC R.D. Wright Career Development Fellow (2015-2018). Some of his research has been published in Nature, Nature Genetics and Nature Communications.

His current interests are in the application of statistical genomic methods to complex diseases, such as motor neuron disease and schizophrenia. He is also interested in trans-ethnic genomic analyses to dissect the transferability of genomic findings in European samples on other populations, such as Asians. He also teaches biostatistics, epidemiology, public health, and research methods.

Speaker 2 : Prof. Cita Rosita (Universitas Airlangga)



Prof. Cita Rosita Sigit Prakoeswa is a senior dermatologist who has been in her field for decades. She graduated from Faculty of Medicine, Airlangga University in 1992 and completed her specialist degree in dermatology in 2001. She then got her doctoral degree from Airlangga University as well in 2008 and became a professor in 2018.

She dedicates her life in the field of leprosy and is very concerned in eradicating the stigma of leprosy in Indonesia. She is always at the forefront of leading leprosy researches in Indonesia, and a leader in the development of leprosy researches and treatment in Indonesia. She also has repeatedly been invited to be a speaker at dermatology symposiums, both nationally and internationally.

Prof. Cita Rosita Sigit Prakoeswa currently serves as the director of education and research of Dr. Soetomo General Academic Hospital. In her leadership, she successfully managed the largest hospital in East Java which contained 1500 beds and 1700 residents in it.

In recent years, especially in the current COVID-19 pandemic, she has initiated many researches and innovations in an effort to eliminate the COVID-19 pandemic that is occurring in Indonesia. She is also being requested in the team of experts in several task forces related to COVID-19 established by the Indonesian government.

Finally, Prof. Cita Rosita Sigit Prakoeswa is a role model who provides an example for Indonesian women, especially female doctors in Indonesia, to be able to progress and develop continuously in their careers and personal life as a mother.

6. Theme : Diet Study (SKP from Persagi)

Speaker : Prof. Hazreen Abdul Majid (University of Malaya)



Hazreen Abdul Majid is an Associate Professor in the Department of Social and Preventive Medicine, University of Malaya. He obtained his PhD from King's College London (2010). As a trained dietitian, his doctoral dissertation had made some scientific contributions to understanding the mechanisms of prebiotics in reducing diarrhoea for intensive care unit patients receiving enteral nutrition. This ongoing work has been extended to the usage of both pre and probiotics in intensive care units. In addition to some clinical work and research, he had experience in developing collaborative partnerships at the local and state levels for nationally and internationally funded cohort and community-based studies. He led several randomised control trials pertaining prebiotics and gut microbiome and also the first adolescent cohort study in Malaysia. Currently, he is the Head, Centre for Population Health, Department of Social and Preventive Medicine, Faculty of Medicine, University of Malaya. He is an adjunct Professor for the Universitas Airlangga. He is one of the recipients of the Newton Ungku Omar (Medical Research Council UK and Academy Science of Malaysia) award, Nutricia Research Grant, Friesland Campina collaborative grant and World Obesity Foundation travel grant. He is a member of numerous scientific and professional associations with research interest including prebiotics and probiotics in clinical nutrition, adolescent cohort and public health nutrition. He had published more than 80 original articles, several chapters in books, chief editor for the breast cancer survivors' cookbook and more than 50 congress abstracts. He is the current Vice President for the Malaysian Dietitians' Association and the Fellow for MDA. He is also an Associate Editor for Clinical Nutrition ESPEN journal, Associate editor for APJPH journal and a reviewer for over 10 peer-reviewed journals. He is a member of the International Clinical Nutrition section ASPEN (ICNS). He is passionate in helping the community, school children in achieving healthy eating.

KEYNOTE SPEECHES

1. Themes : Healthcare Reforms after COVID-19

Speaker: Ir. Budi Gunadi Sadikin, CHFC, CLU. (Ministry of Health Republic of Indonesia).



Ir. Budi Gunadi Sadikin, CHFC, CLU is Indonesia's Minister of Health from 2020. He served as President Director of PT Inalum (Persero), then in 2019, he was appointed Deputy Minister of State-Owned Enterprises (BUMN) by the President. Ir. Budi Gunadi Sadikin, CHFC, CLU is assigned to lead collaboration between elements of the Indonesian Nation so that they can quickly get out of the Covid-19 pandemic. In addition, the ministry is tasked with preparing the quality of primary health services, strengthening the domestic pharmaceutical and medical device industry, increasing health promotive-preventive efforts, reducing the level of infectious and other endemic diseases and expanding the coverage of national health social security.

2. **Dra. Hj. Khofifah Indar Parawansa, M.Si (Governor of East Java, Indonesia)**



Dra. Hj. Khofifah Indar Parawansa, M.Sc was born on may, 19th 1965. Hj. Khofifah is the Governor of East Java who has served since February 2019. She serves as the 27th Indonesian Minister of Social Affairs who served from 2014 to 2018. Entering politics led her as a member of the council to become a minister twice in different presidents.

3. **Themes : Vaccination and New Strain of SARS CoV-2**
Speaker : Dr. Shalala Ahmadova – Indonesia WHO Representative



- Medical Officer for Communicable Diseases, and Incident Manager COVID-19 WHO Indonesia office– from May 2019 to up to now
- Medical Officer for MDR-TB, WHO Western Pacific Regional Office – 2015 - 2019
- Medical Officer for TB, WHO Papua New Guinea office – 2011-2011
- Medical Officer for TB, WHO Mozambique office – 2008-2011
- International Committee of the Red Cross, Baku, Azerbaijan – 1998 -2008 (various positions including the Head of Health in Prisons program)

PLENARY SESSION 1: The impact of COVID -19 toward the Fourth Industrial Revolution in Public Health



Prof. Cyrus Y. Engineer (John Hopkins University, USA)

Prof. Cyrus Y. Engineer is a practice leader in health sector performance management, including quality, patient safety, and project management.

Research interests: monitoring, evaluation, quality management, quality improvement, patient safety, impact evaluation and hospital management.

Education:

- DrPH - Johns Hopkins Bloomberg School of Public Health (2007)
- MHS - Johns Hopkins Bloomberg School of Public Health (2003)



Prof. Kuntoro (University of Airlangga, Indonesia)

Prof. Kuntoro was born in Tulungagung, August 8, 1948 and holds a bachelor's degree which he obtained from the Faculty of Medicine, Airlangga University (1988), and his master's and doctoral education at the University of Pittsburgh.

He is an educator at FKM UNAIR until now, and his busy life apart from teaching is publishing several works and is also active in conducting research. Besides that, he is also actively involved in various activities such as health organizations

SYMPOSIUM 1: Digital Health – Solution in Improving Quality of Health Services in the Era of Fourth Industrial Revolution



Prof. dr. Indika Karunathilake (University of Colombo, Srilanka)

Indika Karunathilake is the Head of the Department of Medical Education, Faculty of Medicine, University of Colombo, Sri Lanka. He also serves as the Head of the WHO Collaborating Centre for Medical Education based at the Faculty of Medicine. He has conducted extensive research and authored many publications in medical education and public health with over 50 publications in peer-reviewed international journals and over 150 research presentations at the international and national levels. He is a recipient of the President's Award for Scientific Publications (highest national level research award) for Scientific Publications. Prof. Indika Karunathilake has been a resource person in Medical Education for many national, regional and international forums and serves as the editor-in-Chief of the South East Asian Journal of Medical Education (SEAJME).



Prof. Dr-Ing. Eko Supriyanto
(Universiti Teknologi Malaysia)

Eko Supriyanto obtained his doctorate from the University of Federal Armed Forces Germany. He is full professor at school of Biomedical Engineering & Health Sciences, Universiti Teknologi Malaysia (UTM) and adjunct professor at Institute Biomedical Engineering & Informatics, Ilmenau University Of Technology, Germany.

He is currently the general chairman of asean network on technology and policy for covid-19 risk management as well as the president of indonesian association of hospital engineering. Prof. Eko has published over 350 papers in international journals and proceedings, and registered more than 60 intellectual property rights. Additionally, he has received over 35 international research awards. He is a well-renowned keynote and invited speaker who has been invited to events in over 30 countries worldwide.

Prof. eko is an international and industrial expert on the application of technology i.r. 4.0 in healthcare and corporate management. His experiences also include working as a consultant for more than 30 hospitals, ministry of health indonesia & malaysia as well as world health organization.



Prof. Dr. Retna Apsari, M.Si,
(Universitas Airlangga, Indonesia)

Prof. Dr. Retna Apsari, M.Si, is a Professor at the Faculty of Science and Technology, Universitas Airlangga. Prof. Retno Apsari is currently Deputy Dean III of the Faculty of Advanced and Multidisciplinary Technology.

Symposium 2 : Challenges and Opportunities for Universal Health Coverage in The Era of Fourth Industrial Revolution



Prof. Ali Ghufon,
Director of BPJS (National Health Insurance, Indonesia)

Prof. dr. Ali Ghufon Mukti, M.Sc., Ph.D is the president director of BPJS (National Health Insurance, Indonesia). He is also a doctor and academician. Previously he served as director general of resources for science technology and higher education of the republic of Indonesia.

Education:

- dr - Faculty of Medicine Gadjah Mada University (1988)
- M.Sc - Tropical Medicine, The Department of Tropical Hygiene Mahidol University, Bangkok Thailand (1991)
- Ph.D - Faculty of Medicine, University of Newcastle Australia (2000)



Prof. Maznah Dahlui (University of Malaya)

Public Health Physician and a Professor at the Department of Social and Preventive Medicine, Faculty of Medicine, **University of Malaya**. Currently Deputy Dean (Development) of Faculty of Medicine and is a senate member of University of Malaya.



**Prof. Budi Hidayat, PhD
(University of Indonesia)**

Budi Hidayat was born in Purbalingga in February 1972. He received his bachelor's and master's degrees respectively from the University of Indonesia (SKM, 1995) and the University of Southern California (MPPM, 2001) with cum laude predicate. Education S3 (PhD), Summa Cum Laude, obtained when he was 32 years old from the University of Heidelberg, Germany.

Besides being active in teaching and researching, Prof. Budi is also actively assisting the government (Bappenas, Ministry of Health, Ministry of Social Affairs, and Ministry of Finance) in the development of the Social Protection System. He is listed as a consultant to a number of donor agencies: GTZ and EPOS Health Consultants/GVG/AOK (2004-2005); World Bank (2006-10); AusAID (2011-13); DFAT (2013/14), UNICEF (2015) and GIZ (2017). He is also the only Indonesian citizen who sits as a member of the IORB (International Outcome Research Board) which regularly discusses and criticizes advances in health technology (especially medicines) circulating in a number of developing countries.

Symposium 3 : Transforming Gadget Addiction to Achieve Healthy Society and Nation Prosperity



**Prof. Chung-Yi Li
(NCKU Taiwan)**

Prof. Chung-Yi Li is an epidemiologist who received his PhD degree from McGill University in Montreal, Canada. Prof. Li is now a full professor affiliated with the Department of Public Health, College of Medicine, National Cheng Kung University in Tainan, Taiwan. He has expertise on environmental epidemiology, life course epidemiology, and health service research. He is now Councilor for the International Society for Environmental Epidemiology, Asia and Western Pacific (AWP) Chapter.



Prof. Philip Baker
(QUT, Australia)

Professor of Epidemiology, School of Public Health and Social Work, Queensland **University of Technology**, Australia



Prof. Bruce Maycock
(Curtin University of Technology, Australia)

The Dean of the Faculty of Health Sciences, **Curtin University**, Australia and currently serves as the Head of School of Public Health within the Faculty of Health Sciences.

PLENARY SESSION 2: University and Leadership Role in an Artificial Intelligence Driven World during COVID-19 Pandemic



View on Covid-19 Vaccine Acceptability: Result from an International.
Speaker: Prof. Wah Yun Low (University of Malaya, Malaysia)

Wah Yun Low is the Deputy Executive Director (Research & Internationalisation), Asia-Europe Institute at the University of Malaya. She is a Chartered Psychologist and a Professor of Psychology at the Faculty of Medicine, University of Malaya, Kuala Lumpur. Prof. Low was the former Head, Research Management Center, Faculty of Medicine, University of Malaya, and Chair of the University of Malaya Research Ethics Committee (non-medical). She was the Deputy Director, Research Services Unit, Institute of Research Management and Innovation, University of Malaya, and was also the Head of the Scholarly Publication and Support Unit, at the University.



University Support to The Development of COVID-19 Vaccine in Indonesia (Vaksin Merah Putih)
Speakers : Prof. Dr. M. Nasih (Rector of Universitas Airlangga)

Prof. Dr. Mohammad Nasih, S.E., M.T., Ak., is the Rector of Airlangga University who has served from 2015. As an academic in the field of accounting, Prof. Nasih actively participates in several professional organizations, such as the Islamic Economic Community (MES), the Indonesian Economic Bachelors Association (ISEI), the Indonesian Accountants Association (IAI), the Islamic Economist Association (IAEI), the Indonesian Muslim Intellectuals

Association (ICMI), and many others.



Role of vaccine in the past, recent and future of pandemic/epidemic

Speaker : Dr. Soetrisno, dr., Sp. OG (K) (Chairman of IDI East Java, Indonesia)

Dr. Sutrisno is the chairman of the hospital supervisory agency in East Java. He is also the chairman of IDI for East Java region and the chairman of POGI branch of Malang. He is currently active in Department of Obstetrics and Gynecology, Faculty of Medicine, Brawijaya University / Dr. Saiful Anwar Malang Hospital.

Educational background:

- dr – Faculty of Medicine, Brawijaya University
- Sp 1 – Faculty of Medicine, Airlangga University
- Sp 2 – Faculty of Medicine, Airlangga University
- Dr – Faculty of Medicine, Brawijaya University

Research Interest:

- The Effect of Genistein on Estrogen Receptor Expression, Cell Proliferation and Apoptosis on Endometriosis Cell Culture.
- The Effect of Genistein as Anti-inflammatory and Anti-angiogenesis in Primary Endometriosis Cell Culture.

Symposium 6 : “E- Public Health for Detecting, Preventing and Responding Public Health Challenges”



Establishing Laboratory information systems and managing data for priority diseases testing and beyond in Indonesia.

Speakers : Reshma Kakkar, MM (Global Health Association Public Health Laboratories)

Reshma Kakkar is Manager Global Health at Association of Public Health Laboratories. Has supported various projects in public health informatics and laboratory information systems both domestically and internationally for the last 14 years. She has worked with both national reference and public health laboratories as well as district level clinical laboratories, incorporating informatics best practices and has supported public health informatics projects in Africa, Asia and South America.



**Global Health Security Agenda in Pandemic COVID-19 Issue.
Speakers : Prof. Dr. Budi Haryanto, M.PH., MSPH, MSc
(University of Indonesia)**

Prof. Dr. Budi Haryanto, MSPH, MSc is a Professor of the Department of Environmental Health – Faculty of Public Health and Head of Research Division of the Research Center for the Climate Change University of Indonesia.

He has participated in numerous environmental epidemiology studies. In addition to research on health effects in children of air pollution, including lead, PM 2.5, nano-particles, and biological exposures. He is a Board Director of the Pacific Basin Consortium on Environment and Health, Vice president of the Indonesian Clean Emission Partnerships, Head Division of Environmental Health Sciences Development and Working Group Chairman for Climate Change and Human Health at the Indonesian Public Health Association, and a member of numerous international and national professional societies and organizations, including the International Society of Environmental Epidemiology (ISEE), Clean Air Initiative in Asian Cities (CAI), Indonesian Environmental Health Association, and Indonesian Epidemiological Network (IEN). Most recently he has actively contributed to the studies and development of policy and action plans of health adaptation to climate change.



**E- Public Health for Detecting, Preventing and Responding
Diet Related Non- Communicable Diseases.
Speakers : Prof Sri Sumarmi, S.KM., M.Si. (Universitas
Airlangga, Indonesia)**

Prof. Sumarmi is one of the Professors at the Faculty of Public Health. She obtained her bachelor's degree from the Faculty of Public Health, Universitas Airlangga (1991), and she continued her master's education at the Bogor Agricultural Institute, then she continued her doctoral education at Airlangga University.

She is an educator at FKM UNAIR until now, and her busy life apart from teaching is publishing several works and is also active in conducting research. Besides that, she is also actively participating in various activities such as health organizations

Symposium 7 : Implementation E-Public Health in Supporting Global Health Security



Health Information System for Supporting Global Health Security.

Speakers : Dr. Santi Martini (Dean Faculty of Public Health, University of Airlangga)

Dr. Santi Martini graduated from Medical Faculty of Universitas Airlangga, Master Program of Gadjah Mada University, and Doctoral Program in the Universitas Airlangga. Since 2020 she is Dean in the Faculty of Public Health Universitas Airlangga.

She's also chief of Tobacco Control Support Centre (TCSC) Indonesia Public Health Association East Java. She's conducted research related to non-communicable diseases and the risk factors such as stroke, hypertension, metabolic syndrome, nasopharyngeal cancer, smoking behavior among youth and as well, epidemiology of COVID-19. She's also works with local government to create smoke free area regulation since 2014. She did research about "Tobacco Industry Compliance and Awareness to Implementation of Pictorial Health Warning in Indonesia", "Risk Analysis of Cigarette Smoke among Pregnant Women through Blood Co-HB Concentration Level", and "Exposure from Nicotine Among Tobacco Farmer and Its Relationship to Health Disorders (Comparison Study in Indonesia and Thailand)". Her research collaborated with Netherland Cancer Institute Anthony Van Leuwenhoek with title "Effectiveness of a Multicentre Nasopharyngeal Carcinoma Awareness Programme in Indonesia" has been published in BMJ Open in 2016. She has research collaboration with Johns Hopkins University about Cigarette Health Warning Labels in Indonesia: Identifying the effectiveness of religious vs non-religious messages in 2018 and collaboration with La Trobe University in 2019 the title is "Smoking Behavior of The Health Professionals in Asia Pacific and Middle East Countries". Then, she's a collaborator of IHME University of Washington since 2018. She also has research collaboration with SATU scheme in 2021. She got funding for doing research and community development from international funding agency such as World Bank, NKI-AVL, Union, and WHO.



Digital Technologies for Driving Inclusive and Sustainable Growth to Achieve the SDG'S.

Speakers : Prof. Masamine Jimba, PhD. (University of Tokyo)

Masamine Jimba is professor and chair of the Department of Community and Global Health at the Graduate School of Medicine, the University of Tokyo After being educated both in Japan and USA, he has had a variety of global health experiences in the Gaza Strip and West Bank (2 years for WHO:1994-1996) and in Nepal (5 years for Japan International Cooperation Agency:1996-2001).

After 2002, he has conducted health promotion activities in Asia, Latin America and Africa: for example, school health projects in Laos and Thai, a healthy nutrition and clean water project in Vietnam, maternal, newborn, and child health in Ghana.

For academic activities, he has taught global health at different universities and other organizations in Japan and other Asian countries. He has also published about 200 articles in international academic journals.

For local and global network activities, he became the President of the Japanese Society of Health Education and Promotion and a board member of other academic societies in Japan. In Asia and Pacific Region, he works as the President-Elect of the Asia-Pacific Academic Consortium for Public Health, Member of the APRU Global Health Advisory Committee, Executive Committee Member of the Global Health and Human Security Program by the Japan Center for International Exchange. This program aims to propose policy initiatives to the Japanese government by focusing on 'health and human security.' He also belongs to several global networks for school health and others.

He believes that research, policy and practices must be linked for global health promotion. His current interest is slow research and positive deviance approach, which can improve sustainability of health promotion efforts at local level for a long period of time.



Society 5.0 in the Fourth Industrial Revolution Era in Supporting Global Health Security.

Speakers : Tara Singh Bam (Union Asia, Singapore)

- 2009 - 2013 : global coordinator for a working group of smoking cessation for TB patients
- 2009 - present : Bloomberg partners coordination in Indonesia
- 2013 - present : guest faculty for Johns Hopkins University Tobacco Control Leadership Program

INFORMATION FOR THE DELEGATES

Registration

The 52nd APACPH was carried out in a hybrid manner. So that the registration is distinguished online and offline.

OFFLINE CONFERENCE			
INDONESIAN PARTICIPANT			
CLASSIFICATION	EARLY BIRD 1 January 2021 – 1 June 2021	REGULER 2 June 2021 – 1 September 2021	2 September -28 October 2021
Student	IDR 1.750.00 (Non- Presenter) IDR 2.000.000 (Presenter)	IDR 2.000.000(Non- Presenter) IDR 2.500.000 (Presenter)	IDR 2.500.000 (Non- Presenter)
Member (domestic)	IDR 2.000.000 (Non- Presenter) IDR 2.500.000 (Presenter)	IDR 2.500.000(Non- Presenter) IDR 3.000.000 (Presenter)	IDR 3.000.000 (Non- Presenter)
Non-member (domestic)	IDR 2.500.000 (Non- Presenter) IDR 3.000.000 (Presenter)	IDR 3.000.000 (Non- Presenter) IDR 3.500.000(Presenter)	IDR 3.500.000 (Non- Presenter)
INTERNATIONAL PARTICIPANT			
CLASSIFICATION	EARLY BIRD	REGULER	ON SITE
Student	USD 150 (Non-Presenter) USD 200 (Presenter)	USD 200 (Non-Presenter) USD 250 (Presenter)	USD 250 (Non- Presenter)
Member	USD 200 (Non-Presenter) USD 250 (Presenter)	USD 250 (Non-Presenter) USD 300 (Presenter)	USD 300 (Non- Presenter)
Non-member	USD 250 (Non-Presenter) USD 300 (Presenter)	USD 300 (Non-Presenter) USD 350 (Presenter)	USD 350 (Non- Presenter)

**ONLINE
CONFERENCE****INDONESIAN
PARTICIPANT**

CLASSIFICATION	EARLY BIRD 1 January 2021 – 1 June 2021	REGULER 2 June 2021 – 1 September 2021	2 September -28 October 2021
Student	IDR 1.000.000 (Non- Presenter) IDR 1.500.000 (Presenter)	IDR 1.250.000 (Non- Presenter) IDR 1.750.000 (Presenter)	IDR 1.750.000 (Non- Presenter)
Member (domestic)	IDR 1.500.000 (Non- Presenter) IDR 2.000.000 (Presenter)	IDR 1.750.000 (Non- Presenter) IDR 2.250.000 (Presenter)	IDR 2.250.000 (Non- Presenter)
Non-member (domestic)	IDR 2.000.000 (Non- Presenter) 2.500.000 (Presenter)	IDR 2.250.000 (Non- Presenter) 2.750.000 (Presenter)	IDR 2.750.000 (Non- Presenter)

**INTERNATIONAL
PARTICIPANT**

CLASSIFICATION	EARLY BIRD	REGULER	ON SITE
Student	USD 100 (Non-Presenter) USD 150 (Presenter)	USD 150 (Non-Presenter) USD 200 (Presenter)	USD 200 (Non- Presenter)
Member	USD 150 (Non-Presenter) USD 200 (Presenter)	USD 200 (Non-Presenter) USD 250 (Presenter)	USD 250 (Non- Presenter)
Non-member	USD 200 (Non-Presenter) USD 250 (Presenter)	USD 250 (Non-Presenter) USD 300 (Presenter)	USD 300 (Non- Presenter)



REGISTRATION

On Site Registration

Walk-in registration can be done at the conference venue. Only Indonesian Rupiah will be accepted and US\$ won't be accepted.

Conference kit

Conference kit will be distributed upon registration at the registration counter.

Exhibition space

Exhibition booths will be at the Conference lobby.

Tour Desk

Tour information can be available at the information counter next to the registration counter.

Conference Notice Board and message

Notice boards will be placed at the conference lobby for messages and updates of the conference.

Emergency Services

UMS ambulance and medical services are available throughout the conference.

Contact person: dr. Ardian (+62 812-3056-146)





ABSTRACT SESSION

52nd Asia-Pacific Academic Consortium for Public Health (APACPH) Conference
*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0 AND
THE COVID-19 PANDEMIC*



SCOPE : NUTRITION

52nd Asia-Pacific Academic Consortium for Public Health (APACPH) Conference
*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0 AND
THE COVID-19 PANDEMIC*

Factors Related to the Prevalence of Malnutrition Status in Children Below 2 Years Old in Indonesia: An ecological study

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Background: Malnutrition refers to deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients. An estimated 159 million children worldwide under the age of 5 years are stunted and 50 million are wasted. There are many factors related with malnutrition in children. Previous research has found that the prevalence of malnutrition in children below 2 years is quite high in Indonesia.

Aim: This study aims to ecologically analyze the factors related to the prevalence of malnutrition status in children below 2 years old in Indonesia.

Method: The research conducts ecological analysis using secondary data from the Ministry of Health of the Republic of Indonesia report in 2019. The study takes all provinces as samples. Apart from malnutrition status in children below 2 years old, four other variables analyzed as independent variables were the prevalence of chronic energy deficiency in pregnant woman, prevalence of pre-lacteal feeding, prevalence of children aged 0-23 months who are still breastfed, prevalence of various foods consumed by children. Data were analyzed using a scatter plot.

Results: The results showed that the higher the prevalence of chronic energy deficiency in pregnant woman in a province, the higher the prevalence of malnutrition status in children below 2 years. The higher the prevalence of pre-lacteal feeding, the higher the prevalence of malnutrition status in children below 2 years. The higher the prevalence of children aged 0-23 months who are still breastfed, the lower the prevalence of malnutrition status in children below 2 years. The higher the prevalence of various foods consumed by children, the lower the prevalence of malnutrition status in children below 2 years.

Conclusion: The study concluded that four independent variables analysed were related to Indonesia's prevalence of malnutrition status in.

Knowledge Gaps on Dietary Patterns and Double Burden of Malnutrition Research: A Mini-Review

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³Department of Public Health, College of Medicine, National Cheng Kung University, Taiwan

Background: Nutrition transition, characterized by shifts in dietary patterns, is a known factor for double burden of malnutrition. Recent evidence indicates the association between patterns of diets and risks for obesity, diabetes, and cardiovascular diseases. However, whether dietary patterns influence the occurrence of double burden of malnutrition is not well understood.

Aim: This study aimed to review the relationship between dietary patterns and double burden of malnutrition among adults in the literature. Approaches for dietary pattern analysis and definitions for double burden of malnutrition assessment were also investigated.

Method: A structured search was performed from Web of Science of any peer-reviewed articles published before February 6, 2021. Inclusion criteria were: 1) adults as study participants; 2) analysis of primary or secondary data; and 3) with full-text available in English. Separate selection procedures were conducted for dietary patterns and double burden of malnutrition literature. Subsequently, studies discussing the dietary pattern-double burden of malnutrition link were identified. Descriptive information was extracted from each eligible article and research gaps were described.

Results: A total of 133 studies (102 for dietary patterns and 31 for double burden of malnutrition) were included in this review. Most studies were conducted in Asia with data collected from health and nutrition surveys. Principal component analysis was the most common method for generating dietary patterns. The national-level double burden of malnutrition was most frequently assessed and defined as the coexistence of overweight/obesity and underweight. From the 133 studies, only four articles examined the dietary pattern-double burden of malnutrition relationship and suggested that healthier dietary patterns positively impact malnutrition in all its forms. Significant knowledge gaps remain including: 1) application of other or combination of dietary pattern analysis approaches; 2) evaluation of the individual-level double burden of malnutrition and inclusion of micronutrient deficiencies and diet-related non communicable diseases indicators in the definition.

Conclusion: Findings from this review revealed that there is a paucity of studies investigating the nexus of dietary patterns and double burden of malnutrition. Future research is imperative to address the documented knowledge gaps and support public health nutrition policies.

Keywords: dietary patterns, double burden of malnutrition, knowledge gaps

The Relationship Between Stunting And Teeth Eruption In In 9-12 Years Old Children In Tuah Negeri Sub-District

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Background: Stunting can cause malnutrition in children, which will then affect bone growth. Bone growth in stunted children will be inhibited, which results in inhibited periodontal bone maturation. The delay in maturation of the periodontal bone that supports these teeth will delay children's delayed tooth eruption.

Aim: This study analyses the relationship between stunting and children characteristics that consists of age, gender, parental education, parental occupation, and parental income to teeth eruption status in 9-12 years old children in Tuah Negeri sub-district.

Methods: This study is an analytic observational study with a cross-sectional design. The number of sample is 110 children aged 9-12 years old, which were taken with stratified random sampling technique from elementary schools in Tuah Negeri District. Stunting was determined based on anthropometric measurements by measuring height by age, then grouped according to the Z-score into stunting (≤ -2 SD) and not stunting (> -2 SD). Oral examination was carried out to see the teeth eruption in children according to their age group and recorded in odontogram. The rest of characteristics data were obtained through questionnaires and filled out by their parents. All data were analyzed with chi-square test to determine the relationship between stunting and child characteristics to delayed teeth eruption and logistic regression to determine the most influential characteristic that caused delayed teeth eruption in children.

Results: The measurement of nutritional status showed that 36 children (32.7%) were stunted and out of the 36 stunting children, 23 (63.9%) experienced delayed teeth eruption. The bivariate analysis results showed $p = 0.000$ and $OR = 5.932$ for the relationship between stunting and teeth eruption status. The results of multivariate analysis showed that children's characteristics that were significantly related to the status of tooth eruption were nutritional status and parental income with $p=0.000$ and $OR=6.944$ for stunting and $p=0.002$ and $OR=4.861$ for parental income.

Conclusion: Characteristics of children that are significantly related to the status of tooth eruption are nutritional status and parental income.

Keywords: Stunting, nutritional status, children characteristics, tooth eruption

Effect Of Addition Of Fermented Soybean Cake Flour To Calcium, Protein, Water Content And Acceptance Of Catfish Meatballs

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Background: On average more than 50% of women experience dysmenorrhea in each country. Some women who experience unbearable pain during menstruation can affect 50% of daily activity in women of productive age, and 85% in young women in their teens. Based on that explanation, our team proposed catfish meatballs with the addition of fermented soybean cake flour, one form of food processing to improve nutrients (calcium) which serves to reduce dysmenorrhea.

Aim: The purpose of this study was to analyze the feasibility of catfish meatballs with the addition of fermented soybean cake flour as a healthy diet food to reduce dysmenorrhea in young women and teens.

Method: The research design was true experimental with 12 experimental units: catfish meatballs without the addition of fermented soybean cake flour / control (P0) and with the addition of 10 percent fermented soybean cake flour (P10), 20 percent (P20), 30 percent (P30). Calcium content of the samples was analyzed by Atomic Absorption Spectrophotometry (AAS), protein by Kjeldahl method, water by Oven method and acceptance test using Hedonic Scale Test. Data from calcium, protein and water test results were analyzed using the One-Way ANOVA and Post Hoc Test while the acceptance test results were analyzed using the Friedman test and Wilcoxon Signed Ranks Test with significance level 5 percent ($\alpha=0.05$).

Results: The results showed that addition of fermented soybean cake flour can increase calcium and protein levels of catfish meatballs. The analysis showed the catfish meatballs with fermented soybean cake flour addition had an effect on calcium levels, protein, water content and acceptability (taste) of catfish meatballs (p-value $< \alpha$).

Conclusion: Catfish meatballs the highest with fermented soybean cake flour addition 30 percent(P30) has the highest levels of calcium and protein. Women who have dysmenorrhea can consume P30 catfish meatballs for 10-15 grains per day to get their calcium needs.

Occurrence and Spatial-Temporal Distribution of Antibiotic Residues in Broiler Meat in the Philippines from 2015 to 2019

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Background: Antibiotic use in broiler chickens can be categorized into three purposes: prophylactic, therapeutic, or for growth promotion. The indiscriminate use of antibiotics including its administration beyond permissible limits without adherence to withdrawal periods may lead to the presence of their residues deposited in the tissues of chickens. These residues are a public health concern as it can lead to several major health issues including antibiotic resistance, hypersensitivity reaction, toxicity, teratogenicity, and carcinogenicity. In the Philippines, the National Meat Inspection Service (NMIS) monitors and analyzes samples from different broiler meat establishments for the presence of any banned and/or regulated drugs and to ensure that drugs do not exceed the maximum residual levels.

Aim: This study aimed to describe the occurrence and spatial-temporal distribution of antibiotic residues in broiler meat across regions in the Philippines from 2015 to 2019.

Method: This study employed an exploratory mixed ecologic study design. Regional level data on antibiotic residues were collected and processed at the NMIS central laboratory. Choropleth maps were generated using ArcGIS 10.8.

Results: The most common antibiotics detected as residues in broiler chicken meat are olaquinox, chloramphenicol, and nitrofurans. All of which are antibiotics prohibited for use in food-producing animals in the Philippines. In a year, the overall highest occurrence of antibiotic residues in 2015 - 2019 was in region XI in 2016, wherein all residues detected were banned antibiotics only.

Conclusion: This study emphasized the need for a stricter, more proactive, and strengthened surveillance and monitoring of antibiotic use in broiler chicken farms and antibiotic residues in broiler meat in the Philippines. The discriminate use of antibiotics must be further promoted among broiler breeders and label directions on antimicrobial products must be strictly followed. Efforts should be focused on the control of banned antibiotics entering the food chain.

Keywords: antibiotic residues, broiler meat, antibiotic resistance

Association Between Breakfast Frequency and Cardiometabolic Risk Profiles in Indonesian Adults

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³University of New Orleans, USA.

Background: The prevalence of cardiometabolic diseases, such as diabetes and cardiovascular disease, continues to increase in Indonesia, placing a heavy burden on health care system. Evidence has shown the importance of dietary control in relation to metabolic health. However, the relation of breakfast frequency with cardiometabolic risk remains contradictory.

Aim: This study aimed to evaluate the association of breakfast frequency with cardiometabolic risk profiles in Indonesian adults.

Methods: This study used a cross-sectional design. A total of 400 adults aged ≥ 40 years were participated. They were classified into three groups based on the number of days they ate breakfast: skipping group (0 days/week), irregular group (1-4 days/week), and regular group (≥ 5 days/week). Information on socio-demographic characteristics, lifestyle factors, and breakfast habits were collected using a questionnaire. Cardiometabolic profiles of adult participants included body weight, body mass index (BMI), blood pressure, triglycerides (TG), high-density lipoprotein cholesterol (HDL-C), fasting blood glucose (FBG), and metabolic syndrome. Multiple logistic regression analysis was used to analyze the association between breakfast frequency and cardiometabolic profiles.

Results: The number of participants classified as skipping, irregular, and regular breakfast were 13%, 22%, and 65%, respectively. The mean of BMI, TG, FBG, and systolic blood pressure were slightly lower in the regular breakfast group than other groups. Cardiometabolic profiles of participants with regular breakfast tended to be better, although not significantly. The multivariate-adjusted odds ratios of metabolic syndrome in the regular and irregular groups compared with the skipping group were 0.52 (95% CI; 0.24 - 1.15, and 0.81 (95% CI; 0.41 - 1.61), respectively.

Conclusions: There was no significant association between breakfast frequency and cardiometabolic profiles after adjusting for risk factors, but a tendency of regular breakfast to lower the risk of metabolic syndrome was observed. This study suggests promoting the importance of breakfast consumption for metabolic health in adults.

Keywords: breakfast, cardiometabolic profile, metabolic syndrome, adults

Nutrition Consumption And Child Stunting In Tengger Community, East Java, Indonesia

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³Research group Maternal and Child Nutrition, Universitas Airlangga, Indonesia

Background: More than one-quarter of under-five children in the developing world stunted. Socio-cultural practices are thought to be one of the main factors that contribute to the incidence of stunting. The Tengger tribe is one of the tribes in Indonesia that still holds strong cultural values.

Aim: The purpose of this study was to determine relationship between nutrition intake and child stunting in Tengger Tribe.

Methods: This study had a cross sectional design. The sample in this study were mothers of toddlers who were in the traditional territory of the Tengger Tribe, Wonokitri Village, Pasuruan. Samples were taken by random sampling technique as many as 100 samples. Stunting was defined as <-2 SD height-for-age-z-score by WHO Antro 2005. Data collection consisting of age, occupation, income, education and knowledge were collected using a questionnaire and data on food consumption patterns were collected using the Semi-quantitative food frequency questionnaire (SQ-FFQ) and the Food Recall. The data in this study were analyzed using chi-square analysis.

Results: The average education of the parents are primary and junior high school graduates, as agricultural laborers with an average income below the minimum wage. There was no significant relationship between education, occupation of fathers and mothers with the incidence of underweight and stunting among children under five ($p > 0.05$). The number of smokers in each household was classified as high, but there was no significant relationship between maternal nutritional status, presence of smokers at home, exclusive breastfeeding, birth history and birth attendants with nutritional status of children under five based on WAZ and HAZ ($p = 0.743$, $p = 0.378$). There was no significant relationship between the level of energy, carbohydrate and protein adequacy on the nutritional status of children under five, both WAZ and HAZ ($p > 0.05$). On the other hand, there is a significant relationship between fat intake and nutritional status of children under five ($p = 0.03$).

Conclusion: There is a need for more attention to factors related to the incidence of stunting in society. People need to look at their diet, especially macro nutrients: carbohydrates, proteins and fats.

Analysys Of Health Education Of Family Development Session With Stunting Events On Hope Family Program Recipients In Pangkajene And Island District

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Background: Stunting is one of the targets of the Sustainable Development Goals which aims to eliminate hunger and all forms of malnutrition by 2030. In 2017, stunting children under five in Indonesia experienced an increase in the number of cases by 29.6% while the stunting prevalence rate in Pangkajene and Islands districts showed 50.5% or the third highest in South Sulawesi Province. Data for 2019 is 15.10%, with the number of amilies receiving the Family Hope Program as many as 16,498 in Pangkajene and Islands districts.

Aim: To determine the relationship between the health education of Family Development Session (FDS) and the incidence of stunting in Family Hope Program recipients in Pangkajene and Islands Districts.

Method: This type of research is observational research with a cross sectional study design.

Results: Of the 71 respondents, as many as 36 children under five (51%) experienced stunting and 35 children under five (49%) under five were not stunted.

Conclusion: There is a relationship between the health education of FDS and the incidence of stunting in Pangkajene and the Islands District ($p=0.001$).

Keywords: FDS, Family Hope Program, Stunting.

Perception of dietary lifestyle among Japanese older adults living alone in a rural area

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Background: Expanding of older adults, aged over 65 in Japan, are leading in the world. Especially, the number of them living alone is rapidly increasing in a rural area. The older adults living alone have difficulty to go shopping far away if their mental and physical condition worsens. When local retailers are closed down in the city center area, they become vulnerable to shopping. Thus, it is an urgent task to examine the perception of dietary lifestyle among older adults living alone and to provide them with appropriate supports.

Aim: The aim of this study was to explore the perception of dietary lifestyle among Japanese older adults living alone in a rural area.

Method: A qualitative descriptive study design was used in this study. Semi-structured interviews were carried out with Japanese older adults living alone in a rural area, using an interview guide. A content analysis approach was used to analyze the descriptive data.

Results: Participants were aged 75 years old and above. Two themes, individual factors and environmental factors, were found. The individual factors were “Self-management of household finances”, “Physical and eating functions”, “Maintenance of traditional dietary skills and behaviors”, “Health awareness and daily lives suitable to the physical conditions”, and “Mental distance from family members”. The environmental factors were “Coexistence with the natural environment and attachment to the community”, and “Familiarity with life according to the residential conditions”.

Conclusion: The perception of dietary lifestyle among older adults living alone had diverse and complex factors under the interaction between particular environments and them. These results suggest that it is necessary to examine the perceptions of the dietary lifestyle of them and to provide them with support considering the factors of the perception of eating lifestyle.

The Implementation of Kadarzi's Behavior (Nutritional Family Awareness) among Family with Stunting Toddlers Aged 24-59 Month

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Background: Nutrition problems which focused on toddlers in developing and poor countries is stunting. Stunting is a condition of growth failure among under five children due to chronic malnutrition. The impact of this condition, children who had stunting is shorter compared to another in their same age. One of the specific nutrient intervention and an effort to overcome the problem by applying kadarzi's behavior (nutrition family aware).

Aim: to analyze the relationship between implementation of nutrition family awareness and indicator of nutrition family awareness with stunting incidence among toddlers aged 24-59 months in Jambearum Village, Sumberjambe District, Jember Regency.

Method: A cross sectional method was used in this study. 82 mother who lived in Jambearum village and had children 24-59 months was involved in this study. They selected using simple random sampling. This research was conducted in Jambearum Village, Sumberjambe Subdistrict, Jember Regency in July 2019. Data collected included the characteristics of toddlers (age and sex), family characteristics (mother's education level, nutritional knowledge level, occupational status, and family income) and kadarzi behavior were obtained through interviews using structured questionnaires and document studies. Diversity of food consumption using the FFQ (Food Frequency Questionnaire). Stunting among toddlers was obtained from height according to age measurements using microtoice. Data analyzed using Chi Square test.

Results: The prevalence of stunting among toddlers in Jambearum Village was around 52.4%. Families who implemented kadarzi in their life ($p = 0.031$), maintained their weight regularly ($p = 0.032$), consumed various type of foods ($p = 0.028$) and used iodized salt ($p = 0.004$) would have lower stunting incidence among toddlers. Meanwhile, families who provided exclusive breastfeeding ($p = 0.242$) and consumed nutrition supplement based on government recommendation ($p = 0.224$) would have higher incidence of stunting among toddlers.

Conclusion: Families who had better practice of kadarzi's behavior, maintained weight regularly, consumed various type of foods and used iodized salt has lower stunting incidence among toddlers.

Keywords: Toddlers, Kadarzi, Stunting

Dietary Pattern In College Students And It's Corelation With Abdominal Fat

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Background: Abdominal obesity is an important risk factor for various diseases.

Aim: The aim of this study was to determine dietary pattern and it's relationship with abdominal fat among female college students.

Methods: A total of 156 female subjects (19-24 years old) followed this study. Subjects were interviewed for their food intake using semi-quantitatif food frequency questionnaire (SQ-FFQ). Dietary pattern were identified using principal component analysis (PCA) method. Abdominal fat was measured use waist circumference (WC), waist and height ratio (WHR), and sagittal abdominal diameter (SAD).

Results: Two major dietary pattern were extracted: "less healthy" and "more healthy" dietary pattern. There is relationship between "less healthy" dietary patterns with WC ($r = 0.406$), WCHR ($r = 0.389$), and SAD ($r = 0.370$), as well as a "more healthy" dietary pattern with WC ($r = -0.320$), WCHR ($r = -0.338$), and SAD ($r = -0.353$) with p-value $<0,001$.

Conclusion: Increased intake of "less healthy" dietary pattern was associated with an increase in abdominal fat, whereas increased intake of "more healthy" dietary pattern was associated with a decrease of abdominal fat.

Keywords: Dietary pattern, abdominal obesity, college student

Triability Or Observability That Influence The Cadre Decision Using “Aplikasi Anti Stunting”?

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Background: Stunting is the impaired growth and development that children experience from poor nutrition, repeated infection, and inadequate psychosocial stimulation. Stunting caused by insufficient good nutrition from pregnancy to 24 months of age. This stunting incident usually takes place in developing countries. Health promotion medium also used as a strategy to reduce stunting. “Anti Stunting” mobile application is a health promotion medium that contains information about stunting and how to prevent it.

Aim: This study aims to analyze the effect of "Anti Stunting" mobile application on the triability and observability variables on the decision to use the "Anti Stunting" mobile application.

Method: This research was conducted in one of the “X” communities in Nganjuk Regency. The method used in this study is a Quasi Experiment and uses a post only design. The sample in this study was 50 conducted by purposive random sampling. Respondents received training on the use of the “Anti Stunting” mobile application and were subsequently given a number of questions through questionnaires.

Result: The results showed that there was a significant effect on triability (p value = 0.005) and observability (p value = 0.02) on the decision to use the "Anti Stunting" mobile application.

Conclusion: Based on this research, it can be concluded that this “Anti Stunting” mobile application can be used as a health promotion medium in accordance with the needs of cadres in an effort to reduce stunting rates.

Keyword: mobile application, stunting, observability, triability

Validity and Reliability of Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ) for Under Five Children in Sleman Regency, Indonesia: Comparison Between Two Age Groups

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Background: A reliable, validated food consumption assessment is needed to assess consumption patterns of children under five. The Semi-Quantitative Food Frequency Questionnaire (SQFFQ) form requires a long interview time as it includes a broad variety of foods which are not specific for the under-five children in Sleman Regency, Indonesia. Thus, it is important to develop a food consumption assessment form that fits this population well.

Aim: To develop a reliable, concise, and valid SQFFQ consisting of the foods and drinks commonly consumed by the under-five children at Sleman Regency to assess macronutrients consumption in the 12-35 months and 36-59 months child population.

Method: This study includes 102 under-five children. The study subjects were members of Sleman Health and Demographic Surveillance System (Sleman HDSS) household who were selected using cluster random sampling. The validity of the SQFFQ questionnaire was tested against the gold standard questionnaire, namely the 24 Hours Recalls (24HR). The reliability test was conducted between SQFFQ measurement conducted in the 1st visit and 2nd visit, a month after. Median comparison, Wilcoxon signed-rank test, Spearman correlation coefficient, cross-classification test and Bland Altman plots are used to test the validity and reliability in each group. All tests were conducted separately for "12-35 months age" and "36-59 months age" groups.

Results: Results of all tests in each age group lead to the same conclusions. Validity analyses revealed that compared to 24HR, the SQFFQ significantly overestimated macronutrients consumptions by 6.6%-33.5%. The correlation test of macronutrients consumption measured by both methods was sufficiently correlated ($\rho:0.26-0.56$). The cross-classification test showed a high percentage of agreement between the two methods (75%-95%). Bland Altman plots showed that the subject was at the Limit of Agreement limit of 90%-100%. Reliability analyses of 1st SQFFQ and 2nd SQFFQ showed that there were no significant median differences (-4%-7.2%), a relatively high correlation ($\rho:0.42-0.89$) of macronutrients consumption measured in the two occasions, and a relatively high percentage of agreement of cross-classification (75%- 100%).



Conclusion: Based on the various tests conducted, our SQFFQ is valid compared to the 24HR and reliable in assessing macronutrients consumption in both age groups in Sleman Regency.

Determinants of Stunting in Timor Leste children under five years: an analysis of DHS Data From 2016

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Background: Stunting is a persistent and essential form of malnutrition in preschool children in the least developed countries, especially in Timor Leste, the country with the highest prevalence in Southeast Asia at 50.2%.

Aim: We analyzed data from the Demographic and Health Survey conducted in Timor Leste in 2016 to identify possible determinants of stunting

Method: The variables analyzed were mother's education, mother's age, mother's mother's age, mother's height, sex of the mother, and the head of the household. The sample in this study were 3,696 toddlers, with 2,060 not stunting and 1,636 stunting.

Results: In the bivariate analysis, the variables found to be statistically significantly associated with stunting were maternal education, maternal height, and gender. In the survey, men were more likely to be stunted ($p < 0,05$), maternal height was associated with about 0,7 times the risk stunting and body mass index the maternal was associated with a chance of stunting of about 1,1.

Conclusion: Improving the nutritional status of children in Timur Leste requires various nutrition and health interventions.

A Qualitative Study on Secondary School Teacher's Perceptions of Stunting in Majene District, West Sulawesi Province of Indonesia

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Background: Stunting remains a major public health problem in Majene Regency West Sulawesi Province of Indonesia. School based nutrition education is an effective strategy to reduce the prevalence of stunting in all settings. The teachers are the key to implementing the strategy in order to improve the students' behavior and nutritional status. However, to what extent the secondary school teachers understanding the problem, including stunting, is unclear.

Aim: The study aimed to explore the teachers' perceptions about stunting A qualitative case-study approach was employed using two focus group discussions (FGD) in four secondary schools as a study location.

Method: The study participants were secondary school teachers teaching biology, physical education, and health science, and religious subjects and or were assigned as school health supervisors (UKS), junior of red cross supervisor (PMR), and intra-school student organizations supervisor (OSIS). A total of 22 teachers were interviewed following the interview guidelines and were recorded using a camera, a recording device. The transcription process was done using an inductive-interactive model There were variations of perception about stunting definition, causes, impacts, prevention and control, and implementers of stunting program.

Results: One teacher perceived that stunting is a mismatch between the child's weight and age. Another also perceived that the genetic factor is the main cause of stunting. Interestingly, a teacher perceived that stunting is related to religion, like prayer, its functions as a spirit in creating a mindset towards food and drinks. Likewise, the prevention and control of stunting also through worship and prayer, especially during pregnancy. Low cognitive skill, low productivity, illness, detrimental to the state are the common impacts of stunting. The implementer of stunting intervention based on teachers' perception were several agencies such as the Health Office, BPOM, Education Office, Women Empowerment and Child Protection Service, Industry and Trade Service, Fisheries and Agriculture Service, BKKBN, and the Ministry of Religion.

Conclusion: Their perception base on the complexity of the causes of stunting The perceptions of teachers about stunting are varied. It might be due to teachers' knowledge, value, and experiences, which also diverged

Food Insecurity Situation among Kasetsart University Students, Thailand

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Background: Food insecurity is defined as the limited access to secure consistent access to a sufficient quantity of affordable, nutritious food to sustain a healthy lifestyle. Undergraduate students may be risk to food insecurity resulting from the limitation of financial resources, rising cost of tuition, housing and food.

Aim: to determine the prevalence of food insecurity and determine the differences in health, academic, and sociodemographic characteristics based on food security status among students in Kasetsart University.

Method: A cross-sectional design was conducted among undergraduate student in Kasetsart university (Bangkhen campus), Thailand. Food security status was assessed using the U.S. Household Food Security Survey Model. Anthropometric measurement (weight, height, waist circumference, and body fat) will be conducted by using measuring tape, stadiometers and Bioelectrical Impedance Analysis. Participants self-reported their grade point average (GPA) and completed questions related to sociodemographic variables.

Results: Participants response (n=409) showed 52.1% of respondents were food-insecure. Of food-insecure students, 67% and 74.1% get student loan and other scholarships, respectively. Monthly family income (55680 ± 57741 Baht vs 33750 ± 28302 Baht, p-value < 0.001) and GPA (2.98 ± 0.52 vs 2.77 ± 0.48 , p-value 0.001) were lower in food-insecure student when compared to food-secure student. Food-insecure students decreased the risk of overweight/obesity (OR = 0.88, 95% CIs: 0.57-1.36). Moreover, food-insecure students increased risk of poor sleeping time (less than 8 hour/day) (OR = 0.11, 95% CIs: 0.67-1.83). There was no association between sociodemographic and food security status.

Conclusion: Food insecurity among undergrad students is high prevalence and has impact on academic performance. Screening for food insecurity, policy implementation and programmatic initiatives required to promote a healthier university

Keywords: Food insecurity, undergrad student, nutritional status

Degeneration and Necrosis of Hepatocyte Cells Due to Oral MPs Intake

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Background: Plastic waste has increased every year. In the ocean, plastic polymers degrade to 5 millimeters in size called microplastics (MPs). MPs are toxic substances for living organisms. MPs enter to the human body through contaminated food. MPs in the gastrointestinal tract will be absorbed into the blood circulation and distributed to the secondary tissues. Liver is one of them. Liver is the first detoxification organ in the body.

Aim: Analysis of differences in the histopathological features of the liver subject in the oral MP intake and control groups

Method: Experimental research on the white rats (*Rattus norvegicus*) wistar strain. There are 16 male subjects, weighing 180-200 grams, aged \pm 12 weeks. Subjects were randomized into groups E and K with an equal number. Subjects in group E were given MPs 0.5 mg/day by oral probe for 28 days. Group K as negative control. At the end of the study, subjects were terminated and the liver was made histopathological preparations with HE staining.

Results: There were differences in the number of normal hepatocyte cells ($p= .001$), degeneration ($p= .002$), and necrosis ($p= .001$) between groups E and K. In group E, there was a mononuclear cell inflammation that was denser and broader than the group K. Kupffer cells appear abundant in group E.

Conclutions: Microplastic intake in white rats caused hepatocyte cell death which was observed in the histopathological picture. These findings can be followed by examining specific biomarkers of liver function in the future.

The Effect Of Drying Temperature And Milling Time At Total Flavonoid Levels In Dry Green Tea Powder

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Background: The manufacture of green tea nanoparticle powder using dry milling method. The basic ingredients of making green tea powder come from fresh tea leaves

Aim: This study describes the process of synthesis and characterization of green tea dry powder nanoparticles and the effect of drying temperature and milling duration on the total flavonoid levels of green tea dry powder.

Method: Dry milling process is carried out using a microwave with a temperature variation of 400C, 800C, and 1000C for 4 minutes and then dried in an oven with a temperature of 600C for 2 hours. Dry milling process was carried out with variations in time 0, 60, 180, 300, and 480 minutes. After the dry milling process, the characterization was done using 2 methods: the first, using Scanning Electron Microscopy (SEM) to determine the solid morphological conditions, the second is to determine the particle size by characterization of Particle Size Analyzer (PSA). The next analysis process is the identification of the total content of flavonoids in green tea dry powder by LC-MS method.

Results: The result of the analysis using SEM with Sigma Scan software shows that the grain size (μm) of the milling time variations is different. Drying temperature and milling duration individually and collectively have a significant effect on total flavonoid levels; the highest flavonoid level is 400C in the drying process, especially on the milling duration for 3 hours.

Conclusion: From the results of this study, it can be concluded that the drying temperature and the duration of milling affect the levels of flavonoids in green tea dry powder.

Evaluation of Quality and Characterized of Cookies Tempeh Semangit Flour on Nutritional

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Background: Chronic Energy Deficiency (CED) cases are still occur in Indonesia, mainly due the imbalance of nutrients intake and it can lead to the growth retardation, either physical or mental. Tempeh semangit is a term used for over-fermented tempeh with pungent odor and darkening appearance commonly used in Javanese cuisine.

Aim: The aim of this study was to characterize and analyze the nutrients from high-protein cookies formula containing semangit tempeh flour with the addition of ferrous fumarates as supplemental food with CED and to improve fetal growth.

Methods: Completed randomized design was used with four tempeh fermentation variations. Formula cookies of semangit tempeh consists of 50 grams semangit tempeh flour, 65 gram skimmed milk, 60 grams sugar powder, 50 grams whole egg, 50 grams of flours with, 25 grams of maize flour and 0.42 gram of ferrous fumarates.. All powdered ingredients were mixed by using dry mixer. The chemical characterization of cookies tempeh semangit were analyzed was proximate analysis, amino acid essential and sensory analysis with.

Results: The results of this study were; the formula of high protein cookies contains 486.52 kcal/100 gram, 10.35% wb water conte total fat, 28.61 %, 3.53 % ash content, 41.45 % carbohydrate. Analysis of amino acid showed that three highest amino acid were L-glutamac acid (61484.07 mg / kg), L-aspartic acid (37281.39 mg / kg) and L-arginine (32692.72 mg / kg).

Conclusions: The cookies of semangit tempeh as a high protein cookies to fill the nutrients needed for pregnant woman with CED. The formulation of semangit cookies tempeh that potentially has high protein cookies as supplemental during pregnancy can support the improvement of maternal nutritional status.

Keywords: CED, Tempeh, Cookies, Semangit, Amino acid

How Empowerment To Health Cadres Can Increase Exclusive Breastfeeding

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Background: Infant nutrition is still a problem in Indonesia. One of the factors that cause low level of infant nutrition is exclusive breastfeeding that is insufficient for infant nutrition needs. The rate of exclusive breastfeeding in Surabaya (69.15%) is still below the average rate of exclusive breastfeeding in East Java, Indonesia (74.83%) in 2015-2019.

Aim: The study's objective was to analyze the impact of structural empowerment and psychological empowerment on the performance of exclusive breastfeeding programs in Surabaya.

Method: This study was an observational analytic study with a cross-sectional approach. The sample size was 82 out of 101 breastfeeding villages. It was calculated with the multi-stage random sampling technique. The respondents of the study were one active breastfeeding health cadre from each breastfeeding village, picked by the primary healthcare as representative. Multiple linear regression analysis was used to identify the influence between variables. The independent variables in this study were structural empowerment and psychological empowerment, whereas the dependent variables were performances of exclusive breastfeeding programs.

Result: Structural empowerment significantly provided a positive impact on process performance ($p=0,023$ dan $b=0,554$) and result performance of breastfeeding cadres ($p=0,011$ dan $b=0,930$). Other than that, psychological empowerment was not significant in impacting process performance ($p=0,075$) and result performance of breastfeeding cadres ($p=0,902$).

Conclusion: The higher the level of structural empowerment in a primary healthcare, the higher the psychological empowerment felt by breastfeeding cadres in exclusive breastfeeding programs at breastfeeding villages. Primary healthcare can raise structural empowerment for positive impacts to the performance of breastfeeding cadres in exclusive breastfeeding programs

Keywords: exclusive breastfeeding, cadre, psychological empowerment, structural empowerment

The effect of anemia in pregnancy and secondhand smoke exposures on the development of 6 Months Old Infants

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Background: The prevalence of smoking in the household and anemia in pregnancy is high in Indonesia. It is necessary to study the impact on the development of the children if the two exposures -secondhand smoke (SHS) and anemia in pregnancy-, occur in infants at the beginning of their six months of life.

Aim: This study aimed to analyze the effect of anemia in pregnancy and secondhand smoke on the development of infants aged six months.

Method: It was a prospective cohort study. Mother-baby pairs (n=63) were enrolled at delivery in seven public health centers in Jakarta, Indonesia. Mothers were recruited in the study during pregnancy from November 2017 to June 2018. Study visits took place during pregnancy, delivery, and six months after delivery. Bayley Scales of Infant and Toddler Development (BSID III) was used to collect data on child development (cognitive and motor scales). Infants grouped as ETS exposed if they lived with at least one smoker who usually smokes at home. Maternal hemoglobin (Hb) level during pregnancy was obtained from the maternal health record. The statistical analysis was using General Linear Model.

Results: The mean composite scores of cognitive and motor developments were 105 and 89.4, respectively. A quarter of babies were at risk in motor development. Almost 10% of infants were exposed to secondhand smoke and anemia during pregnancy and had a lower cognitive score of 3.0 points and a lower motor score of 6.8 points than the unexposed infants. However, those were not significant.

Conclusion: Infants with exposure to a combination of pregnancy anemia and SHS tended to lower development, especially on the motor scale. The integration of tobacco control and maternal-child health programs, especially for pregnant women and children under two years of age, needs to be done.

Keywords: secondhand smoke, tobacco use, pregnancy anemia, development, six months old infants

Health and Nutritional Status of Elderly People in Selected Area of Dhaka City: a Cross-sectional Study

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Method: Anthropometric data height and weight of the study subjects were collected by using standard techniques. Nutritional status was measured according to WHO guideline. χ^2 test and logistic regression was performed as $P < 0.05$ level of significance. Statistical analyses were performed by appropriate univariate and multivariate techniques using SPSS windows 11.5.

Result: Most of the subjects belong to 60-65yrs age groups. More than half of them were overweight while one third were obese and no one was in underweight. Maximum respondents ate regular meal 3 times a day. Digestive status of the study population was mostly good and minimum had lost their good digestion power. More than half of the respondent had different type of disease like diabetes, respiratory problem, CVD, hypertension, asthma, arthritis, stroke, eye problem etc. Most of the respondents were taken rice either once a day or twice a day. About half of the subjects took beef 1-2 times per week. Significant association was found between level of education and nutritional status. Logistic regression revealed that presence of disease (during study period) was found significant association with nutritional status [OR (95% CI): 2.21 (0.335–1.325) $p=0.004$] and presence of chronic disease was also found significant association with nutritional status [OR (95% CI): 3.33 (0.172–1.224) $p=0.004$] among elderly of the study subjects.

Conclusion: In conclusion, urban elderly especially affluent society facing the risk of over nutrition. More than half of the respondent suffered different type of diseases. Most of them are suffering from diabetes mellitus

Evaluation of The Implementation of Iron Tablets for Adolescent Girl in Pekanbaru City: A Qualitative Study

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Background: The program for giving Iron tablets is one of the efforts to overcome anemia based on WHO recommendations, one of the targets is the adolescent girl. Indicators of the success of this program are decreasing the incidence of anemia in adolescent girls and increasing adherence to iron tablets consumption.

Aim: This study aims to determine the implementation of the Fe tablets program for adolescent girls in 2019 in Pekanbaru City.

Methods: This study uses a qualitative approach which is then presented with a descriptive narrative. The data obtained are primary data obtained and collected by in-depth interviews with informants of key person from relevant institution at district level, school and adolescent girls, while secondary data by document review and then analyzed by content analysis.

Results: The results showed that the implementation of the Iron tablets program for adolescent girls in Pekanbaru City has been running, but there are still many obstacles in its implementation so that the scope of success of this program has not reached the national target. Constraints in its implementation include the lack of coordination of cross-sectoral cooperation, the need for additional health workers in the implementation, the lack of provision of IEC media in socialization, and the low level of compliance of adolescent girls in consuming iron tablets.

Conclusions: It is necessary to strengthen coordination and control in the implementation of the Fe tablets program for adolescent girls in Pekanbaru City, there is a need for good innovation so that program implementation can be optimal and adolescent girls are more motivated in supporting this program, it is necessary to increase the procurement of IEC media to support the success of this program and there is a need for improvement providing education to the adolescent girl and even parents or guardians on the knowledge about the importance of this Iron tablets program.

Keywords: Iron Tablets, Adolescent Girl, IEC media

INTAKE OF SUGAR, SALT, AND FAT AMONG ADULT COMMUNITY IN BALI

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Background: Bali is one of the provinces in Indonesia with a high prevalence of obesity. Several factors that contribute to obesity is one of them intake of sugar, salt and fat that exceeds the recommended limit per day.

Aim: The purpose of this study was to describe the daily consumption of sugar, salt and fat in the adult population in Bali.

Method: This study was a cross-sectional analytic study, using a population of adults aged 15 to 60 years who live in Bali. The sample is part of the population selected by the nonprobability sampling method (accidental sampling), namely 86 people aged 15-60 years, and can operate the google form. The data collected in the form of sample characteristics, sugar intake/consumption, salt consumption, and fat consumption in a day. The questionnaire was given in the form of a google form which was given in the form of a google fom link and distributed to the wider community through the WhatsApp application. The data were analyzed by descriptive statistics.

Results: The results showed that the average age of the sample was 25 years, with the youngest being 16 years old and the oldest being 54 years old, mostly women (79.1%), most (75.6%) were unmarried, and most (65.1%) are currently pursuing higher education or have completed higher education. Based on data on sugar consumption per day, it was found that the sample who consumed according to the standard (4 tablespoons/day) was 15.1% and those who consumed more than 4 tablespoons/day were 9.3%. Samples consuming salt and fat conformed to the standards of 39.5% and 32.6% respectively.

Conclusion: The conclusion of this study is that there are still many people in the adult group in Bali who consume sugar, salt, and fat not in accordance with Indonesian balanced nutrition guidelines.

Keywords: sugar, salt, fat, intake, bali

Effect of a Probiotic Biscuit on Fecal Microbiota in Under Nourished Young Children

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Background: A human intervention study on the effect of 90 days supplementation of biscuit with a cream containing the potential probiotic strain *E. faecium* IS-27526 at a dose of 108cfu/day on bifidobacteria in the fecal microbiota of undernourished children younger than 5 years was conducted.

Aim: Describes the effect of 90 days supplementation of functional fish and soy protein isolate biscuits with a cream containing probiotic *E. faecium* IS-27526 at a dose of 108 cfu/day on fecal microbiota of undernourished young children.

Method: The study was a Randomized Double Blind Placebo Controlled Trial in children under five years old. There were 5 groups of 6 children each: P0 = control biscuit with control cream; P1 = fish and soy protein isolate biscuit with control cream; P2 = control biscuit with probiotic cream; P3 = fish and soy protein isolate biscuit with probiotic cream (every day) and P4 = fish and soy protein isolate biscuit with probiotic cream (every two days). PCR was used to detect bifidobacteria and *Enterococcus faecium* in feces samples.

Results: It was found that after 90 days of supplementation, only 25% of the children in the control group (P0) harboured bifidobacteria. In treated groups P1 and P4, the percentage of children positive for bifidobacteria was approximately 60%, while in groups P2 and P3 the prevalence was 100%. However, the increase of 10% was only demonstrated by P3 as 100% of bifidobacteria content has been shown in group P2 at the pretreatment condition. In the control group (P0), *E. faecium* could not be identified either pre or post-intervention, in contrast to the treated groups which showed increased in some treatments with the highest of 66.7% (group P3). No adverse effect was observed during 90 days of supplementation to children.

Conclusion: Supplementation of fish and soy protein isolate biscuit and/or probiotic cream every day at a dose of 108cfu/day is considered safe for children under five years old and even increased the number of bifidobacteria and *E. faecium* in the microbiota.

Keyword: Probiotic cream, microbiota, *E. faecium*, undernourished, bifidobacteria

Analysis The Effect of Infectious Diseases with Food Security on The Nutritional Status of Toddler

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Background: Malnutrition in toddler can cause physical, mental, social, and intellectual growth and development disorders that are persistent and continue to be carried on until the child becomes an adult in Indonesia. In fact 4 out of 10 toddler experience physical growth disorders and intelligence levels due to malnutrition in the form of Protein Energy Deficiency. More specifically, malnutrition can cause a delay in body growth, delay in brain development, also causing decrease or low body resistance to infectious diseases. Malnutrition problems in toddlers are caused by various factors such as low household food security and infectious diseases. Furthermore provide an irregular diet, not in accordance with good nutritional needs for toddlers, inadequate family food security and rarely carrying out growth and development checks at Integrated Healthcare Center as a detection of nutritional status in toddler, So that the behavior has a bad impact on the nutritional status of toddler.

Result: The Results of the calculation of χ^2 -chi-square in this research showed that the significance values were higher than the cut-off value of 0.05; thus, the model is considered as having the relevant predictive value. The Result of t-values were lower than ttable (1.96) at the significance level of 5% of the variable was not significant. Tests of direct effects of infectious diseases on nutritional status showed an inner weight coefficient of -0.35 with a t-value of -6.24 . Since the t-value was > 1.96 , thus there was a significant direct effect of infectious diseases on nutritional status.

Conclusion: A negative value of the inner weight indicated a negative relationship between the two. It means that the lower the infectious disease, the better the nutritional status would be.

Keywords: nutrition, toddler, infectious disease.

The Risk Factors of Preconception Anemia in Premarital Women in Bantul, Indonesia

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Background: Preconception anemia is a public health problem that will affects pregnancy outcomes. Indonesian Basic Health Survey (2018) showed that 27.2% women in Indonesia were anemic.

Aim: The aim of this study was to determine the risk factors of preconception anemia in premarital women in Bantul, Indonesia.

Method: This cross-sectional study was involved 190 premarital women in reproductive age living in Bantul, Yogyakarta, Indonesia. The data collected were socio-demographic characteristics, iron intake, vitamin C intake, Fe inhibitors (tannin, phytate, oxalate) intake, the presence of infection, consumption of iron supplement, and body mass index (BMI). Chi square test and multiple logistic regression were used to determine the factors associated with preconception anemia.

Results: Of 190 premarital women, 20% had anemia, 54,7% had low iron intake (0.05). The average of iron and vitamin C intake were lower in the anemic group, while the average of tannin and oxalate intake were higher in the anemic group. After adjusted with other covariates, the odd of having anemia was significantly higher in the women whose iron intake.

Test Antihyperglycemic Activity and Regeneration of Pancreas Beta Cells Extract and Fractions of Okra (*Abelmoschus Esculenta* (L) Moench) Fruit Extracts in Streptozotocin-Nicotinamide-Induced Rats

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Background: Diabetes Mellitus (DM) is a disease caused by a metabolic disorder that results in an increase in blood sugar levels. The problems that arise today are the side effects of using oral antihyperglycemic drugs.

Aim: The aim of this study was to determine the antihyperglycemic and pancreatic cell regeneration from ethanolic extract and fractions of okra fruit in streptozotocin-nicotinamide (STZ-NA) induced diabetic rats.

Methods: This study used 35 male wistar rats divided into 7 groups of rats namely normal group, group 2 was given CMC-Na 0.5%, group 3 was given Glicazid, group 4 was given okra ethanol extract 200mg/kg, group 5 was given n-hexane fraction. 107 mg/kg BW, group 6 was given ethyl acetate fraction 6 mg/kg BW and group 7 was given water fraction 86 mg/kg BW. The test material was given for 28 days, then the decrease in blood glucose levels and the repair of pancreatic cells was seen with Hematoxylin-Eosin staining.

Results: The results showed that there were differences between groups ($p < 0.05$). Our research shows that okra fruit extracts and fractions reduce blood glucose levels and regenerate the pancreas.

Conclusion: The ethyl acetate fraction was the most active fraction compared to the other fractions with a percentage value of 44.95% antihyperglycemic activity.

Keywords: *Abelmoschus esculentus* , fractions, diabetes mellitus, streptozotocin, nicotinamide, blood sugar levels.

Antibacterial Activities Test and Wound Healing of Infection Leaf Ethanol Extract (*Colocasia Esculenta* (L.) Schott) in The Hyperglycemic Rabbits.

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Background: Hyperglycemia is a state of blood glucose levels that increases above normal levels. In conditions of hyperglycemia accompanied by the presence of a wound it will cause the condition of the wound to become even worse so that it becomes an infection wound.

Aim: Determine the antibacterial activity and wound healing of ethanol extract (*Colocasia esculenta* (L.) Schott) leaves against *Staphylococcus aureus* ATCC 25293 and *Escherichia coli* ATCC 25922 in hyperglycemic rabbits induced by alloxan.

Method: The study used 15 New Zealand 3-5 months old rabbits weighing around 1500-2500 grams, which were randomly divided into 5 groups, namely normal, negative control (base cream), positive control (Sagestam® which each gram contains equivalent Gentamycin Sulfate with 1mg Gentamycin), topical and 10% taro leaf extract cream topically. The back skin of the hyperglycemic rabbit, was injured using a 5mm diameter punch biopsy with a depth of $\pm 0,5$ mm, then treated according to the test group for 14 days. Parameters measured included wound diameters and histological observation of infected wounds and wounds without infection in hyperglycemic rabbits.

Results: Result of the experiment showed that 10% taro leaf ethanol extract cream had antibacterial activity against *S. aureus* and *E. coli* which were comparable to positive controls, namely the inhibition zone diameter of *S. aureus* 27.3mm and *E. coli* 18.5mm. Taro leaf extract cream also has infection wound healing activity that is comparable to positive control in hyperglycemic rabbits, 0.9 mm infection wound healing activity and 0.8 mm infectious wound.

Conclusion: *Colocasia esculenta* (L.) Schott) leaf extract cream has antibacterial activity against *S. aureus* and *E. coli* which were comparable to positive controls and also has infection wound healing activity that is comparable to positive control in hyperglycemic rabbits.

Keywords: *Colocasia esculenta* (L.) schott; antibacterial; wound healing; alloxan.

Analysis of Husband Supports with Adherence of Pregnant Women to Consume Iron Supplement

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Background: Stunting is a global problem, including in Indonesia. UNICEF reports the incidence of stunting in Indonesia that in 2018, almost 3 in 10 children under five years of age were stunted or too short for their age, while 1 in 10 was underweight or too thin for their age. Various efforts to prevent stunting have been carried out by the Indonesian government, one of them is iron supplementation for pregnant women. The success of this program is largely determined by the adherence of pregnant women in consuming iron supplement that they receive.

Aim: This study aims to determine the effect of husband's support on the adherence of pregnant women in consuming iron supplements.

Method: This research is a literature study by reviewing 15 journals related to the influence of husband's support on the adherence of pregnant women in consuming iron supplements. The type of data used is secondary data. The method of data collection is literature study. The method that will be used for the assessment is a literature study. The data obtained were compiled, analyzed, and concluded so as to obtain conclusions regarding the study of literature.

Results: Total of 15 articles were reviewed, all of which were written from 2015 – 2021. All articles concluded that there was a significant relationship between husband's support for pregnant women's adherence to iron supplements.

Conclusion: Based on previous research, it can be concluded that husband's support increases the adherence of pregnant women in consuming iron supplements.

Keyword: iron supplements, pregnant women, husband support, adherence, stunting

Food Handlers Behavior with The Implementation of Food Safety in Food at Girl Islamic Boarding School Hidayatul Mubtadia'aat Lirboyo

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Background: Food is a basic human need that is used for growth and development process. Food safety problems occur because of the food product is exposed to a dirty environment, so the food becomes contaminated by substances that can harm human health.

Aim: The purpose of this study was to determine food handlers behavior with the implementation of food safety in food at girl islamic boarding school hidayatul mubtadia'aat lirboyo.

Method: The research design used in this study was observational, using cross sectional approach. The population of all food handlers in Girl Islamic Boarding School Mubtadia'aat Lirboyo., by simple random sampling technique obtained a sample of 32 respondents. The independent variable in this study was behavior of handlers food, while the dependent variable was food safety.

Result: Research instrument used questionnaire and the results were analyzed using Spearman Rank test. The results showed 32 respondents have less behavioral food security in the medium category, that is 16 respondents (50.0%). Results of analysis using Spearman rank test showed a p-value = 0.000 < α = 0.05 so that H0 rejected and H1 accepted meaning there is a food handler behavior with food safety in the operation of the food in Girl Islamic Boarding School Mubtadia'aat Lirboyo.

Conclusion: The behavior of the food handlers or managers of the most important procedures in order to maintain food security. Procedures maintain the cleanliness of one of them is related to the attitudes and behavior of clean. With this expected pattern of preventive measures such as sanitation managers of food handlers and handlers in islamic boarding school.

Keywords: Behavior of food handlers, Food Safety

Analysis of Gravidarum Emesis with Anemia Events in Gravida Mother in Mrican Puskesmas Kediri City

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Background: During pregnancy, a woman experiencing physiological changes can be followed by pathological processes that threaten the state of the mother and fetus. Excessive nausea, vomiting can cause dehydration in pregnant women. This situation will cause extra cellular and plasma fluids to be reduced so that the volume of fluid and blood vessels decreases, causing the amount of nutrients (nutrients) including iron and oxygen that are regulated to the tissues to be reduced, consequently causing anemia in pregnant women.

Aim: The purpose of this study was to determine the effect of emesis gravidarum with the incidence of anemia in pregnant women.

Method: The research design used is quantitative analytic with the "cross sectional" approach. The independent variable is emesis gravidarum, the dependent variable is the incidence of anemia. Population of all pregnant women who do the examination at mrican health center, Kediri city in 2019. Accidental sampling sampling technique with a sample size of 25 people. Research instruments using questionnaires and observation sheets, data analysis using the Spearman rank test.

Result: The results of the study nearly half of respondents experienced mild emesis as many as 12 respondents (48%), the majority of respondents experienced mild anemia which is as much as 18 respondents (72%). The results of Spearman Rank the p-value 0.04 statistic are smaller than α (0.05) which means that there is a relationship between emesis gravidarum and the incidence of anemia in gravida at mrican health center in Kediri city.

Conclusion: This gravidarum emesis causes a decrease in appetite so that there is a change in the balance of electrolytes with potassium, calcium, and sodium resulting in changes in the body's metabolism and result in pregnant women being affected by anemia.

Keywords: emesis gravidarum, anemia, pregnant women.

Literature Review : Risk Factors of Anemia in Pregnancy Women

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Background: In Indonesia, according to the results of Riskesdas (2018), the proportion of anemia in 2018 has increased to 48.9 % when compared to 2013 which was 37.1%. Anemia in pregnancy is a condition where a hemoglobin level is below 110 g / L in the first and third trimesters or a hemoglobin level below 105 g / L in the second trimester. Anemia during pregnancy will impact pregnancy, childbirth, and post-partum.

Aim: The purpose of literature review is to summarize the risk factors of anemia in pregnancy women.

Method: Literature review was taken from 15 journals using a crosssectional study, population is pregnant women in the region. There are eight international journals and seven journals from Indonesia with the span of the last five years. Literature source was from Pubmed, BMC, and Google Scholar.

Results: There were 19 variables were statistically significant through bivariate and multivariate tests on the occurrence of anemia in pregnancy. These variables were age, ethnicity, education, parity, compliance with Fe tablets, economic status, nutritional status, trimester in pregnancy, gestational age, frequency of ANC, residence, income, family members, food insecurity, mother's diet, current clinical disease, parasitic infection, mothers do not use family planning, and body mass index (BMI).

The Effect of Papaya Gandul Leaf Extract Giving (*Carica Papaya* Linn) Againsts Thrombocyte Levels in Male Mice Strain BALB/C with DHF (Dengue Haemorrhagic Fever)

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Background: Dengue hemorrhagic fever is a disease caused by the dengue virus I, II, III and IV. This virus resulted in thrombocytopenia which cause bleeding manifestations. Papaya leaf has many useful substances for humans, such as carpaine, caricaksantin, violaksantin, papain, saponins, flavonoids, tannins, karpain, pseudokarpain, nicotine, kontinin, miosmin and glycosides karposid. One of the content of papaya is believed to increase levels of platelets.

Aim: This research aims to prove the Effect of Papaya Gandul Leaf Extract giving Against Thrombocyte Levels in Male Mice Strain Balb/c with DHF (Dengue Haemorrhagic Fever).

Method: The design that is used in this study is True Experimental Design with a population sample of 20 mice were divided into 5 groups and injected intravenously Den-2 virus 0.2 ml. Data collection using the method hemocytometer further analyzed Parametric Test One-way ANOVA.

Result: The results of analysis using Parametric Test One-way ANOVA, at α 0.05 with the results sig 0.026. With the results of the P1 group 844.75 (x 103/uL), P2 group 1552.75 (x 103/uL) and P3 group 1264 (x 103/uL). Results from all three treatment groups showed that the group of P2 has the highest value of increased thrombocyte, so it the most effective in increasing thrombocyte levels are P2 dose.

Conclusion: It is therefore concluded that giving papaya gandul leaf extract has a therapeutic effect of liver inflammation and inhibit the enzyme reverse transcriptase and DNA polymerase of the virus and inhibit the growth of nucleus virus DNA or RNA, then the virus will weaken and die, so that the cells will increase thrombocyte.

Keywords: Increased Levels of Thrombocytes, Papaya Gandul Leaf Extract

Increasing The Value of Traditional Plants Through Instant Powder Products Dates Ginger

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Background: Indonesia is a country that is rich in biological natural resources. One source of this wealth comes from the abundance of spices, for example ginger. Ginger is a natural food ingredient that is good for warming and increasing the stamina of the human body. Therefore, ginger is widely used for various processed products such as ginger powder drinks. Traditional drinks in the form of instant powder is one way to increase added value, long product durability and practicality in consuming, Powder drinks can made from ginger, turmeric, kencur and temulawak are drinks that are liked by the community.

Aim: Bachelor of Pharmacy study program of IIK Strada Indonesia through Stradapreneur wants to contribute in creating innovative traditional plant products that are beneficial to the community as a form of community service in the Tri Dharma of Higher Education in Ketami Village, Pesantren District, Kediri City.

Method: The products are ginger powder drink with a mix of dates,. The processing carried out includes pressing simplicia, weighing raw materials, mixing, cooking (recrystallization), wet sieving, drying, dry sieving, and packaging. The primary packaging used is metallized multilayer laminate and the secondary packaging uses cardboard. The power used is in the form of electricity and LPG fuel. Quality control is carried out from receiving raw materials, production processes, to finished products that are ready to be marketed. The production team has a food safety certificate that consistently pays attention to the sanitation of equipment, production rooms, personal hygiene, and processing of waste generated from the production process.

Result: The results of the production of traditional instant ginger powder drinks have attractive packaging, meet food safety requirements and can be adopted by the community as an effort to improve the economy.

Keywords: traditional drink, instant powder, community, Kediri City

Successful Breast Milk Production in Review of Nutritional Status and Anemia Status in Breastfeeding Women in Pratama Clinic Prisdhy, Wonorejo Village, Wates Subdistrict Kediri

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Background: Problems that occur during breastfeeding are nutritional status and anemia status. The nutritional status and anemia status of mothers who are lacking when breastfeeding is very influential on breast milk

Aim: The purpose of the study was to determine the relationship between nutritional status and anemia status with the smooth production of breast milk in breastfeeding mothers

Method: The design of this research is correlation with cross sectional approach. The population in this study amounted to 53 breastfeeding mothers with a sample size of 41 breastfeeding mothers. Sampling of this study using simple random sampling, data collection using questionnaires with observation sheets.

Results: The results of this study showed that more than half of the respondents, namely 18 respondents (43.90%) had normal nutritional status with smooth milk production and almost half of the respondents, namely 16 respondents (39.0%) had mild anemia status with smooth milk production. Based on the Spearman statistical test, the value of 0.000 is smaller than the 0.05 value, so it can be concluded that H1 is accepted, which means that there is a relationship between nutritional status and anemia status with the smooth production of breast milk in breastfeeding mothers.

Conclusion: Nutritional status, anemia status and smooth milk production are closely related. Anemia status can be obtained from food (nutritional status). Because the fulfillment of nutrients in foods containing iron can increase hemoglobin. The increased Hb plays a role in distributing oxygen and nutrients to the brain. To provide stimulation for the brain to produce the hormone prolactin and can stimulate cells in the alveoli to produce breast milk.

The Affordability of the Indonesian Dietary Guideline

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Background: Dietary guideline is developed to guide a healthy diet. However, healthy diet not always affordable to certain groups. While studies on affordability of healthy diet has been done in many countries, very limited evidence available for Indonesian case.

Aim: to estimate the cost of following the Indonesian dietary guideline, and analyze its affordability to Indonesian population.

Method: Modified Cost of Recommended Diet (CoRD) method was applied to calculate the cost of following the Indonesian dietary guideline. A household of 4, consist of children aged 12-23 months, adolescent girl aged 15-16 years, moderately active lactating women aged 30-39 years, and moderately active men aged 30-59 years was set for the calculation. We review the guideline and extract information on quantifiable portion size suggestion for each age group and each food groups, i.e. staple foods, animal source protein, plant source protein, vegetables, fruits, sugar, oil, salts and water. For each food groups, local food items were listed, and the price were obtained from the most recent national consumer price data available from the national statistical agency. For each foods, the price was adjusted to raw-cooked conversion factor and percent of edible portion. To calculate the cost per day, in staple, animal source, plant source protein, and fruits groups, the average of 2 lowest cost food items were calculated. In vegetable group, the average price of three lowest cost food items (1 dark green leafy vegetable and 2 other vegetables) was taken. The cost per person per day for all food groups were summed to obtained the cost of Recommended Diet.

Results: The cost of Recommended Diet for Indonesian is IDR 29,339.5/person/day (USD 2/person/day) or IDR 880,186/person/month, which is relatively comparable to those in low and lower middle income countries (Hirvonen et al, 2020). However, this cost is higher compared to the national average of household food expenditure, i.e. IDR 572,551/person/month, indicating that healthy diet may not be affordable for many Indonesians.

Conclusion: The Indonesian dietary guideline may not be affordable for many Indonesians, as the cost of following the guideline is higher compared to the average household food expenditure.

Nutrition Education and Anemia in Adolescent Girls: A Meta-Analysis

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Background: Around 360 million adolescents comprise about 20% of the population in South – East Asia Region (SEAR) countries. Morbidity among adolescents also causes the loss of 21,783 Disability Adjusted Life Years (DALYs) per 100,000 adolescents due to self-harm, anemia, depression, traffic accidents, and diarrhea.

Aim: This study aimed to examine the effect of nutrition education on the incidence of anemia in adolescent girls.

Method: This research was a systematic review and Meta-Analysis. The articles used were obtained from several electronic databases, including Google Scholar, JAMA Network, PubMed, Science Direct, The New England of Medicine, Lancet, and ProQuest, published between 2010 to 2019. The keywords used were: "nutrition education" AND "anemia" AND "adolescent girl" OR "adolescent" OR "young children" AND aOR. The inclusion criteria were full-text articles with an observational study design. The articles were collected using the PRISMA diagram and analyzed using the Review Manager 5.3 application.

Results: The Meta-Analysis from seven included studies showed that not getting nutrition education increased the risk for the incidence of anemia in adolescent girls (aOR= 2.10; 95% CI= 1.60 to 2.76; p=<0.001).

Conclusion: Nutrition education affects the risk of anemia in adolescent girls.

Keywords: health promotion, anemia, adolescent

Relationship Between Individual and Family Characteristics with Unhealthy Eating Habits Among Students of SMAN 2 Liwa, Lampung Barat District in 2020

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Background: Unhealthy eating habits are one of the nutrition issues which will result in negative health outcomes as it is one of the risk factors of few chronic diseases. Adolescents are vulnerable to unhealthy eating habits. Individual and family characteristics are one of the factors which will influence unhealthy eating habits.

Aim: This study aims to observe the relationship between individual and family characteristics with unhealthy eating habits among students at SMAN 2 Liwa Lampung Barat. This cross-sectional study uses secondary data from a study titled “Eating Behavior Changes Before and During Covid-19 Pandemic”.

Method: Total number of respondents of the study is 168 students. This study uses the SPSS application to analyze the data.

Result: Study result shows that 66,1% of students of SMAN 2 Liwa Lampung Barat have unhealthy eating habits. Variables that show a significant relationship (p-value <0,05) are sleeping duration, mother’s educational level, father’s occupation, and mother’s occupation. On the other side, the variables of age, gender, stress level, and father’s education are not having a significant relationship (p-value >0,05) with the cases of unhealthy eating habits.

Conclusion: Adolescents are vulnerable to unhealthy eating habits. Study shows that sleeping duration, mother’s educational level, and parents’ occupation are related to unhealthy eating habits.

Keywords: Adolescents; unhealthy eating habits; SMAN 2 Liwa Lampung

Dominant Factor Related to The Tendency of Eating Disorder among Students of 5 State Senior High School Bekasi in 2021

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Background: In Indonesia, there has not been much research done on eating disorders in adolescents. Whereas adolescents start to have awareness about how they look. Adolescents are exposed to cultural influences that allow them to have eating behavior changes that lead to eating disorders to achieve a body that they desired.

Aim: The aim of this study is to determine the dominant factor and other factors associated with the tendency of eating disorder among students of 5 State Senior High School Bekasi in 2021.

Method: The dependent variable of this study is the tendency of eating disorder measure by Eating Disorder Diagnostic Scale (EDDS) as the questionnaire. There are eight independent variables in this study, they are gender, social media, mass media figure influence, family influence, peer influence, self esteem, body image and history of dieting behavior. This is a quantitative study using cross-sectional method to 410 respondents (grade 10 and 11) from 5 State Senior High School Bekasi. The data obtained were analyzed by univariate, bivariate (chi-square test) and multivariate analysis (multiple logistic regression test). This research was conducted during the COVID-19 pandemic, so anthropometric measurement wasn't conduct.

Results: The results showed that 91.7% of respondents had the tendency to have eating disorder. The findings of the bivariate test found significant relationship between the tendency of eating disorder and social media variables, the influence of mass media figures, family influence, peer influence, self-esteem, and history of dieting behavior. The results of the multivariate test showed the history of dieting behavior as the dominant factor in the tendency of eating disorder (odd ratio = 5.342).

Conclusion: The role of the family and collaboration between schools and health workers is needed to provide nutrition education and support so that adolescents have healthy eating behaviors.

Keywords : eating disorder, adolescent, high school student, history of dieting behavior

Nutrition Literacy Proportion Differences among Regular Undergraduate Students in Universitas Indonesia Year 2021

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Background: Nutrition literacy is the ability to obtain, process, understand, and use nutritional and dietary information, as well as access to the services needed to make good nutritional decisions. Low nutritional literacy can have an impact on a poor diet and lead to the incidence of non-communicable diseases related to nutrition, such as diabetes, obesity, and hypertension. College students are prone to develop poor eating habits if not supported by good nutrition literacy.

Aim: This study measured the difference in the proportion of nutritional literacy in regular active undergraduate students at the University of Indonesia based on the cluster of science, gender, paternal and maternal education level, pocket money, and media use.

Method: This study was conducted at the University of Indonesia, Depok, West Java. The study design used is a cross-sectional design with quota sampling method to get 130 samples of students from Health Science Cluster and 130 samples of students from Non-Health Science

Cluster. Research instruments used are modified questionnaires from Nutrition Literacy Assessment Instrument (NLAI) and Nutrition Literacy Assessment for Adolescent (NLAA) that have been adapted to the Indonesian population and questionnaires related to gender, parental education level, pocket money, and media use.

Results: The results of this study showed that the majority of the University of Indonesia students in 2021 has an adequate level of nutrition literacy (62,7%). The results of the bivariate analysis also showed a significant difference in proportion to the level of total nutrition literacy based on cluster of science (OR = 6.7, p-value < 0,01), gender (OR = 2.25, p-value < 0,01), and media use (OR = 4.36, p-value < 0,01). Significant proportion differences were also found between the level of functional nutrition literacy based on cluster of science (p-value < 0,01), gender (p-value < 0,01), and media use (p-value < 0,01), between the level of interactive nutrition literacy based on cluster of science (p-value < 0,05), maternal education level (p-value < 0,05), and media use (p-value < 0,01), as well as between critical nutrition literacy level based on cluster of science (p-value < 0,01), maternal education level (p-value < 0,05), and media use (p-value < 0,01).



Conclusion: Students from non-health science cluster are at risk of having a lower level of nutrition literacy compared to students from health science cluster. Gender is also related to knowledge and understanding related to nutrition in students. Students who have a low level of maternal education needs more attention to improve their level of nutrition literacy, while students who use the media to seek information related to nutrition in proportion have a higher level of nutrition literacy than students who don't use the media to seek information related to nutrition.

Keyword: Nutrition literacy, Health sciences cluster, College students, Gender, Parental education level, Media use, Pocket money



The Influence of Playing Balanced Nutrition Digital Card Game “Hi, Banana!” on the Improvement of Nutrition Knowledge in Elementary School Children on Pondok Kelapa East Jakarta 2021

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Background: Improving nutritional knowledge is an important foundation to help shaping eating behavior and proper nutrition status since young age, while also reducing mortality and morbidity from nutrition and health-related disease in the future. Currently, technological-based nutrition intervention has brought upon educational games with a potential to reach younger population age.

Aim: Thus, this research was created to challenge the effectivity of balanced nutrition message provided in the digital card game, “Hi, Banana!” to increase nutritional knowledge for school-age children.

Method: Using research design of pre-experimental one group pretest and post-test, intervention with the game “Hi, Banana!” aimed at 50 students from grade 3, 4, and 5 in 03 Pondok Kelapa State Elementary School in Jakarta Timur by measuring knowledge before intervention (pretest), playing the game for a week, measuring post intervention nutritional knowledge at the end of week 1 (post-test 1), doing retention and measuring post-retention nutritional knowledge at the end of week 2 (post-test 2). This intervention was done in duration of 2 weeks between May until June, 2021.

Results: There were significant differences in the children’s average nutritional knowledge seen between pretest and post-test 1, also between pretest and post-test 2, with no significant difference in nutrition knowledge found in post-test 1 to post-test 2. In addition, the average nutritional knowledge of children significantly different between groups categorized by information exposure and duration of daily internet operation in children, as well as exposure to nutrition information and education level for parents who support and accompany children during the intervention. There were no significant differences in nutritional knowledge based on gender, age, class, frequency and duration of contact with games.

Conclusion: Therefore, balanced nutrition digital card game “Hi, Banana!” has proven to increase and retain nutritional knowledge in school-age children based on grades 3, 4, and 5 at Pondok Kelapa, East Jakarta. The average nutrition knowledge also different in compared groups based of children’s information exposure, children’s duration of daily internet operation, parent’s exposure to nutrition information, and parent’s education level.

Keywords: Nutritional knowledge, intervention, card game, school-age children

Factors Associated with The Feeding Practice of Iron-Rich Complementary Foods in Infants Aged 6-23 Months in Indonesia 2017 (Data Analysis of Indonesian Health Demographic Survey 2017)

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Background: The first two years of life are critical periods that determine child's growth and development. Iron deficiency during this period is associated with the incidence of stunting and anemia, which is characterized by poor growth and permanent disturbance of cognitive development. In addition, after six months of age, infants have low hemoglobin levels and iron stores, as well as an increased need for iron that can't be only met from consuming breast milk. Therefore, it is important to provide iron-rich complementary foods to prevent stunting and anemia.

Aim: The purpose of this study is to determine the proportion of the feeding practice of iron-rich complementary foods and the determinant factors associated with the feeding practice of iron rich complementary foods in infants aged 6-23 months in Indonesia in 2017.

Method: This study uses secondary data from the Indonesian Health Demographic Survey 2017. The research design used is cross-sectional with a sample size of 2400 respondents. The sample of this research is mothers who have infants aged 6-23 months in Indonesia. The sampling technique was done by simple random sampling. Data analysis was performed using the chi-square test and multiple logistic regression on the SPSS version 25.

Results: Based on the results of the analysis, as many as 73.7% of infants received iron-rich complementary foods with the most common food source from fish/shellfish. Mother's education level [p-value 0.028; OR = 1.38; 95% CI: 1.035-1.831], digital media access [p-value 0.011; OR = 1.44; 95% CI: 1.079-1.922], age of child [p-value <0.001; OR = 1.76; 95% CI: 1.453-2.132], level of family welfare [p-value <0.001; OR = 1.80; 95% CI: 1.409-2.310], and postnatal care [p-value 0.002; OR = 1.37; 95% CI: 1.117-1.679] had a significant effect on the feeding practice of iron-rich complementary foods.

Conclusion: The Ministry of Health and the Ministry of Agriculture are recommended to optimize nutrition intervention programs, especially the provision of iron rich foods to infants and strengthen the Rumah Pangan Lestari program to ensure the availability of iron rich foods. Health care facilities are advised to strengthen nutrition education regarding the importance of iron-rich foods. Mothers are advised to improve their knowledge through the internet about the importance of iron-rich foods in infants.

Keywords: iron-rich complementary foods, infant aged 6-23 months, feeding practice

**Identification of Stunting Prevalence, Autocorrelation,
and Determinants in 514 Indonesian Districts/Cities Using A Spatial Autoregressive
Model**

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Background: While the national prevalence of stunting in Indonesia has decreased, the level remains high in many districts/cities and there is significant variation.

Method: This ecological study employed aggregated data from the 2018 Basic Health Research Report to describe stunting prevalence at the district/city level, identify the autocorrelation between districts/cities, and determine a stunting prevalence model using a spatial autoregressive (SAR) model. Data processing was carried out using the R i386 3.6.1 software to process spatial data and Tableau Public 2020 to describe the stunting prevalence distribution.

Results: It was found that 282 districts/cities (54.9%) in Indonesia had stunting prevalences above the national average, and that it was $\geq 30\%$ in 297 districts/cities (57.8%) and $\geq 40\%$ in 91 districts/cities (17.7%). Autocorrelation was found between regions based on stunting prevalence in Sumatra, Java, Sulawesi, and Bali and East Nusa Tenggara and West Nusa Tenggara (Bali NTT NTB). The results of the SAR modeling showed that significant determinants of stunting were close defecation, handwashing, antenatal care at least four times during pregnancy (ANC-K4), and poverty in Sumatra; ANC-K4 and poverty in Java; close defecation and ANC-K4 in Sulawesi; and handwashing, immunization, poverty, and child supplementary feeding in Bali NTT NTB.

Keywords: stunting, stunting autocorrelation, Indonesian spatial analysis, stunting SAR

The Effect of the Health Belief Model Theory on Effort to Prevent Stunting in Toddlers Through Nutritional Fulfillment Behavior in Working Area of Kualin Public Health Center, South Central Timor Regency

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Background: Stunting is a toddler with chronic nutritional problem who have nutritional status based on length or height according to age of under five when compared with standar of the WHO-MGRS (Multicentre Growth Reference Study) in 2005, has a z-score value less than -2SD and if the z-score value is less than -3SD is categorized as a very short toddler. The incidence of stunting is caused by several factors, one of which is not optimal nutrition.

Aim: The purpose of this study in general was to determine the effect of the health belief model theory on effort to prevent stunting in toddlers through nutritional fulfillment behavior in working area of Kualin Public Health Center, South Central Timor Regency.

Method: The type of research is a quantitative study with an observational method and a cross sectional approach. The sample used was 243 stunting mothers. The independent variable are perceived susceptibility, perceived severity, perceived barrier cues to action, perceived benefit and self efficacy. Nutritional fulfillment behavior as an intermediate variable and stunting prevention as a dependent variable. Data analysis used path analysis.

Results: The result show that in the first regression test model, simultaneously there was an effect of variabel X on Y with a significance value of 0,000 and a large effect of 10,2%. The result of second regression test model, simultaneously shows that there is an effect of variable X and Y of Z with a significance value of 0,000 and a large effect of 12,8%.

Conclusion: The conclusion of this study is simultaneously there is an effect of the application of Health belief model theory on effort to prevent stunting in toddlers through nutritional fulfillment behavior in working are of kualin public health center, Kualin district, south central timor regency.

Keywords: Health belief model, nutritional fulfillment behavior, prevent of stunting

The Relationship between Mother's Knowledge Level about Nutrition and Stunting in Toddlers

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Background : There are still many mothers who do not know about toddler nutrition in Banjaragung Village, Puri District, Mojokerto Regency, which can cause a high incidence of stunting.

Aim: The aim of this study is to determine the relationship of maternal knowledge about nutrition with the incidence of stunting in infants.

Method: The study used a correlation analytic design with a cross-sectional approach. The population in this study were all mothers and toddlers in Banjaragung Village, Puri District, Mojokerto Regency on March 2020, total 360 respondents. The sampling technique used proportional random sampling with a sample of 144 respondents. Data collection was carried out using a questionnaire.

Results: The results suggested that 9,7% of respondents who had less knowledge, their children experienced stunting, while 12,5% of mothers who had good knowledge, their children were not stunting, namely 21 people (48.8 %). There is a relationship between the level of knowledge and the incidence of stunting in Posyandu, Banjaragung Village, Puri District, Mojokerto Regency.

Conclusion: There is a need to improve health service, especially in the field of child health, to prevent stunting in children.

Body Mass Index, Macronutrient and Micronutrient Intake in Relation with Dementia among Older Adults in Surabaya, Indonesia

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Background: Dementia is one of cognitive impairment which could lead to malnutrition in older adults. There was a strong evidence suggests that dementia is affected by lack of macro and micronutrients intake as well as nutritional status.

Aim: This study aims to analyze the correlation between socio economic, Body Mass Index (BMI), macronutrient and micronutrient intake with dementia.

Method: Four hundreds older adults were recruited to the study through simple random sampling. The study was taken place in Surabaya, Indonesia. Dementia was measured using Mini-Mental State Exam (MMSE) questionnaire while daily intake was retrieved from 3 non-consecutive days 24h food recall done by trained nutritionist. Socio-economic status including educational background, occupation, income and expenses were retrieved from structured questionnaire, Data then analysed statistically using chi-square and logistic linear regression.

Results: The result reveals the correlation of dementia with age, sex, present disease and socio-economic measures (i.e., educational background and monthly income) were correlated with dementia ($p < 0.05$). Logistic regression analysis found that there was significant different in Body Mass Index ($p=0.028$; OR= -0.147; 95%CI= -0.016–0.003), daily carbohydrate intake ($p=0.001$; OR= -0.292; 95%CI=-0.007- -0.002), natrium intake ($p=0.004$; OR=0.171; 95%CI=0.000–0.000) and fiber intake ($p=0.009$; OR=2.386; 95%CI=0.006–0.064) between older adults with and without dementia.

Conclusion: This study offers an important insight to improve older adults' daily intake related to carbohydrate, natrium and fiber intake in minimizing the risk of dementia and also emphasize on balanced-diet lifestyle during elderly period.

Relationship Patterns Of Breastfeeding And Diarrhea In Baby 0-6 Months In Mattiro Sompe District, Pinrang District, South Sulawesi, Indonesia

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Background: Neonatal period is an important period for survival in infancy. Nutrition and breastfeeding are most needed in this period for the physical and mental development of the baby. Breast milk contains anti-body from the mother that helps fight disease, protect babies from diarrhea and acute respiratory infections and Prolonged and exclusive breastfeeding can accelerate weight gain and body length in the first few months of life.

Aim: To analyze the relationship between breastfeeding patterns and the incidence of diarrhea in infants 0-6 months
Method: The study used a cross sectional study design involving mothers and babies aged 0-6 months in the Mattiro Sompe District Pinrang District as many as 71 breastfeeding mothers and their babies by looking at the relationship between breastfeeding patterns and the incidence of diarrhea.

Results: The results of 71 breastfeeding mothers and their babies in Mattiro Sompe Subdistrict Pinrang District with the relationship of breastfeeding patterns showed that there was a significant relationship between breastfeeding patterns and the incidence of diarrhea where for exclusive breastfeeding showed the value of $p = 0,000$ (OR = 0.039 LL = 0.008 UL = 0.190) , predominant breastfeeding shows the value of $p = 0,296$ (OR = 2,250 LL = 0,417 UL = 12,130) while partial breastfeeding shows the result $p = 0,007$ (OR = 4,583 LL = 1,501 UL = 13,992) of the three breastfeeding patterns indicating that partial breastfeeding is a factor most at risk of diarrhea.

Conclusion: The results showed that there was a significant relationship between breastfeeding patterns and the incidence of diarrhea in Mattiro Sompe Subdistrict, Pinrang District.

Keywords: breastfeeding patterns, diarrhea, infants 0-6 months

Comparison between physical exercise and alendronate Against bone calcium levels and body weight in Wistar rats model Glucocorticoid-Induce Osteoporosis

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Background: Glucocorticoid-induced osteoporosis (GIO) is a bone condition with osteoporosis due to taking long-term glucocorticoid drugs which is the most common cause of increasing the number of fracture cases which is a health problem. GIO is one of the most common forms of osteoporosis in men. Sodium alendronate is a bisphosphonate drug that is approved for prevention and management of GIO but has serious side effects on long-term use. Doing physical exercise "weight-bearing exercise" such as running is known to increase BMD (Bone Mineral Density) and can reduce osteoporosis and the risk of osteoporosis.

Method: This study was a study with experimental studies, using male Wistar rats aged 8 weeks divided randomly into 4 groups, namely 1) positive control group (given oral prednisolone 0.54 mg / 200g / day), 2) negative control group (not given oral prednisolone), 3) physical exercise group and 4) oral administration group of sodium alendronate (0.09 mg / 200g / day). Bone density will be measured by measuring the calcium level of the tibia bone using the AAS (Atomic Absorptions Spectrophotometer) method and the body weight of mice using scales.

Results: The results showed that physical exercise and sodium alendronate significantly affected $p = 0.029$ with ($p < 0.05$) increasing calcium levels in rats induced by glucocorticoids and obtained $p = 0.064$ with ($p < 0.05$) in this study there was no difference significant body weight difference between research groups.

Effect of the First 1000 Days of Life Calendar Use for Early Detection Risk Factors of Stunting in Bangka District

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Background: Nutrition problems occur in every life cycle, starting in the womb (fetus), infants, children, adults and old age. The period of the first two years of life is a critical period, because at this time there is very rapid growth and development. One of the nutritional problems suffered by toddlers is stunting which is a short or very short body condition that occurs due to malnutrition and repeated illnesses for a long time in the fetus until the first 2 years of a child's life. Stunting or stunted body growth is a form of malnutrition characterized by height according to age below the standard deviation (<-2 SD). Children with stunting have an IQ of 5-10 points lower than normal children.

Aim: This study examines the effect of using the calendar of the first 1000 days of life as a medium for health promotion on reducing risk factors for stunting in Bangka Regency

Method: This research is a quasi-experimental research with a pre-post test with control group design. Subjects were mothers who had stunting children under the age of 2 years (6-24 months) as many as 30 people selected by purposive sampling. Subjects were divided into two groups, the case group used 1000 HPK calendar media and the second group without treatment (control). The case group is mothers who have stunting children (PB / U <-2 SD Z-score) and the control group is normal children based on PB / U indicators.

Results: Characteristics of respondents namely the age of the respondents at most, 40% aged 25-29 years, from parity of mothers at most (33.3%) mothers with parity 2, from the education of the respondents most (46.7%) respondents completed primary school, from most of the mothers work (86.7%) of respondents work as housewives, from the majority of income 53.3% of income between 1-2 million, health services are used mostly (73.3%) using public health care (Puskesmas) as a health service center, exclusive breastfeeding history, most (80%) mothers with exclusive breastfeeding, most complete infant and toddler immunizations, husband's attitudes and support 100% of husbands support stunting management, baby's weight 80% baby's weight > 2500 ..

Conclusion: There is an effect of using the calendar of 1000 First Days Life on the length / height of the child's body, after observing for 4 months the control group and the treatment group with a sample of 15 control groups and 15 treatment groups.

Analysis of Iron, Zinc, and Calcium Contents in Cooked Foodstuffs from Bangkalan, East Java

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Background: Bangkalan is one of 100 districts with many stunting cases in Indonesia. Stunting is stunt and growth retardation in children due to malnutrition, especially in the first two years of birth. Adequate nutrition becomes important for children and nursing mothers. The database of nutrient content including carbohydrates, proteins, fats, and vitamins has been widely available, but the database of essential minerals content is limited. Essential mineral deficiency can cause abnormalities and growth retardation, especially iron (Fe), zinc (Zn), and calcium (Ca).

Aim: This study aims to provide a database of Fe, Zn, and Ca contents in foodstuffs. The database is vital to be a consideration in the selection of the daily food menu composition for families with stunting children.

Method: Various types of foodstuffs were purchased at the market in Bangkalan district, East Java. Foodstuffs were cleaned and boiled using clean water without purification at temperature 80°C. The foodstuffs used as samples are a common part consumed by people. The samples are divided into three categories of dishes, staples and vegetables. The mineral contents in the samples were determined using instrumental neutron activation analysis (INAA).

Results: The results show that the order of categories based on the Fe content from the highest values is vegetables (44 to 1462 mg/kg), staples (13 to 178 mg/kg), and dishes (10 to 66 mg/kg), respectively. Based on the Zn and Ca contents, the order is dishes (15 to 154 mg/kg for Zn, 504 to 27749 mg/kg for Ca); vegetables (10 to 70 mg/kg for Zn, 300 to 26459 mg/kg for Ca); and staples (5 to 47 mg/kg for Zn, 25 to 3017 mg/kg for Ca), respectively. The contents of Fe, Zn, and Ca in foodstuffs are not interrelated, shown by the results of the Person's correlation with $r < 0.01$. This indicates the need for a combination of various types of foodstuffs to meet the intake of essential minerals in the body. The mineral intake estimation can be determined by multiplying its content by the level of consumption of each food. The dominant contribution to the mineral intake of Fe, Zn, and Ca, respectively, is sourced from spinach, rice, and fish. However, the daily intake is relatively insufficient from the main food, so supplement foods are still needed to meet the recommended daily intake.

Conclusion: Database of essential minerals content (Fe, Zn, and Ca) in foodstuffs has been obtained, and it is found that each foodstuff has different content. That way, the combination of various types of food is important to meet the daily mineral intake. Even so, food supplements are still needed to achieve the recommended intake.

Environmental Risk Factors Associated with Child Stunting in Coastal Areas : A systematic Review of The Literature

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Background: Stunting is malnutrition in the form of a linear growth delay in the first two years of life that affects a quarter of children globally. The main cause of stunting is nutritional status but there is other evidence that the environment is also a risk factor for the progress of a child's growth (stunting).

Aim: The purpose of this review is to explore the current literature and develop environmental risk factors that have been linked to stunting and researchers attempt to find which risk factors are dominant independently of environmental factors.

Method: A systematic search of the literature was performed using Pubmed, EBSCOhost, and Scopus. A search of the grey literature was conducted. Papers were included in this review if they examined an association between childhood stunting and exposure to environmental risk factors.

Results: The results showed that lack of adequate sanitation such as clean water sources and types of latrines, as well as foodborne mitotoxins are associated with an increased risk of stunting . Access to safe water sources was studied in a large number of studies, but the results were inconclusive because of inconsistent study findings and inappropriate types of latrines that had a risk of stunting and a causal model identifying foodborne mitotoxins has the potential to have a direct effect on child growth.

Conclusion: Various environmental risk factors related to stunting show the importance of considering how the environment interacts with nutritional status. Health promotion activities may be more effective when considering environmental factors together with nutrition interventions.

COCONUT AS A TOOL FOR RATS IN THE REGION BUFFER OF PROBOLINGGO, INDONESIA

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Background: Rats are wild animals from the mammal group known as animals that disrupt human life and have an impact on the transmission of diseases carried by mice. The rats eradication program is carried out in border areas such as ports.

Aim: This study aims to determine the effectiveness of rat traps with coconut, coconut roasted and burned coconut in the Probolinggo Tajung Tembaga Port buffer region. Burned coconut is a standard for baiting rats.

Method: This type of research is pre-experimental.

Results: Catches of rats were obtained as many as 13 rats with the types of *Rattus norvegicus* and *Rattus rattus diardii*, with the results of coconut roasted 6 rats, coconut 4 rats and burned coconut 3 rats. The rat density obtained was 0.071. Environmental sanitation which affects the presence of rats, namely the condition of non-closed landfills by 76%, the presence of 100% used goods outside the house and 100% disposal of open waste water. After the normality test was obtained, the results showed that the data were not normally distributed so that the Kruskal Wallis test was carried out and the results showed that there was no difference between coconut, roasted coconut and roasted coconut feed (p value = 0.562).

Conclusion: the Kruskal Wallis test was carried out and the results showed that there was no difference between coconut, roasted coconut and roasted coconut feed (p value = 0.562).

Effect Zinc Supplementation on Zinc and Cadmium Status in Stunted Children

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Background: Previous study showed that Zinc supplementation of 5 mg per day affected the alteration of zinc deposit in hair and cadmium urine. Zinc supplementation can increase zinc status and can be protective factor on cadmium exposure. But, so far some research showed difference result zinc supplementation on cadmium exposure in stunted children.

Aim: To analyze effect of 5, 10, 20 mg zinc supplementation on zinc and cadmium status in stunted children

Method: This experimental study was conducted on 45 stunted children that were divided into 3 groups. Group 1 (15 children who were given 5 mg/day zinc supplementation); group 2 (15 children who were given 10 mg/day zinc supplementation); group 3 (15 children who were given 20 mg/day zinc supplementation). The treatment was given for 3 months. Zinc and cadmium were examined in pre and post treatment. Analysis of urine Cd and hair zinc used spectrophotometric method at Public Health Nutrition Laboratory, Universitas Airlangga. Statistical analysis was using paired t test and anova one way with significance 0.05.

Result: The result showed that pre examination of zinc hair status on stunted children were in low level with average 60,87 ppm; and cadmium urine status were very high 6,53 µg/L. Paired t test analysis showed that there were differences between pre and post on zinc hair status and cadmium urine status in each group ($p=0,000$; $p=0,000$). Anova one way analysis showed that there was differenced between group (5 mg, 10 mg, 20 mg) on zinc hair ($p=0,000;0,000;0,003$), but not on cadmium urine ($p=0,196;0,084;0,617$)

Conclusion: It can be concluded that increasing zinc supplementation in stunted children give an impact on zinc hair status but not on cadmium exposure.

Keywords: zinc supplementation, zinc hair, cadmium urine, stunted children

Glycemic Index and Glycemic Load of Cookies Addicted With Tofu Pulp

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Background: Diabetes is a chronic metabolic disorder characterized by high blood glucose levels because the body cannot produce or secrete insulin effectively. People with diabetes mellitus must pay attention to carbohydrate intake and prefer to consume complex carbohydrate sources with a low glycemic index and glycemic load because glycemic control can prevent complications of diabetes and maintain blood sugar levels. Tofu pulp are known have high fiber, protein content and also have low in carbohydrates. Utilization of tofu pulp into cookies is expected to have a low glycemic index and glycemic load that can be consumed by people with diabetes.

Aim: This study aims to analyze the glycemic index and glycemic load of tofu pulp cookies.

Method: This research uses a one shot case study design with sample selection using purposive sampling technique which is divided into two groups of 10 respondents each. The glycemic index was obtained by comparing the blood glucose yield curve of the reference food and the test food from each group. The glycemic index and glycemic load data of both groups were analyzed using independent t-test.

Results: The glycemic index of control cookies and tofu pulp cookies are in the high category (>70) which are 111.58 and 111.06, respectively. There was no significant difference between the glycemic index of control cookies and tofu pulp cookies p -value= 0,558 ($p>0,05$). The glycemic load of the two cookies was also high (> 20), namely control cookies of 26.6 and tofu dregs cookies of 22.47. There was no significant difference between the glycemic load of control cookies and tofu pulp cookies p -value= 0,896 ($p>0,05$) Conclusion: Tofu pulp cookies are not recommended for consumption for diabetics because its high glycemic index and glycemic load

Keywords : Cookies, tofu pulp, glycemic index, glycemic load

The Purpose of This Study Is to Determine Whether There Is Influence Iron Tablet Consumption With Hb Levels of Anemia Female Adolescent in SMA Negeri 01 Doro Pekalongan Regency.

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Background : Anemia in young women can interfere motor development and decrease the ability of concentration, thus it affects the learning achievement. The prevalence of anemia in adolescent girls are still very high. Provision of iron tablets is one way to increase Hb so that it can overcome anemia problem in young women. The number of iron tablets administered and consumed by the respondent in a time for one month as much as 4 items consumed 1x / week.

Aim : This study is to determine whether there is influence iron tablet consumption with Hb levels of anemia female adolescent in SMA Negeri 01 Doro Pekalongan Regency.

Method: This research design uses experimental quasi with approach of pre test and post test. Samples taken by all girls of SMA Negeri 01 Doro anemia were 37 students. The data of iron tablet consumption was obtained by filling the questionnaire distributed while the Hb level was measured by cyanmethoglobin method. The statistical test used is the Wilcoxon test of the previous variable data first viewed the normality.

Result : In the univariate analysis, the average number of iron tablets consumed by adolescent girls was 2.76 ± 1.01 grains with a minimum value of 1 grain and a maximum of 4 grains. Mean Body Mass Index (BMI) in female adolescent $20,47 \pm 2.54$ kg / m² with maximum value 28,76 kg (obesity nutrient status) and minimum 15,77 kg (nutrient status less). Based on the result of analysis, consumption variable of iron tablet is significant so that there is influence of iron tablet consumption with Hb content of adolescent daughter anemia ($p = 0,00$). Hb level of female adolescent before being given Iron Tablet has an average of 10.8 gr / dl after given Iron Tablet Hb level increased by 12,40 gr / dl.

Conclusion : It is expected that young women consume iron tablets to prevent and treat anemia.

Keywords: Iron tablet, Hemoglobin, adolescent

Ultra-Processed Food Consumption in College Students during Covid-19 pandemic (before and during Ramadhan fasting): a cross-sectional study

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Background: The quarantine during covid-19 pandemic could be considered a risk factor for poor-quality foods consumption, including ultra-processed foods. Ramadhan intermittent religious fasting that is practiced by most Indonesian citizens coincided this year with Covid-19 pandemic. Dietary and lifestyle before and during Ramadhan month might change, as the fast involves abstaining from consuming food or drink from dawn to sunset or almost 13.5 hours in Indonesia.

Aim: to compare ultra-processed foods consumption before and during Ramadhan fasting among college students.

Method: Of the cross-sectional study via web survey, 229 college students (80% girls, 13.6% overweight and obese, 18-24 years) had weekly ultra-processed foods consumption data. To compare ultra-processed foods consumption before and during Ramadhan fasting, a Wilcoxon test was performed.

Results: The consumption of ultra-processed foods was lower during Ramadhan fasting compare to before Ramadhan fasting ($p < 0.001$). Decreasing ultra-processed foods consumption during Ramadhan fasting were candy ($p < 0.001$), chocolate ($p < 0.001$), ice cream ($p < 0.001$), packaged bread ($p < 0.001$), cereal ($p < 0.001$), chips ($p < 0.001$), hamburger ($p < 0.001$), jams ($p = 0.017$), margarine ($p = 0.039$) French fries ($p = 0.003$), processed cheese ($p < 0.001$), instant soup ($p = 0.014$), instant noodle ($p = 0.001$), sprinkles ($p = 0.007$), soy sauce ($p < 0.001$), biscuit ($p < 0.001$) and soft drink ($p = 0.002$).

Conclusion: Ramadhan intermittent fasting changes the consumption of ultra-processed foods. Further research is needed to explore Ramadhan fasting affects immunity against SARS-CoV-2 infection.

Keywords: adolescents; Covid-19 pandemic; e-survey

Exploring the Sustainability of Childhood Obesity Interventions: A Mixed Methods Study

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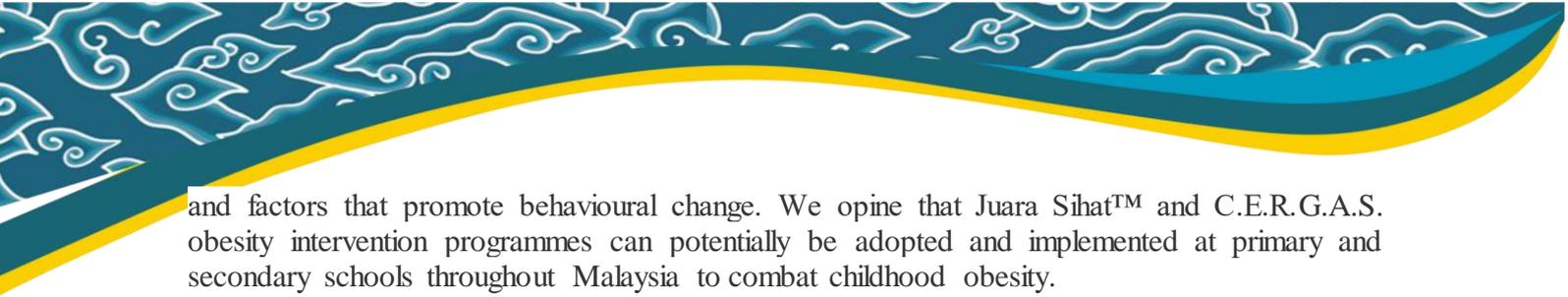
Background: Obesity and physical inactivity among school children are among the most challenging health problems in Malaysia. School-based obesity intervention is important not only to promote healthy lifestyles and behaviour changes, but it also has to be translatable, scalable and sustainable.

Aim: This mixed methods study aimed to explore the sustained impact of Juara Sihat™ and C.E.R.G.A.S. interventions, which are 12-week obesity interventions conducted among primary school and secondary school students, respectively. Both intervention programmes focused on healthy eating and physical activity, while the latter has an added component of physical fitness.

Method: Participants of Juara Sihat™ (n=55) and C.E.R.G.A.S. (n=52) were followed-up at 16 and 18 months, respectively, after completion of intervention for sustainability of anthropometric outcomes, including body mass index (BMI), body fat percentage (%BF) and waist circumference (WC). A total of 47 participants were followed-up at 30 months with face-to-face in-depth interview to explore barriers and motivators that influence sustainability of behavioural changes. Anthropometric assessments done at baseline [P0], 3rd [P1], 6th [P2], and at 16th or 18th months [P3] postintervention are reported. Repeated measures ANOVA with intention-to-treat principle was applied. Interviews were audio-recorded, transcribed verbatim and analysed thematically.

Results: At 16 months after completion of programme, Juara Sihat™ demonstrated sustained effects in BMI-for-age Z-score which showed a reduction (P0 2.41±0.84 vs P3 2.27±0.81) and physical activity level which showed positive improvements (P0 2.46±0.62 vs P3 2.87±0.76). Similarly for C.E.R.G.A.S programme, significant reductions were found in BMI-for-age Z-score (P0 2.51±0.89 vs P3 2.16±0.88, p<0.05) and %BF (P0 41.8±8.0 vs P3 36.8±7.6, p<0.001). Three shared themes for barriers were identified: (1) inconsistency of knowledge; (2) peer influence; and (3) negative attitude, such as laziness, embarrassment, boredom, busyness and lack of self-discipline. Meanwhile, the five shared themes for motivators were: (1) moral support from family members, peers and school teachers; (2) self-awareness on health status and body image; (3) knowledge on food pyramid and physical activity; (4) supportive physical environment; and (5) physical environment and healthy eating practices after intervention.

Conclusion: Overall, the effect of Juara Sihat™ and C.E.R.G.A.S. interventions on BMI-for-age Z-score was successfully sustained over a period of more than a year after completion of programme. Future school-based obesity intervention programmes should consider barriers



and factors that promote behavioural change. We opine that Juara Sihat™ and C.E.R.G.A.S. obesity intervention programmes can potentially be adopted and implemented at primary and secondary schools throughout Malaysia to combat childhood obesity.

Keywords: sustainability; Childhood; Obesity; Interventions; Mixed Methods



Food Accessibility Related to Nutritional Status in Japanese Older Adults Living Alone: A Literature Review

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Background: Expanding of older adults, aged over 65 in Japan, are leading in the world. Especially, the number of them living alone is rapidly increasing. The older adults living alone have difficulty to go shopping far away if their mental and physical condition worsens. If local retailers are closed down in the city center area, they become vulnerable to shopping. Thus, it is an urgent task to examine the food accessibility related to the nutritional status of older adults living alone.

Aim: The aim of this study was to clarify the findings obtained in earlier studies on the food accessibility related to the nutritional status of the older adults living alone for the purpose of providing them with suitable dietary support.

Method: PubMed, CINAHL, and Igaku Chuo Zasshi the Web version (the Japanese Medical Database) were used as databases to search literature published between 1999 and 2018. The main keywords were "elderly" and "living alone." In addition, "nutrition" and "food" were used (search 1), or "food access" was used (search 2). Eighteen articles were selected and examined.

Results: Nutritional status in older adults living alone tended to be poorer than who living with someone. Food accessibility related to the nutritional status of older adults living alone has 7 factors. They were "Low economic situation," "Feeling of isolation and eating alone," "decreased functional ability," "Weak social network," "Low skills and behaviors in diet," "Low awareness about eating," and "Living conditions inconvenient for shopping".

Conclusion: The food accessibility related to poor nutritional status in older adults living alone had diverse and complex factors. These results suggest that it is necessary to examine the difficulties in the daily life of them, and to provide them with support considering the factors of food accessibility.

The Effectiveness of Dietary Health Education Intervention to Reduce Coughing for the Elderly with Dysphagia

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Background: One of the barriers precludes the elders from sufficient nutrition is dysphagia. Dysphagia is further associated with a high risk of aspiration, aspiration pneumonia, and death among the affected elders. Such an unfavorable situation can be improved by the measures of modifying the texture of food. Given the aging society of Tainan, the effectiveness and cost-effectiveness of the diet-texture-modifying education programme provided at the population level are urgently needed.

Aim: The first aim is to evaluate the disease burden of choking and dysphagia among four Tainan communities. The second aim is to assess the potential effectiveness of the diet-texture-modifying intervention. Finally, a cost-effectiveness study on the proposed intervention programme was assessed.

Method: Structured questionnaires were provided to attendants of community-dwelling elders aged 65 and above in Tainan to investigate dysphagia or choking through self-assessment. The effectiveness of the diet-texture-modifying intervention was assessed through a systematic literature review. Based on the data above and in Taiwan, a cost-effectiveness analysis for a community-based diet-texture-modifying intervention was assessed.

Results: There were 1,083 elders who attended the survey and the average age was 75.3 years old. There were 122 subjects (11.3%) who suffered from choking and 170 subjects (15.7%) suffered from dysphagia. By using the information abstracted from the systematic literature review in conjunction with meta-analysis, the diet-texture-modifying intervention results in reducing the risk of choking/aspiration pneumonia by 28% (95% CI: 14-41%; OR=0.72, 95%CI 0.59-0.86). The cost-effectiveness analysis for the population-based diet-texture-modifying intervention showed the efficacy in reducing pneumonia cases (5,979 vs 6,336) and deaths (649 vs 714) compared with ordinary health education. Compared with ordinary health education, the incremental cost of the diet-texture-modifying intervention was NTD 365.75 and the incremental effect was 0.006836 life-years, which gives the incremental cost-effectiveness ratio (ICER) of NTD 53976.08 per life-year gained.

Conclusion: By using the demography of Tainan elders, this practicum thesis shows that a population-based diet-texture-modifying intervention can be a preventive approach to be considered according to the results of cost-effectiveness analysis.

Keywords: health education, dysphagia, choke, elderly, texture-modified food.

Development And Evaluation Of An Interactive Nutrition Website – A Digital Health Intervention Among Adolescent Girls

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Background: Digital assisted technology and digital health intervention can help integrate behavioral modification models into adolescent lifestyles and provide them with web based interventions offer adolescents for easy access to information and counseling on demand. Integrating technological advances and counselling care will provide better treatments for obesity in the future. Currently, the most effective distribution channel of information is World Wide Web, which is convenient to use and capable of reaching a broad audience.

Aim: The aim of the present study is to develop an interactive nutrition website and to evaluate its impact on nutrition knowledge on adolescent girls. **Method:** Two hundred adolescent girls in the age group of 17 to 20 years which included 100 Non-Nutrition students and 100 Nutrition students were selected from Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore. An informative, interactive nutrition website was developed with the domain name www.nutrition-ijkl.com with information on basic food groups; importance of nutrition to adolescents, growth and development, nutrient requirements, nutritional problems, special situations, ICMR recommended daily allowances, Body Mass Index and nutrient calculations. The students were asked to visit the contents on each web page, and calculate their Body Mass Index and their nutrient intake. The adolescent girls were asked to answer the questions posted in the questionnaire and opinionnaire in the website.

Results: The results revealed that there is significant difference at one per cent level in the initial nutritional knowledge of the nutrition students when compared with non-nutrition both before imparting nutrition education and after imparting nutrition education through nutrition website. The nutrition students showed higher scores than the non-nutrition students. Nutrition education through the developed website improved their mean nutrition knowledge scores significantly ($p < 0.01$) from 9.61 ± 3.96 and 13.47 ± 2.99 to 14.84 ± 1.51 and 15.88 ± 0.35 in both non-nutrition and nutrition students respectively.

Conclusion: Digital assisted technologies as digital health intervention are useful to distribute generic nutrition communication to a large potential audience worldwide and provide an easily accessible source of information on nutrition and health, determinants of nutrition behaviours, and evidence-based nutrition education strategies.

Keywords: Digital health intervention, Digital Technologies, Nutrition Website

The Effect Of Drying Temperature And Milling Time At Total Flavonoid Levels In Dry Green Tea Powder

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Background: The manufacture of green tea nanoparticle powder using dry milling method. The basic ingredients of making green tea powder come from fresh tea leaves. Dry milling process is carried out using a microwave with a temperature variation of 400C, 800C, and 1000C for 4 minutes and then dried in an oven with a temperature of 600C for 2 hours. Dry milling process was carried out with variations in time 0, 60, 180, 300, and 480 minutes.

Aim: This study describes the process of synthesis and characterization of green tea dry powder nanoparticles and the effect of drying temperature and milling duration on the total flavonoid levels of green tea dry powder.

Method: After the dry milling process, the characterization was done using 2 methods: the first, using Scanning Electron Microscopy (SEM) to determine the solid morphological conditions, the second is to determine the particle size by characterization of Particle Size Analyzer (PSA). The next analysis process is the identification of the total content of flavonoids in green tea dry powder by LC-MS method.

Result: The result of the analysis using SEM with Sigma Scan software shows that the grain size (μm) of the milling time variations is different. Drying temperature and milling duration individually and collectively have a significant effect on total flavonoid levels; the highest flavonoid level is 400C in the drying process, especially on the milling duration for 3 hours.

Conclusion: From the results of this study, it can be concluded that the drying temperature and the duration of milling affect the levels of flavonoids in green tea dry powder.



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*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0
AND THE COVID-19 PANDEMIC*



Performance Analysis of TB Control Program Officer of Public Health Center in Implementing a Scoring System for Childhood TB Diagnosis in Surabaya

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Background: Tuberculosis (TB) still becomes a main health issue in the world since it is one of the big ten cases that cause mortality. From the total case of TB, it has been estimated around 10% of the cases happened in children <15 years old. One of the issues of childhood TB in Indonesia is establishing a diagnosis. The scoring system for childhood TB diagnosis is socialized and recommended as the approach for diagnosis. The officer has an important function and role in detecting the case of childhood TB. A good implementation of the scoring system is expected to be able to increase the total proportion of childhood TB, which has not fulfilled the established standard.

Aim: This research aims at analyzing the performance of TB control program officer at a public health center in implementing the scoring system for the diagnosis of childhood TB.

Method: The research is an observational study by using a cross-sectional design. The population is all officers of the TB control program at Public Health Center in the work area of Health Agency of Surabaya in 2019 with a total sample of 61 officers taken using simple random sampling technique. The data is analyzed by using simple Logistic Regression with a p-value of <0,25. The dominant variable is analyzed using Multiple Logistic Regression with a p-value of <0,05.

Results: The research finding showed that no impact of age (p=0,707), sex (p=0,344), education (p=0,912), employment status (p=0,674), supervision (p=0,069), rewards (p=0,075), workload (p=0,322), work period (p=0,082), and attitude (p=0,573) on the performance of TB control program at Public Health Center in Implementing Scoring System for the diagnosis of TB in children. There was an impact of training (p=0,028), work environment (p=0,012), and motivation (p=0,004) on the performance of TB control program officer of Public Health Center in Implementing Scoring System for childhood TB diagnosis.

Conclusion: The most affecting factors for the performance of the TB control program officer of the Public Health Center in Implementing a Scoring System for childhood TB diagnosis were supervision and work period.

Keywords: Performance, Scoring System, Childhood TB

Analysis of Social Awareness, Social Skills and Characteristics of Midwives: A Study of Giving Tablets Fe In Antenatal Care Services, Public Health Centres In Surabaya

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Background: Coverage of Fe tablets during antenatal care visit in public health centres in Surabaya was still low.

Aim: The purpose of this study was to analyze the relationship between characteristics of a midwife and social awareness and social skill of a midwife in Fe administration in pregnant women in Public Health Center in Surabaya.

Method: This research was an analytic observational study and a cross-sectional approach. The research location was in all public health centres in Surabaya. The samples of as many as 65 midwives were taken using multistage random cluster sampling technique from 62 Public Health Centers representing every region in Surabaya. The data obtained were analyzed by using the Ordinal Logistic Regression technique.

Results: The results showed that the age and length of employment are closely related to social awareness of midwife, while the educational background was not closely related to social awareness of midwife. Results of other studies showed that midwives' age and length of employment were not closely related to social skill, while midwives' educational background was closely related to social skill.

Conclusion: This study concludes that the characteristics of a midwife are closely related to the social competence of a midwife including social awareness and social skill. Midwives with good social awareness and social skill generate a good performance achievement. We suggest that public health centres should immediately provide education and training to midwives who have less social awareness and skill. In addition to the process of hiring a midwife, public health centres should pay attention to midwives' ability of social interaction as it relates to the responsibility of providing services to pregnant women.

Requirements for Surgical Checklist to Improve Communication and Teamwork in the Operating Theatre: A Systematic Review

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Background: Clear information and good interaction between surgical teams are the essential keys for an operating theatre to run safely. In 2010, world health organization had released a surgical checklist to improve safety attitudes including communication and teamwork.

Aim: This systematic review aimed to determine the requirements of implementing the world health organization's surgical checklist toward communication and teamwork in the operating theatre.

Method: The registered protocol and Prisma flowchart were used to obtain relevant articles from PubMed, CINAHL, Science Direct, Google Scholar, and other relevant sources. The article screening was restricted to studies that used the world health organization's surgical checklist. Other information regarding research design, sample size, instrument tools used, outcomes, and study limitations were extracted and synthesized. Comparing and contrasting between selected articles were completed to summarize review.

Results: Twenty-two articles with quasi-experimental and cross-sectional research methods were chosen from 3.806 articles. Implementing the world health organization's surgical checklist can improve communication in the operating theatre when followed by effective communication training, reducing perception's discrepancy, eliminating hierarchy across surgical teams, and modifying the checklist. Implementing it can also increase teamwork if pursued by teamwork training and leadership support. Surgical teams should recognize that the checklist will have a good impact on patients if coordination between them occurred.

Conclusion: Some substantial requirements for the world health organization's surgical checklist should be done as implementation to ensure communication and teamwork between surgical teams improved in the operating theatre. Meta-analysis research needs to be carried out to determine the relevance of implementing the surgical checklist recently.

Keywords: world health organization's surgical checklist, communication, teamwork, operating theatre

Efforts to Improve the Achievement of Hand Hygiene in a Private Hospital in Manado

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Background: One of the efforts to prevent infection that is transmitted through the hands by removing dirt and debris and inhibiting or killing microorganisms on the skin that can be obtained from contact between patients and the environment is called hand hygiene. The average achievement of the compliance indicators for the implementation of hand hygiene in the 2019-2020 period in private hospitals in Manado is 77.67 and has not reached the set standard, namely 95%.

Aim: The purpose of this study was to examine the factors that influence nurses' compliance in performing hand hygiene, identify problems in the availability of hand hygiene facilities, information and training with nurses' compliance in implementing hand hygiene in private hospitals in Manado.

Method: The PSC method consists of 5 stages. These stages include (1) Problem Analysis, (2) Strategic Design, (3) Strategy Development, (4) Implementation, Monitoring, Evaluation, and (5) Follow Up and Feedback. Data collection on problems through document search and interviews.

Results: After determining the priority of the problem using the CARL method, the priority problem is established, namely there is no PIC for Hand Hygiene which is in charge of controlling the availability in the room so that it is always available not until it is empty and by using the CARL method an alternative solution is sought and an unclear Monitoring and Reporting Flow is obtained and the replacement of hand rub in each room has not been done

regularly, from the priority of the solution, a development strategy is made that will be a guide in working on the solution.

Conclusion: Hand hygiene is very important and must be carried out by all medical and non-medical staff who work in the hospital, the impact of hand hygiene if not done properly can worsen or even cause severe conditions for patients. Doing the right hand hygiene is in accordance with the WHO standard, namely 5 moments and the recommended method. In any condition, you must always remember and do hand hygiene activities.

Measurement of Team Effectiveness Main Programme in Community Health Center

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Background: Health development goal is to increase awareness, willingness and ability of healthy life for every community to achieve optimal health status. According to Kepmenkes No. 128 year 2004, there are two efforts needed to implement Community Health Center function. The efforts are primary health care and developed health care. The number of health center programs which had main program coverage to both categories was 62.51%.

Aim: To measure team effectiveness among main programme in Community Health Center.

Method: This was an analytic observational research with cross-sectional study. The population is all of team of main program in Community Health Center Gresik District. The sample was 90 team taken by stratified random sampling. Data obtained from primary data by using modified questionnaires of Hoevermeyer Inventory. The collected data were analyzed using descriptive analysis.

Results: The team that had the highest effectiveness was nutrition unit, while the health promotion unit had the lowest team effectiveness. Overall, the positive sub-norm and role variable had the lowest average in measuring team effectiveness, while goal achievement variable had the highest average. The conformity between ability and responsibility had the lowest score in positive sub-norm and role variable.

Conclusion: Therefore, to increase the team effectiveness of main programme in Community Health Center, it can be done by increasing the role and positive norms.

Keyword: Hoevermeyer inventory, team effectiveness, main programme

Human Resource Management and Task Shifting in Indonesian Blood Services: Case Study in Malinau District Hospital

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Background: The lack of blood transfusion services is one of the problems related to high mortality rate in Indonesia. As much as 9% of untreated maternal bleeding is caused by unavailability of blood for transfusion in time. There are many factors affecting this problem, one of which is human resource management.

Aim: This paper is aimed to describe human resource management strategy in blood service in Indonesia, especially in Malinau Public District Hospital.

Method: The qualitative research was conducted in 2019 as a part of post training evaluation held by Indonesian Ministry of Health.

Results: The results showed that, due to lack of blood transfusion technician, Indonesia has implemented task-shifting health workers (i.e., Laboratory analysts and nurses work as blood transfusion technician). However, this strategy has some weaknesses, such as doubling the need of human resources (blood procedure is done by both a nurse and a laboratory analyst in a time, based on their respective expertise). Ideally, blood procedure is done by blood transfusion technician. Unfortunately, there are very few educational institutions that trained blood transfusion technician as input factor. And for the implementation of task-shifting procedure can be concluded still below the standard. Even though the output is surprisingly quite good, despite the limitation of the type of blood processing that can be done.

Conclusion: In conclusion, the fulfillment of blood transfusion workers is still lacking, both in quantity and quality. The government should arrange a roadmap to meet the need of blood transfusion workers.

Associations between social support and access to healthcare among Vietnamese international students in Japanese language schools in Aichi Prefecture

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Background: The number of international students has almost doubled in the last five years. They are considered one of the high-risk groups in terms of access to healthcare. Previous studies have suggested that social support is positively associated with access to healthcare among foreign residents in Japan.

Aim: The aim of this study was to investigate the associations between social support and access to healthcare among Vietnamese international students in Japanese language schools in Aichi Prefecture, which has the largest number of Vietnamese residents in Japan.

Method: A cross-sectional design was employed. Of the ten Japanese language schools, where 30 and more Vietnamese students registered, seven agreed to participate in this study. Self-administered questionnaires were distributed to Vietnamese students aged 18 years old and above. In total, 233 valid responses were collected. Students were asked if they had an occasion in the previous 12 months that the student needed healthcare, but did not receive it

(unmet healthcare needs). Emotional/informational social support scores were categorized into quartiles; low, medium-low, medium-high, and high. Bivariate analyses were carried out between unmet healthcare needs and emotional/informational support level as well as self-rated health level and other participants characteristics. Adjusted odds ratios (AORs) were calculated by logistic regression analyses.

Results: Forty-six students (19.7%) had experienced unmet healthcare needs. One hundred thirty-three (87.1%) were female. Approximately three-quarters of students (74.2%) graduated up to high school level. The median score for the emotional/informational support was 53.1 (inter quartile range (IQR): 37.5-68.8). Median scores for the low, medium-low, medium-high, and high quartiles were 28.1, 48.4, 62.5, and 81.3, respectively. Compared to students in the low category, AORs of unmet healthcare needs of students in medium-low, medium-high, and high categories were 0.45 (95% confidence interval [CI] 0.19-1.10), 0.20 (95% CI 0.07-0.59), and 0.26 (95% CI 0.09-0.73), respectively. Of the investigated variables, only emotional/informational support was significantly associated with unmet healthcare needs among international students.

Conclusion: International students might have difficulty to have not only proper access to healthcare, but also adequate social support. Emotional/informational support is considered a crucial factor for international students in Aichi Prefecture.

Efforts to Improve Behavior of GST Nursing Services (Greeting, Smile, Thanks) Inpatient Installation at Siloam Hospital Surabaya

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Background: In Siloam Hospitals Surabaya, inpatient treatment is a very important service, especially as the biggest revenue contributor. Service quality as seen from customer perspective which is customer satisfaction is related with one of service aspects which is GST (Greeting, Smile dan Thanks). GST measurement can be evaluated as a parameter in PSI (patient satisfaction index). Based on customer feedback form in GWI (Group wide Indicator) year 2019, PSI was at 62,7% (target at 85%).

Aim: The purpose of residence placement was to give recommendation towards improvement of GST in nursing care at Siloam Hospitals Surabaya.

Method: Method is observational-experimental with Problem Solving Cycle which contains problem analysis, strategy design, strategy development, implementation, monitoring evaluation, follow up dan feedback. Activity the results of the activity from the problem analysis stage observe and analyze problems related to the GST FGD process (focus group discussion).

Results: In assessing problem priority, JCI prioritization matrix was used and the root cause was determined from fish bone diagram. Furthermore, in the strategy design stage, GST team was established and in the solution alternative stage, there were five solution programs selected with decision matrix selecting and project priority with WWW format (What, Who dan When) that will be implemented operationally. In implementation and monitoring stage, PDSA (plan, do, study dan action) done in 4 cycles can increase GST score.

Conclusion: In conclusion, GST score was increased progressively 77%, and residence purpose was achieved.

Keywords: nursing care, patient satisfaction index, problem solving cycle, GST

Relationship between recognition of job-related stress, coping and subjective health in the Japanese nursing profession

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Background: Nurses have a heavy physical and mental burden, and various health problems caused by them have become social problems. This year, it is reported that the number of medical and welfare facility staff who are suffering from stress related to dealing with the new coronavirus infection is increasing.

Aim: In this study, we report on the relationship between recognition of job-related stress, coping and subjective health on nursing profession in coronavirus calamity.

Method: We asked the monitor registered by Macromill, Inc., an Internet research company, to answer the Internet survey anonymously using the survey URL or QR code presented by Macromill, Inc. The researcher received the raw data aggregated in an Excel file from Macromill, Inc. The contents of the survey are personal attributes, recognition of job-related stress, the effect of job-related stress on health, and job-related stress coping methods, degree of subjective health, presence or absence of symptoms, and contents of symptoms. In the analysis, subjective health was set as the dependent variable, job-related stress recognition and coping were set as the independent variables, and the χ^2 -square test was performed using the statistical software SPSS ver.23.0.

Results: The subjects were 329 nurses who responded. The subjects had an average age of 40.8 ± 9.2 years, 298 females (90.6%) and 31 males (9.4%). There were 144 (43.8%) who had some kind of symptom. We examined the relationship between the presence or absence of symptoms and attribute. Those in positions higher than the chief and those with overtime significantly had subjective symptoms. The group who frequently felt job-related stress and the group who felt that job-related stress affected their health status significantly had subjective symptoms. However, there were no significant differences in the presence or absence and number of job-related stress factors, and the presence or absence and number of stress coping.

Conclusion: Those with subjective symptoms feel job-related stress and feel that it affects their health, but may not have been able to cope with the stress effectively.

Analysis of Factors Affecting Completeness of Filling Manual and Electronic Medical Records and The Impact of Incompleteness of Medical Record Filling: A Systematic Review

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Background: Medical records are important documents that must be completed because all documentation of services is included in them. The problem that occurs in various health care facilities in several countries is the incomplete filling of medical records, both manual and electronic.

Aim: This study aimed to analyze the factors that affect the completeness of filling in manual and electronic medical record files.

Method: The research protocol was arranged and submitted to PROSPERO. Sources of information data from seven electronic databases (Scopus, CINAHL, Springer, DOAJ, ScienceDirect, PubMed, and Google Scholar). The search strategy uses the PICOS framework technique with keywords and synonyms to identify articles published in 2010 and beyond. This research work reviewed 32 articles that met the eligibility criteria based on the research theme and objectives.

Results: The factors that affecting the completeness of manual medical records were divided into individual factors, organizational factors, internal factors, and external factors. The impact of incomplete filling in manual and electronic medical forms is due to them incompleteness of the data entered the medical records. In electronic medical records, the filling accuracy is essential; if there is an error in the input of the data, the data obtained will be incorrect and difficult to correct.

Conclusion: The completeness of manual and electronic medical records is influenced by the level of education, employment status, tenure, workload, motivation, responsibility, attitudes, work expectations, knowledge, compliance filling medical records, leadership, supervision, reward and punishment. communication, managerial policies, fulfillment of facilities and infrastructure, form design and content, medical record flow, user friendly medical record display, replacement of old systems with newEDS systems, SPO filling of medical records, completeness of features and information needs for external reporting. The impact of the incompleteness of filling in medical records is the incompleteness of data that will become information.

Keywords: medical record, manual, electronic, completeness

Improving Implementation of 10 STSB (Steps to Successful Breastfeeding) through BENEFIT (Breastfeeding Exclusively in Health Facility) Project in East Java, Indonesia

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Background: Improving coverage of exclusive breastfeeding is conducted by implementing 10 STSB in health facilities. Based on the results of the assessment BFHI phase 1, it showed the necessity for strengthening the steps 1 and 2 STSB as critical management procedures. To follow up on these findings, Project BENEFIT was performed on improving those steps. The project was carried out from 2019 to 2020 in 5 districts/city in East Java Province, namely Bondowoso, Jember, Probolinggo, Trenggalek and Surabaya.

Aim: This study aimed to assess the implementation of BENEFIT project which focus in strengthening steps 1 and 2 STSB in health facilities in East Java Province

Method: The cross-sectional study was conducted on 720 respondents consist of 143 health facility leaders and 577 post-partum mothers (validation). Data were collected using questionnaire adapted from BFHI Unicef / WHO using the KoBo ToolBox application in the period July-October 2020.

Results: There was an improvement in the implementation of step 1 and 2 STSB. Step 1 which is the availability of an exclusive breastfeeding policy showed a significant increase in adherence (66.52% to 76.42%, $p = 0.004$). As many as 85% of health facilities leaders stated that there was routine socialization regarding the 10 STSB policy to all staff. Whereas for step 2 (training for maternal and child health officer) showed a non-significant increase in implementation (69.22 to 78.10, $p = 0.263$). Critical management procedures role as a foundation that affects practice of breastfeeding support in health facilities. Based on monitoring and evaluation findings showed some improvement on breastfeeding support practice such as coverage of skin-to-skin contact (69%) both on normal and section-caesarean delivery, rooming-in (66%) and exclusive breastfeeding education during ANC (67.2%).

Conclusion: There was improvement compliance in steps 1 and 2 STSB as critical management procedures. As a foundation for implementing other steps, strengthening steps 1 and 2 STSB have been proven in increasing breastfeeding support practices in health facilities by all staff (medical and non-medical workers).

Keywords: Breastfeeding, STSB, BENEFIT

Overview of Job Stress Index in Malang Islamic Hospital Nurses and its Relationship with Individual Characteristics, Self-Efficacy, and Personality Types

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Background: Job stress cannot be avoided by hospital nurses. The ability of each nurse to deal with stress that comes from the working environment was different. This research is important to consider the goal of SDGs 3, "ensuring a healthy life and promoting prosperity for all people of all ages", one of which is to maintain mental health.

Aim: The purpose of this study was to analyze the description of the job stress index of nurses, as well as its relationship with individual characteristics, self-efficacy, and personality types.

Method: This study was observational, descriptive, and used a cross-sectional approach. Respondents were all nurses in Malang Islamic Hospital with a total of 103 people. The independent variables were individual characteristics (age, married status, years of service, gender), self-efficacy, and personality types based on Hippocrates (sanguine, choleric, melancholy, and phlegmatic), while the dependent variable was the nurse's job stress. The job stress index calculation uses the Job Stress Survey. Data were analyzed using the Contingency Coefficient to determine the strength of the relationship between variables.

Results: The job stress index of nurses in each unit in the hospital was different. The highest job stress index was experienced by nurses in the Emergency Unit (19.59) and Surgical Room (17.83). Job stress has a strong relationship with age (0.726), marital status (0.785), and years of service (0.770). Meanwhile, self-efficacy has a moderate relationship strength (0.463) and each personality type has a weak and almost homogeneous level of relationship with nurses' job stress (0.251).

Conclusion: Nurses of Malang Islamic Hospital in the Emergency Unit and Surgical Room have a higher job stress index among others. Job stress has a strong relationship with the individual character (age, marital status, and years of service) of the nurses. Meanwhile, the self-efficacy relationship strength is moderate and the personality type has a weak relationship with the job stress among nurses.

Keywords: SDGs 3rd, job stress index, individual character, self-efficacy, personality type, nurses

Improving Maternal Health, Satisfaction of Women, and Midwifery Students: a Lesson from Geliat Unair, Indonesia

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Background: GELIAT Unair stands for Healthy Mother and Child Care Movement as a project from Universitas Airlangga. Assistance for pregnant women is part of the Unair GELIAT program carried out by students. This program contains a Continuity of Care (CoC) program that assists mothers during pregnancy to postpartum by midwifery students.

Aim: To examine the satisfaction of GELIAT's participants while implementing the program.

Method: Using descriptive observation by collecting data using an online questionnaire. The research respondents included 44 students as companions and 38 postpartum mothers who have been assisted since pregnancy. The selection of respondents was carried out by purposive sampling. The study's inclusion criteria included postpartum mothers who had received assistance since pregnancy and did not experience complications during pregnancy, childbirth, and the puerperium. The inclusion criteria for companions were midwifery students who had accompanied the mother from pregnancy to the postpartum period. The exclusion criteria were mothers and companions who could not access the online questionnaire.

Results: 68.42% of postpartum mothers were delighted with the Unair GELIAT mentoring program, and 94.4% of postpartum mothers get benefited, and 97.37% of postpartum mothers would recommend the Unair GELIAT mentoring program for others. Another notable finding, many women are willing to receive assistance again during their subsequent pregnancy. Also, from the student's side, 70% of the respondents admitted that they were happy when assisting, and 82% of the companions said that they got the opportunity to improve their communication skills. However, the respondents also felt that several obstacles were faced during assistance, including uncooperative mothers, communication issues, difficulties to contact and make an appointment.

Conclusion: The GELIAT Unair leads to enhanced maternal health and satisfaction for women and students, even though several obstacles need to be solved and improved.

Social Satisfaction Index to Hospital Services Dr. Iskak Tulungagung

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Background: Quality control is an important part of the provision of healthcare services. One of the efforts is to conduct a public satisfaction survey following the Minister of Administrative Reform and Bureaucratic Reform of the Republic of Indonesia no. 14 of 2017 on guidelines for preparing public satisfaction surveys of public service units.

Aim: The purpose of this study is to analyze the level of public satisfaction with the services of Iskak Tulungagung Hospital.

Method: The study subjects were all patients in the hospital from inpatient, outpatient, and other supporting facilities as many as 1500 samples. Sampling in this study using probability sampling method with proportionate stratified random sampling technique. Each survey indicator question is packaged in a questionnaire then the data obtained is given a value and calculated using the weighted average value (NRR) of each element of service.

Results: The highest public satisfaction index was found in supporting services (86.23), emergency installations (85.81), and outpatients (85.37). The lowest public satisfaction index was in hospitalization (85.12). All quality of services predicate was "Good" with the highest value in the facilities and infrastructure and the lowest value was found at the time of completion in dealing with patients.

Conclusion: Hospitals can improve their performance from the lowest indicators to all aspects of service support because providing quality services can improve patient satisfaction with hospital services.

Keywords: Satisfaction, service, health care, facilities, patient care

Control of Pharmaceutical Supplies Using The Minimum-Maximum Stock Level (MMSL) Method at The Lavalette Hospital Pharmacy Installation

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Background: Pharmacy Installations are one of the main sources of income in hospital, considering that more than 90% of health services in the hospitals require pharmaceutical supplies and 40-50% of hospital revenues come from pharmacy installations. Based on data for January – September 2020, the supply of pharmaceutical supplies at the Lavalette Hospital always exceeds the target given.

Aim: The purpose of this study is to analyze the factors that cause the high number of pharmaceutical supplies and determine solutions to improve control of pharmaceutical supplies at the Lavalette Hospital.

Method: The PSC method consists of 5 stages. These stages include (1) Problem Analysis, (2) Strategic Design, (3) Strategy Development, (4) Implementation, Monitoring, Evaluation, and (5) Follow Up and Feedback. Data collection on problems through document search and interviews

Results: The root cause priority determined in this study is the imperfect planning system of requirements. At the strategy design stage, the priority for an alternative solution is to control planning need using the maximum-minimum level stock method. The result of the ABC analysis, from 1882 drug items at Lavalette Hospital, 220 drug items were group A, 456 drugs item were group B, and 1206 drug item were group C. The simulation results using the MMSL method show a decrease in the number of supplies of Rp 344,025,534 and an increase in the turnover ratio of 0.35.

Conclusion: The application of the Minimum-Maximum Stock Level method can have a positive impact on the efficiency of drug supplies.

Breastfeeding Telle-counseling Mobile Application in Primary Health Care: Usability and Usefulness Study

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Background: Tele-counseling is one of strategy to increase breastfeeding programs. Primary health care (PHC) needs innovation to support breastfeeding. Mobile apps are one of the innovations that can be used for tele-counseling. There is no evidence of the implementation of breastfeeding tele-counseling using the mobile application.

Aim: The study objectives were to describe the usability and usefulness of Curhat ASI (CA) and Terima Curhat ASI (TCA), a mobile phone app designed for Breastfeeding tele-counseling services in Primary Health Care (PHC).

Method: A total of 39 users of the application, consist of 17 CA mobile apps users (consist of breastfeeding mam and family) and 22 TCA mobile apps users, (Consist of community health workers, villages midwives, breastfeeding counselor, and doctor). They are recruit purposive sampling with certain criteria. The usability and usefulness questionnaire was collected after they had training in mobile application testing.

Results: The result of usability and usefulness showed after the mobile application testing, for CA mobile apps were 4.56 (SD 0.51; range 3-5) and 4.66 (SD 0.50; range 3-5). TCA mobile apps sowed 4.67 (SD 0.79; range 1-5) and 4.87 (SD 0.26; range 4-5). Our findings from qualitative surveys we had for CA mobile apps are 191 comments (66 for usability and 125 for usefulness). For the TCA mobile apps, we had 83 comments (42 for usability and 41 for usefulness). From the comment, most of the respondents give positive feedback. The data showed only 4 for CA mobile apps and 5 feedback for TCA are negative comment, from that information we can use for improvement in the future.

Conclusion: Breastfeeding tele-counseling mobile application is the potential strategy to fulfill primary health care services to support the success of breastfeeding.

Keyword: breastfeeding, primary health care, mobile application

Problem Solving Circle Approach in Maternity Care at Al-Irsyad Hospital Surabaya

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Background: Maternity care at Al-Irsyad Hospital Surabaya experienced a decline in 2020 compared to the previous year. Identification of problems obtained data on the number of maternity visits (growth -110%) compared to other services which tended to increase in each quarterly report

Aim: The purpose of study is to analyze efforts to improve maternity care using the Problem Solving Circle (PSC) approach in the Maternity Room Unit of Al-Irsyad Hospital Surabaya.

Method: Using 5 stages of PSC including Problem analysis, Strategy design, Strategy development, Implementation-monitoring and evaluation, Follow up and Feedback. Tracing by observation, interviews and focus group discussion (FGD) with the head of the division. Using Ishikawa fishbone diagram tools to determine the cause of the problem and the CARL (Capability, Accessibility, Readiness, Leverage) method to determine the priority of several options.

Results: In the Problem analysis stage, the priority cause of the problem is evaluation of service SOP lines since four years the transfer of delivery rooms has never been carried out. The alternative solution priority design strategy is to evaluate the entire flow and SPO as well as create a flow chart and revise the SPO. Strategy development by holding meetings to discuss, controlling, reviewing and improving SOPs and creating flowcharts that did not previously exist. Up date of SPO based on the National Clinical Practice Guidelines published by the Indonesian Obstetrics-Gynecology Association collegiate, received approval from Medical Staf Group and the chairman of the Medical Committee, approved by the hospital leadership. Implementation by carrying out the socialization of the SPO and the flow chart that has been made. Follow up and feedback by providing reports to hospital leaders, formulating recommendations and follow-up efforts to all staf.

Conclusion: Periodic supervision with Monitoring and evaluation every month and continuous improvement according to updates so that it will have an impact on the growth of maternity care services. The PSC (Problem Solving Circle) approach is a reference and can be implemented as a role model in all work units at the Al-Irsyad Surabaya hospital.

Keywords: Problem Solution Circle (PSC), Standard Operating Procedure (SPO), Flow Chart, Maternity care

Pararem: A Customary Health Policy for A Social Norms-Based Intervention to Improve Compliance with Smoke-Free Law in Denpasar Bali Indonesia

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Background: Since 2013, the government of Denpasar has adopted smoke-free law (Perda KTR). Implementation of the law faces several obstacles partly due to the social acceptability of smoking where cigarette and smoking has been deeply engrained within social life and become part of hospitality, thus the compliance remains low. Studies showed social norms of smoking were significant predictor of non-compliance to KTR.

Aim: This study aims to develop a pararem regarding smoke-free area in order to improve compliance with SFL and perception of social norms of smoking in the community.

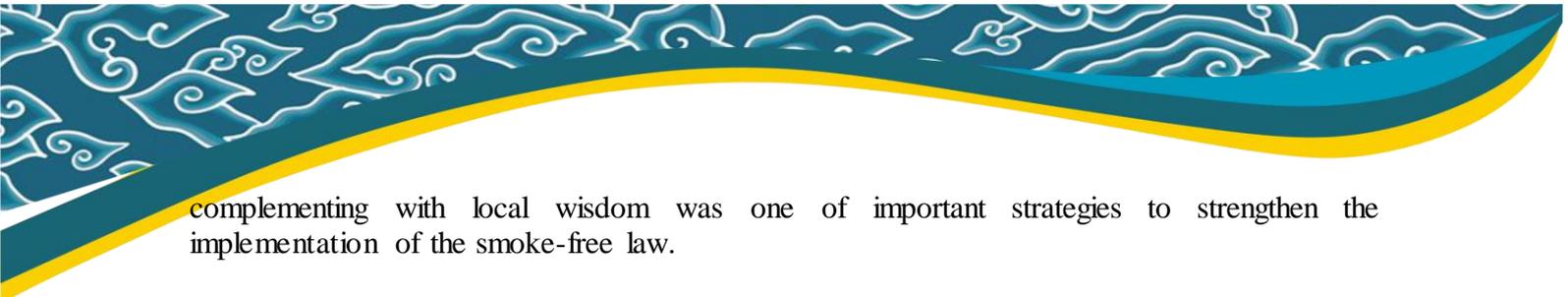
Method: The study comprised of 3 phases, began with a qualitative study to explore smoking social norms, followed by the development of pararem and ended with a quasi-experimental study to prove pararem could improve the compliance. The study conducted from September 2018 until October 2020 in Denpasar, involving 14 informants, 21 FGD participants, 30 worship places and 112 respondents. Data was collected through in-depth interviews, FGDs, interview using questionnaire, observations and workshops. Improvement of compliance was

tested using McNemar and Chi-square. While, change in individual perceptions was tested using independent sample t-test.

Results: The first phase of the study succeeded in interviewing 14 informants and conducting 3 FGDs. The results showed the importance of complementing the current smoke free law with a local wisdom particularly a customary law i.e., pararem. In second phase, pararem was successfully developed based on the results of the previous phases through workshops involving stakeholders from traditional villages, university and government. The last phase of

pararem intervention showed a significant improvement of compliance both in population-level compliance (not comply become comply: 12 places) and individual-level compliance by 71.4% (PR= 2.1; CI 1.409-3.145; $p < 0.01$). Moreover, the results of the evaluation of changes in perception of smoking social norms also showed a higher means difference on the intervention village compared to the control one.

Conclusion: Pararem regarding KTR as a social norms-based intervention was succeeded to improve compliance and change the perceived of smoking social norms. Hence,



complementing with local wisdom was one of important strategies to strengthen the implementation of the smoke-free law.

Medication Error Risk Factor Analysis in Outpatient and Pharmacy Service in Bhayangkara Banjarmasin Police Hospital

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Background: During the COVID-19 Pandemic, the hospital continued to treat COVID-19 patients but at the same time provided services to general patients, with some restrictions on outpatient services while still prioritizing patient safety. Medication errors are errors in drug service that can cause injury or harm to patients, these errors should be prevented as long as it is under the control of health workers and patients themselves. Medication errors can occur anywhere in the drug service chain to patients, both in the prescribing phase, the dispensing phase, the transcribing phase, and the administering phase.

Aim: The research objective is to know the percentage of risk factors for medication error in prescribing phase and dispensing phase in outpatient and pharmacy unit at Bhayangkara Hospital, Banjarmasin.

Method: This research is an observational study and uses analysis descriptive, with retrospective data collection. The data taken is based on all outpatient internal clinic prescriptions at the Pharmacy unit from January to March 2021.

Results: The results showed that the risk factors for medication errors that occurred in the prescribing phase were 0.33% unreadable prescription writing, no doctor initials 69.60%, no patient age 0.44%, no concentration / dosage of preparation 1, 34%, no dosage form 44.24%. Whereas in the dispensing phase, 0.11% wrong drug delivery was obtained, 2.23% wrong / incomplete labeling was given, and the number of drugs delivered was less than 6.59%. Medication error that occurred it is classified as category B according to the NCC-MERP (an error occurs before the drug reaches the patient). It can be concluded that the biggest risk factor for medication error in the outpatient services at Bhayangkara Hospital, Banjarmasin is in the prescribing phase.

Conclusion: Medication error that occurred in this study classified as category B according to the NCC-MERP, in prescribing and dispensing phases can increase the risk of patient safety incidents.

Keywords: medication error, prescribing, dispensing, patient safety

Midwife Compliance with Standards of Antenatal Care for Detecting Preeclampsia in Midwife Independent Practice, Bogor Regency, West Java Indonesia

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Background: Preeclampsia/Eclampsia is one of the main causes of maternal morbidity and mortality in Indonesia. It can be prevented if early detection is carried out thoroughly during antenatal care (ANC) and effective follow-up treatment is provided accordingly. In Indonesia midwives play significant role in providing care to pregnant mothers. Therefore midwives' compliance to ANC standard, as well as to the other standards of maternal health care, will affect the quality of maternal health care and contribute to maternal and neonatal morbidity and mortality.

Aim: To determine the compliance of private practice midwives in Bogor District to antenatal care standard in detecting preeclampsia and its influencing factors.

Method: This study applied a cross-sectional design. 501 private practice midwives in Bogor District, West Jawa, Indonesia, were recruited as samples. Data was collected by interviewing midwives and by gathering it from mothers' cards in the midwives' clinics. Data was analyzed by applying both descriptive and inferential statistics.

Results: It was found that 50.7% of midwives complied to the standard of ANC. Supervision by senior midwives from Public Health Center, District Health Office or Indonesian Midwife Association was found affected the midwives' compliance to ANC standard (p-value = 0.02, PR = 1.22 [95% CI=1.03-1.45]). Midwives' age, education, period of service, knowledge and attitudes towards ANC standard, competence, completeness of medical equipment and availability of guideline did not significantly affect midwives' compliance to ANC standard.

Conclusion: Supervision is the most influencing factor of the midwives' compliance to ANC standard. It is recommended to establish cooperation and coordination between the District Health Office, Public Health Center, and the Indonesian Midwife Association to carry out routine and comprehensive supervision. Consultation and technical assistance provided during supervision will improve the overall quality of maternal health care provided by private practice midwives.

Keywords: Compliance, Antenatal Care, Midwife, Preeclampsia

Use of the PSC Method in Meeting Order Completeness for Completing Inhibities Medical Record in Rumkital Drg. M. Nainggolan

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Background: The medical record is an important part in assisting the implementation of service delivery to patients in the hospital. Kepmenkes Number 129 of 2008 concerning minimum service standards that completeness of filling in 100% medical records within 24 hours after completion of service and completeness of Informed Consent after obtaining clear information is 100%. Rumkital drg. M. Nainggolan recorded incomplete medical records ? 24 hours within 3 months

Aim: Research now has the aim of finding the right solution and in a short time to achieve a complete filling of medical records 100% at Rumkital drg. M. Nainggolan in order to comply with the Ministerial Decree No. 129/2008.

Method: The method used in this research is the PSC (problem solving cycle) method and is a descriptive study. Which consists of problem analysis, strategy design, strategy development, implementation, monitoring evaluation, follow-up and feedback. The research data used were 20 inpatient medical records on November 3-13, 2020.

Results: The results obtained were that aspects of patient identity and informed consent reached 100% complete, while the aspects of medical resumes and doctor's notes / instructions had not yet reached 100%.

Conclusion:The conclusion is that with a more systematic arrangement of the MR form, it reduces the missed MR form that must be completed, although in this study there was also a low effect of doctor adherence.

Improving Effective Communication Between Employees based on the Achievement of Effective Quality of Communication at RSIA Amanah Probolinggo

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Background: In an organization, to identify problems that arise that can help management find the right solutions in stages with the Problem Solving Cycle (PSC) approach. Priority problems with achieving effective communication 98.53% below the 100% standard.

Aim: The purpose is to analyze the factors that cause the achievement of effective communication not reaching standards, determine solutions to effective communication problems at RSIA Amanah Probolinggo until it reaches 100% standards and compile an activity plan in overcoming effective communication problems between employees who do not reached standards.

Method: This research is an observational study with an experimental approach. Researcher analyze and analyze problems that occur in the implementation of effective communication at RSIA Amanah Probolinggo. The problems identified through the process of FGD (focus group discussion) with management to select solutions to problems that will be taken together with management to determine the program solutions taken related to the quality of effective communication. The PSC method consists of 5 stages and These stages include problem analysis, strategic design, strategy development, implementation, monitoring, evaluation, follow up and feedback.

Results: The implementation of improvements has been carried out according to the scheduled time and is currently still in the monitoring and evaluation stage for achievements, after having made alternative solutions and development strategies agreed upon, there is an increase in the achievement of effective communication by 99.4%. With this increase, recommendations can be implemented in every work unit that plays a role in patient satisfaction and reduces patient safety incidents.

Conclusion: The problems at RSIA Amanah Probolinggo which have been prioritized in this residency are lack of compliance of employees in implementing effective communication SOP, incomplete socialization to hospital staff, reward and punishment mechanism has not been maximized, this has decreased staff motivation in implementing effective communication according to the SOP. The residency participants have arranged efforts to improve the quality of effective communication by reviewing SOP and socializing them, hope that the employees carry out effective communication according to the SOP, increase monitoring of the quality of effective communication, reduce patient safety incidents and increase patient satisfaction.

Keywords: effective communication, patient safety, reviewing and socializing.

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Operational Research: PSC (Problem Solving Cycle) Implementation to Reduce the Number of Operation Delays at the Surgical Department of RSI Sakinah Mojokerto

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Background: One of the hospital health services that can describe the quality of the hospital is the surgical service. The Central Surgical Department is a unit with high costs but can generate substantial profits for the Sakinah Mojokerto Islamic Hospital. However, not all operations that are planned, or scheduled can be carried out according to the predetermined time where there can be delays, accelerations, or cancellations of the operations.

Aim: This study aims to reduce the number of postponements of surgery at the Central Surgical Department of RSI Sakinah Mojokerto. **Methods:** The method of implementing activities is carried out using the Operational Research method which uses the application of scientific methods, techniques and equipment in problems that arise in company operations aims to find optimal problem solutions.

Results: From the PSC technique, it is known that the priority of problems, priority causes of problems, priority alternative solutions in several categories of problems both in terms of human resources, finance, materials or time as the cause of delay in the operation schedule.

Conclusion: The delay or cancellation of surgery can be caused by several things including the patient's health condition and the patient's redundant presence, the absence of the operator doctor, the unavailability of the room. And the operating room does not yet have any standard operating room and time management operational procedures.

Keywords: Operational Research, Problem Solving Cycle (PSC), Standard Operating Procedure (SOP), Central Surgical Department

Comparing Hospital Performance Using 30-Day Mortality Following AMI Hospitalisation as the Performance Measure

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Background: Mortality after an acute myocardial infarction (AMI) is a critical hospital performance measure. It reflects various aspects of AMI management. Standardised mortality ratio is an indicator to assess performance, taking into account case-mix variation between patients. Case-mix-adjusted AMI mortality has never been measured for public hospitals in Malaysia.

Aim: This study measures and compares case-mix-adjusted mortality following AMI hospitalisation and up to 30 days post-discharge between 40 Malaysian public hospitals.

Method: Hospital administration data from Malaysian Health Data Warehouse (MyHDW), including ten cardiac referral hospitals (with cardiac catheterisation facility) and 30 other major specialist hospitals (without cardiac catheterisation facility) that provide cardiology services, were analysed in a cross-sectional design. An indirectly standardised mortality ratio (SMR) value for AMI was calculated for each hospital using data from the complete population of discharged patients during 2016. Expected mortality was calculated by fitting a logistic regression model that predicted mortality using age, sex, ethnicity, length of stay, admission frequency, and comorbidity scores as covariates for the 2014 to 2015 reference period. A funnel plot was used to show potential outlier hospitals, and a variable life-adjusted display (VLAD) plot was used to show evidence of deviation from the expected performance.

Results: The analysis indicated two hospitals (Hospital A and B) as potential outliers. Otherwise, adjusted mortality in the remaining referral and major specialist hospitals were similar. Two-thirds of the major specialist hospitals had higher than expected death (SMR 1.05 – 1.51), but the indices were still within the expected variations. The VLAD for Hospital A showed an overall downtrend and multiple significant deviations from the expected performance. The second VLAD displayed the results of about 400 consecutive AMI patients admitted to Hospital C (a major specialist hospital) with no significant signal indicating deviation from the average performance.

Conclusion: Our study revealed variation in risk-adjusted mortality for AMI patients admitted to public hospitals in Malaysia, with two hospitals exhibiting significant out-of-control signals. The SMR can be used as a starting point in identifying potentially higher than expected mortality rates. It can be helpful to complement existing process indicators in measuring hospital performance related to AMI.

Solving The Problem of Delay in Closing Inpatient Account Using Problem Solving Cycle Method in Finance Unit of Privat Hospital in Sidoarjo

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Background: The financial unit is the estuary of all processes that occur in the hospital so that it needs to be given great attention. In the financial unit of privat hospital in Sidoarjo, it was found that there were problems with delays in finishing inpatient accounts. This caused the files that went up to the financial unit not in accordance with the target which resulted in the postponement of the billing process to the insurance or company that was the guarantor for the inpatient.

Aim: Provide recommendations for resolving the problem of delays in closing accounts that occur in the financial unit of Privat Hospital in Sidoarjo.

Method: The action reseach is carried out by the Problem Solving Cycle (PSC) method. At each stage, discussions were held with the finance unit, cashier unit, nursing unit, medical unit and the information technology unit.

Results: In this series of activities, it was found that the problem could be resolved after carrying out 2 cycles of the PSC process. The solution to the first cycle is that the hospital prepares an application in the Hospital Information System, where the system can facilitate communication between the inpatient unit and the cashier unit, so that information about returning patients can be known early by the cashier. The result of the first Cycle process is that the average number of unclosed accounts per day is 40 accounts, with the oldest unclosed account date was 5 days after patient discharge. Because this solution has not obtained the expected results, the second PSC process is carried out, where the solution obtained is that the planning of the patient discharge must involve the primary physician as the decision maker, to decided that patient can go home one day before. After this series of Problem Solving Cycle processes were carried out, the average number of inpatient accounts that had not been deleted becoma an average of 10 accounts per day with the longest time being 3 days after patient discharge.

Conclusion: The average number of accounts that have not been closed on the same day has decreased significantly. However regularly monitoring must be carried out through the hospital information system.

The Correlation of Job Satisfaction and Performance Employees of Hospital

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Background: Based on the data of patient satisfaction in medical service unit which have not reach the standard yet 90% as well as the data of employee satisfaction in medical service unit which reached only 69% out of 75% of the hospital standard determination.

Aim: The purpose of this study was to identify the correlation between job satisfaction and employee performance in Surabaya Islamic Hospital.

Method: This study used a cross-sectional approach. The population of this study is the operator of medical service unit in Surabaya Islamic Hospital, with the exclusion of the doctors. The analysis of the data in this study used pareto analysis and bivariate pearson correlation test. According to this research, job satisfaction has several indicators which become a problem that should be resolved as the value of negative pareto showed >20%. The indicators of job satisfaction are employee satisfaction towards (pekerjaan indikator kesenangan?), satisfaction with compensation, satisfaction of firmness indicators of supervisory and reward, satisfaction of co-workers indicators for the respect of the individual's rights, and promotional opportunities. While employee satisfaction has a good value as the negative value did not show >20%.

Conclusion: This research concluded that job satisfaction has significantly positive correlation with the performance although there is still other aspects that contribute on the improvement of the performance such as motivation and the ability of employees themselves.

Keywords: Job Satisfaction, Performance, Hospital

Medical Record Management as Quality Assurance in Rumah Sehat Dhuafa (RUHAFA) Social Clinic Pamekasan

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Background: Rumah Sehat Dhuafa (RUHAFA) is a social clinic runs by local non-government organization in Pamekasan which provides free medical health for people who cannot afford medical service. People are delighted by the program and every year the number of patients increases. However, since the clinic was built in 2015 there is no evaluation and improvement on the services of the clinic.

Aim: To improve the healthcare service in RUHAFA as a quality assurance program in the clinic.

Method: A quality assurance program is conducted by observation in the clinic and interview of all the related staff in RUHAFA. Series of problems are discovered and based on the priority scale, their medical record is one of the top problem. Therefore, intervention on the medical record design and filling was made and evaluated, referred to the guideline from Indonesia Ministry of Health.

Results: This study analyzes five components of medical record which are patient identity, medical record identification, medical assessment, physician authentication, and correct documentation. There is an improvement in the medical record filling method based on the comparison of the pre- and post-intervention score which are 14 (10-20) and 24 (13-26), respectively ($p < 0,001$).

Conclusion: Medical record is one of important part in health services because it directly impacts patient care. Improvement in this matter results in improvement in the quality of the medical service.

Keywords: quality assurance, medical record, social clinic

“2-Heal” Mobile Application: Assessing Individual Mental Health Status and Providing Recommendations During COVID-19 Pandemic

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Background: The psychosocial consequences of the COVID-19 pandemic have increased mental health problems among people, often deteriorating those with pre-existing conditions. The reasons are increased restrictions, fear of contracting the infection, and loss of occupations. These factors highlight the need for an application (app) that can help address this surge in mental health problems.

Aim: The aim of this study is to develop a mobile-based health intervention tool in helping people dealing with their mental health problems and to assess its usefulness.

Method: 2-Heal is a smart phone-based app for dealing with the mental health issues of people. It is developed through the partnership efforts of researchers from various disciplines such as public health, psychology, and computer science. This app enables the screening of the users’ emotional states, including depression, anxiety, and stress and provides psychoeducation and activities for improving their mental well-being. The app’s content was developed based on a causal structure related to risks and protective factors surrounding the mental health of Malaysian youth. This structure was established on the grounds of a qualitative study, which included interviewing 28 youths aged between 15 and 22 years from the urban areas of Kuala Lumpur and Selangor and a systematic review of the literature on mental health screening tools. Using Google Forms, the screening tool was administered to 154 youths. The scale reliability was examined using Cronbach’s alpha coefficient. The usefulness of this app was subsequently evaluated among Malaysian users.

Results: It was found that the app’s internal reliabilities for depression, anxiety, and stress were 0.82, 0.90, and 0.92, respectively. It was also observed that the app was accessible, and the screening questions were easy to understand by the users. In addition, most users were of the view that the app was helpful in managing their emotions.

Conclusion: The tough challenges posed by the COVID-19 pandemic demand the development of an innovative solution to address the surge in mental health problems. The results of this study demonstrate that 2-Heal has the potential to assist in the mental health services for the epidemic-affected and improve their mental health literacy.

Implementation of Problem Solving Cycle for Improvement of Patient with Admission Letter Flow in Manyar Medical Centre Hospital

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Background: Problem Solving Cycle (PSC) will help hospital to determine and solve the problem that arise in the certain area that being studied. The issue raised is patients with inpatient admission letter still didn't know about the procedures for admission.

Aim: The purposes of this PSC are to know what obstacles found in Inpatient Admission, to determine the priority problem in Inpatient Admission, to determine the alternatives for the problem in Inpatient Admission, to develop a solution cycle for the problem found in Inpatient Admission.

Method: Implementation of the PSC method, namely by performing the stages of problem analysis, strategy design, strategy development, implementation, monitoring evaluation, follow-up and feedback. Data obtained using discussions and observations.

Results: In strategy design, the chosen solution among the alternatives is creating a standard operational procedures (SOP) for patients with admission letter, it contains the procedure of how to educate the patients about Inpatient Admission, any information that should be known by the patients. And in strategy development, the steps that carried out to achieve the goal are creating the SOP with the related official, socializing the SOP to the employee in Outpatients Unit and Admission-Cashier Unit, implementing the SOP in patients services for 2 weeks, and evaluating the implementation process.

Conclusion: The clarity of SOP has improve the service for Inpatients Admission. Service time are shorter and Patient's complaints about patient's flow are reduced. But there are still further development that can be made to enhance the service in Inpatient Admission.

Implementation of Patient Fall Risk Management Program in Naval Academy Hospital Surabaya

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Background: Quality and patient safety are the main things that hospitals must do on an ongoing basis in realizing the quality and highly competitive hospital. The current phenomenon is the absence of a fall risk assessment format/instrument according to the National Hospital Accreditation Standard (SNARS) Edition 1.1. Since the inception of the patient safety program in January 2018, there has not been a policy or program for the management of fall patients including the management of falling patients to be developed.

Aim: To recommend the preparation of guidelines for the risk of falling patients in the inpatient room of Naval Academy Hospital Surabaya. **Method:** The study begins with an analysis of the root of the problem, determining the chosen solution, and testing the program. Program testing is conducted on the application of screening for patients at risk of falling. The instrument used observation and a fall patient screening form.

Results: The results showed that most of the officers or nurses had well implemented the fall patient management program which included: screening, fitting the fall risk identification bracelet, managing the fall risk patient, managing the fall patient, and reporting the incident.

Conclusion: Establishment of policies and implementation of procedures, followed by supervision and monitoring, ensure program implementation.

The Role of Problem Solving Cycle (PSC) In Medical Record Unit in General Hospital Surabaya

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Background: Medical Record service is a supportive medical service that records notes on patient history, physical examination, supportive examination, diagnosis, treatment and nursing care. The issues that came up in Medical Record Unit Bhakti Dharma (BDH) Hospital Surabaya is minimal standard of service that has not been achieved and the storage of 56.799 inactive medical record archives that weren't ideal since 2010.

Aim: To find out and solve main problem in Medical Record Unit in BDH Hospital using Problem Solving Cycle (PSC) method

Method: This action research implements PSC in BDH Hospital Surabaya. Data was collected from 3 months reports in year 2020 in Medical Record Unit of BDH Hospital Surabaya. Secondary data analysis was done descriptively using PSC with steps of problem analysis, strategy design, strategy development, implementation, follow-up and feedback. This research was done during the period of October 2020 until November 2020.

Results: The prioritized problem found was the storage of 56.799 inactive medical records from 2010-2014. The medical records have not been destroyed due to absence of regulation. We conducted a focused group discussion involving multiple government health, law and policy sector to design a strategy to counter this issue. The proposed solution was for the Director of BDH General Hospital to suggest the destruction of inactive medical records and addition of an Archive Retention Schedule for medical records to District and Regional Regulations. The expected response to this suggestion was a Mayor's decree to approve inactive medical record destruction and revision of the Local Regulation regarding Archive Retention Schedule.

Conclusion: The excess storage of inactive medical records in BDH General Hospital was caused by the absence of regulation allowing destruction of inactive medical records. This study suggests that the aforementioned problem could be solved by publication of a regulation allowing medical record destruction and revision of Local Regulation to allow a scheduled archive retention.

Keywords: Medical record, Problem Solving, General Hospital, Regulation

The community mobilisation strategy to prevent child marriage in Bone, South Sulawesi

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Background: The child marriage remains an important social issues in Indonesia. South Sulawesi is one of provinces that has one of the highest burdens of child marriage in Indonesia. UNICEF and local government is conducting interventions to prevent child marriage in Bone, South Sulawesi One of strategies used is community mobilization collaboration with local partners to engage parents and other community members. A total of 2,000 parents and other adults in Bone will be reached in 20 months. Prior to the implementation, a community mapping was conducted.

Aim: This study aims to map the community groups to explore effective channels for child marriage prevention in Bone.

Method: A total of 34 in-depth interviews were conducted with community group leaders, 6 local governments, and 16 religious leaders in six intervention villages in Bone, South Sulawesi.

Results: Three types of community groups that can be potential channels engaged in the child marriage campaign were identified: social, economic and religious groups. The social groups consist of PKK, Dasawisma, Posyandu, Pokja Desa Sehat, BPNT (Bantuan Pangan Non-Tunai), PKH (Program Keluarga Harapan), Kelas Buta Aksara and PKBM. The economic groups consist of farmer groups, KWT (Kelompok Wanita Tani/women farmer), fisherman group, Kube (Kelompok Usaha Bersama). The religious groups consist of recitation for women, recitation for men, BKMT and religious lectures.

Conclusion: There are various activities that can be conducted with these groups but need to be tailored with the community groups as each group has their regular activities or meetings. A series of activities for child marriage prevention need to be developed to deliver campaign messages based on each community group activities.

Keywords: Child marriage, community mobilisation, stakeholder mapping

Preparation of Recommendations for Completion of BPJS Health Insurance Claims in Residence Activities in the Moedjito Dwijosiswojo Hospital 2020 Years

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Background: The National Health Insurance Program (JKN) aims to meet public health needs with a fee payment model using the INA CBGs method. The process of submitting claims from the hospital to BPJS Kesehatan has a verification stage for the completeness of the files. Incomplete claim files can cause delays in submitting claims or even files cannot be claimed. Delays in submitting claims and unclaimed files will cause delays in disbursing funds that should be received by the hospital.

Aim: This study aims to balance the academic knowledge gained by students in lectures with the knowledge and skills of hospital management techniques, especially in the Moedjito Jombang Hospital.

Method: Operational research by implementing 5 stage in the PSC (Problem Solving Cycle). With a problem solving cycle (PSC). In implementing PSC, it needs to be carried out continuously, therefore it is called a 'cycle', including, Problem Identification, Problem Analysis, Plan Development and Plan Implementation. The implementation of Phase I Residency was carried out on October 26, 2020 and Phase II Residency on November 11, 2020. In this residency activity to determine alternative solutions using the USG method while using the CARL method to determine priority alternative solutions. To determine problem identification with focus group discussion.

Results: problems in the case of Dr Moedjito Dwidjosiswojo General Hospital in Jombang related to human resources, infrastructure and management, where this was caused by pending claim files because BPJS claim supporters were incomplete, human resources did not understand coding, lack of thoroughness in internal verification and lack of medical resume. can be read by the internal verifier. The priority alternative solutions in this problem include making soup, reviewing old SOPs and making additional SOP.

Conclusion: In activities that have been carried out after passing the problem solving cycle and implementation, the results were quite good in reporting the completeness of BPJS claim files in November and getting better in December 2020. This is related to the success in determining alternative solutions and running other processes well. So that in the report every month the pending claim file gets the smaller the presentation.

Analysis of Patient Safety Culture and Organizational Culture as a Step of Patient Safety Improvement in RSUD Dr. Iskak Tulungagung 2020

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Background: Safety hospital has become a global issue. There are five important component related to safety in hospitals patient safety is one of them. Patient safety was influenced by individual culture and systems running within the organization.

Aim: The objective of this study was to analyze the description of patient safety culture at Dr. Iskak Hospital in 2020.

Method: This study used observasional descriptive method research design with model cross-sectional. The quantitative approach used AHRQ (Agency Health Research and Quality) 2004 questionnaire. The research subjects were all employees in all units who were directly or indirectly related to the patient as many as 475 samples.

Results: The results showed that the dimension with the highest positive response was the organizational learning dimension (91.79%) and the lowest dimension was staffing (60.89%). For statistical results using SEM, it was found that unit culture had a direct effect on hospital culture (0.382), hospital culture had a direct effect on outcomes (1.675) but unit culture had no significant effect on outcomes (-0.337). Obstacles encountered in implementing patient safety culture are the low awareness of reporting due to fear of being scolded and given sanctions. For this reason the recommendations given were establishment of patient safety teams, education and evaluation monitoring.

Keywords: culture of patient safety, hospital, health employed

Comparison of INA-CBG's Package Rate with Package Unit Cost according to Clinical Pathway (Operational Research of the Problem Solving Cycle at Hospital X)

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Background: Hospital financial reports are important for hospital management in order to determine the current position of the hospital and plan future strategies. At Hospital X, there is a problem with the income statement that is not real because the calculation of BPJS (Badan Penyelenggara Jaminan Sosial) patient services is based on the hospital rate, not the unit cost rate, so it seems that the hospital losses due to BPJS patient services are very high. In 2019 there is a loss of Rp. 416.563.301,- per month.

Aim: The general purpose of this article is to compare INA-CBG'S tariff with package unit cost based on clinical pathway for 8 diagnoses.

Method: The method used in this article is operational research by implementing 5 stages of the Problem Solving Cycle (PSC) which include: (1) Problem Analysis, (2) Strategic Design, (3) Strategy Development, (4) Implementation, Monitoring, Evaluation, and (5) Follow Up and Feedback.

Results: The main problem of this research is an unreal income statement where the root cause of the problem is that the hospital has never calculated the unit cost. With the Activity Based Costing method, the unit cost for 8 diagnoses of inpatient diseases was obtained. The package unit cost for Class 1,2 Adult Typhoid Fever, Class 1,2,3 Adult Pneumonia, Class 1,2 Child Typhoid Fever and Class 1,2,3 Child Pneumonia are lower than the INA-CBGS (Indonesian Case Base Groups) rate. Meanwhile, the unit cost for Class 3 Adult Typhoid Fever, Class 3 Child Typhoid Fever, Class 1,2,3 Dengue Fever, and Class 1,2,3 Adult Child Acute Diarrhea Class are higher than the INA-CBGS rate. If the calculation of the income statement for the 8 diagnoses above in 2019 using package unit costs, the hospital still gets a margin of Rp. 4,301,474,- compared to using hospital costs, it seems that the hospital has suffered a loss of Rp - 215,371,221,-. In this article, it can also be seen that the hospital rates are 63% higher than the INA-CBGS rates.

Keywords: unit cost, activity based costing, clinical pathway, problem solving cycle

Opportunities and Challenges Interprofessional Education in Health Services for Public Health Students

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Background: Interprofessional collaborative practice remains a challenge, especially for public health workers, because there is still little empirical evidence in the public health literature to support and inform it.

Aim: To analyze health services by students using Interprofessional education.

Method: This Systematic Review study is taken from PubMed using keywords “Interprofessional Education, healthcare, public health student”. Screening based on the criteria of the journal that are published in 2015-2020. Articles were screened by title, abstract, and free full text, and data were extracted.

Results: The search yielded 6722 total articles. After screening, 26 articles remained for review. All studies reported a positive impact of IPE on the education of students of the health professions. The number of students who had positive attitudes towards IPE increased after the IPE session (El-Awaisi et al., 2017). Interprofessional learning with other health professional students will improve their ability to understand clinical problems (Maharajan et al., 2017). This training may be useful for students from all health disciplines to recognize the benefits of engaging and learning from public health students (Anderson, August, Goldberg, Youatt, & Beck, 2019). IPE provides essential information for planning and IPE implementation (Woermann et al., 2016). It is needed interpersonal learning activities for health professional students that are designed to encourage social learning (Addy, Browne, Blake, & Bailey, 2015). IPE that focuses on population health is one way for health administration programs can support the transformation of the health system (Brisolara et al., 2020). This also applies the basic skills and soft skills of a public health worker, one of them is the graphical model of public health which has four main tools. They are biostatistical, epidemiology, behavioral and social sciences, health administration and policy become strength to make obstacles in the implementation of IPE can be overcome.

Conclusion: The opportunities of public health experts in the Interprofessional team in charge of coordinating, leading, and mobilizing human resources become the activator to improve the degree of public health. It needs support and awareness of the implementation of IPE both during placements in the study and clinical programs.

Keywords: interprofessional education, Healthcare, Students

The Impact of National Health Insurance for Patients with Catastrophic: Systematic Review

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Background: Catastrophic is a high-cost disease that requires special treatment but its cost constraints treatment process. Health insurance is one of the solutions to overcome difficulties in providing treatment for catastrophic sufferers.

Aim: This study aims to find out the impact of national health insurance for catastrophic sufferers in various countries.

Method: This review is based on literature obtained from 92 relevant articles, 16 articles from Pro-quest, 27 articles from Google scholars, 14 from JACC, 26 articles from Pubmed and 9 articles from Science Direct. After screening by reading the abstract and looking at the entire article, it was stated that only 12 articles were deemed eligible for the impact of catastrophic disease health insurance.

Results: Most of the countries in the results of this literature review describe a positive impact on the existence of health insurance with catastrophic risks that the insurance status significantly increases accessibility and financial protection against disaster spending. The choice of insurance system is related to the level of income in a country. Overview of the National Health Insurance in Indonesia has a budget deficit since its first operation, The main cause is that almost 30% of BPJS Kesehatan funds are absorbed for catastrophic diseases that require further treatment has high cost. Many insurance schemes are implemented in various countries, Basically, large expenditures due to catastrophic diseases can be prevented if the government prioritizes promotive and preventive programs as an effort to prevent the high cost of OOP. The main problem in developing countries is the high expenditure on health OOP, so that it becomes a factor inhibiting households from accessing health services.

Conclusion: Insurance is important in protecting catastrophic financing expenses. The impact of health insurance in Indonesia shows an increase in the number of BPJS Health memberships, participant satisfaction, satisfaction of health facilities and the development of first level health facilities (FKTP), but still high catastrophic cases and low levels of community compliance are challenges for the government. Catastrophic diseases can be prevented if the government prioritizes programs that are promotive and preventive in an effort to prevent the high cost of OOP.

Keywords: Impact, National Health Insurance, Catastrophic, Promotive, Preventive

Determinants of Participation in the Implementation of Non-Smoking Area Policies in Tourism Destination Restaurant Managers in Banjarbaru City, Indonesia

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Background: Riskesdas 2018 data shows that the prevalence of smoking in adolescents aged 10 -18 years has increased from 2013 (7.20%) to 2018 (9.10%). One alternative that is quite feasible to be applied to reduce the prevalence of smoking in Indonesia is implementing a no-smoking area policy (KTR) starting from government and private institutions. The involvement of the private sector, including the restaurant or café industry, which is a tourism destination, is very important, but not all of them provide services in the form of a special area for KTR, so that they are mixed up among customers. Of the 100 restaurants and cafes visited by the KTR Task Force team, most of the managers admitted that they were not aware of any regulations regarding the KTR Regional Regulation.

Aim: This study aims to analyze the determinants related to the role and application of KTR in restaurant managers of tourism destinations in the city of Banjarbaru in 2020.

Method: This study used an analytical survey method with a cross sectional design. The population in this study were all restaurants in Banjarbaru City with a sample of 44 restaurants/cafes using purposive sampling. Data were analyzed using Chi Square test with 95% confidence level.

Results: The results of the study using the Chi Square statistical test found that there was no relationship between age, smoking status with the participation of the application of KTR, while the factors of education, income turnover, sanctions, knowledge and attitudes had a relationship with the role of participation in the application of KTR, namely p value <0.05.

Conclusion: Thus, there is a relationship between education factors, income turnover, sanctions, knowledge and attitudes that have a relationship with the role and application of KTR on restaurant managers of tourism destinations in the city of Banjarbaru. This study can be used as a reference in improving the KTR policy. The relevant offices are expected to be able to give awards to the managers who have successfully implemented KTR, by giving the restaurant/café predicate "Breathing Free".

Keywords: KTR, characteristics, knowledge, attitudes, participation

Study on the Association between Individual Factors/Occupational Stressors and Perceived Occupational Stress in Nurses

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Background: Occupational stress in nursing is often higher than other jobs, and they have high rate of non-specific symptoms. The Japanese Nursing Association emphasizes the necessity of improving mental health for nurses at both organizational and individual levels, especially during the COVID-19 pandemic.

Aim: To clarify the association between individual/occupational stressors and perceived occupational stress.

Method: After reading the consent form, participants anonymously answered an online questionnaire (Macromill, Inc) related to individual factors including years of experience, years in current workplace, and area of expertise. Variables relating to occupational stressors consisted of thirty questions about daily duties in a past month. Perceived occupational stress was identified using 5-point Likert ranging from 1 to 5, by asking if they felt any work-related stress in a month.

Results: About 73 % of participants had either moderate or severe stress. Overall, perceived occupational stress was relatively high with the average score of 3.8 ± 1.0 . Working hours and overtime showed weak positive correlation with stress ($r=0.29$, $r=0.26$ respectively). Regarding area of expertise, nurses in internal medicine, surgery, operating room, and outpatients perceived higher stress than average. Duties with stress scores higher than four included dealing with emergent situations within working hours (4.1 ± 0.9), dealing with emergent situations in overtime (4.1 ± 1.0), regular meetings (4.0 ± 0.9), coordination between related departments (4.1 ± 0.9), human resource development (4.1 ± 0.9), trainings, seminars, or nursing research (4.1 ± 0.9), specimen collection (4.0 ± 0.9), coordination with patient's family (4.0 ± 0.9), assisting patient with eating (4.0 ± 0.9), and assisting patients with personal hygiene (4.0 ± 0.9).

Conclusion: Specimen collection, assisting feeding and personal hygiene are nurses' daily duties. However they feel more nervous by engaging in these duties since these can have higher risk of infection, especially during the COVID-19 pandemic, resulting in higher perceived stress score. Resting is necessary to reduce occupational stress, therefore it is necessary to allocate enough nursing staff so that they are able to take paid leave without hesitation, as well as weekly holidays. In the nursing system, institutionalization to allocate additional staff who are equivalent to full-time staff may be needed.

Mapping of Pharmaceutical Service Facilities (Pharmacy) Based on Geographic Information in Surabaya

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Background: One of the crucial factors in implementing health services in Indonesia is the availability of health services by health care workers in every region in Indonesia. The need for accessibility to health facilities, including pharmacies, hospitals, health centers, health clinics, and others, increases due to population growth in Indonesia. The approach to mapping the geographic location of health facilities needs to be used as a policy reference in determining the achievement of national health care coverage.

Aim: This study aims to see the distribution of pharmacy locations in Surabaya and its relationship with the population and epidemiological parameters.

Method: Geographic information of pharmacies in Surabaya was collected from a database provided by the Indonesian Ministry of Health. Population data in 2019 included the number of district residents in the Surabaya area, the number of hospitals and clinics, the number of disease cases were obtained from the Central Statistics Agency of Surabaya.

Results: A total of 791 pharmacies are spread across 31 districts in the city of Surabaya. The ratio of pharmacies number to the population per district varies from 1: 1426.71 to 1: 49806.00. The number of pharmacies per district significantly correlates with the number of hospitals and clinics in each district of Surabaya ($r = 0.830$).

Conclusion: The distribution of pharmaceutical service facilities (pharmacies) in Surabaya is still uneven and centralized, following hospitals and clinics distribution in each district. The role of policymaker to use the location distribution map is needed to evaluate the licensing process for establishing new pharmacies.

Keywords: Pharmacy, geographic location, pharmaceutical services

SIMPLICIAL MODEL OF INFORMATION SYSTEMS IN HEALTH SERVICE

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Background: Development in the health sector is carried out based on the principle of non-discrimination, and is sustainable. The principle of sustainable development in WHO is in 6 blocks of system strengthening. One of the system strengthening is the health information system. In 2018, the demand for data-based policy making requires the government to prepare accurate, open, and interoperable data called one data. At present the world is actually talking about the 6.0 era, but in Indonesia it is still in the 4.0 era. There are still many problems in improving the health information system in Indonesia and also starting the implementation of JKN, will create a double burden

Aim: On this occasion, our research and development team provides solutions to the challenges and improvement of public health strategies during the industrial revolution 4.0, by providing a model of health information systems in health services in the JKN Era.

Method: This study used a cross-sectional method with quantitative and qualitative data collection. The system approach method starting from input, process and output is applied in this research. The analysis is carried out by modeling the data so that a health information system model is obtained towards one data.

Results: Several modeling steps are obtained. Readiness of information systems from Input components which include: governance, HR, infrastructure, financing, process components: monev, technical guidance, and verification and validation, and output components: standard and quality, average reporting accuracy : 57.77%, completeness of variables: 60.99%, routinely reported on average: 60.03%, operational definitions are easy to understand and fill in average: 60.39%,) average utilization: 63.03 %, bridging average: 62.67% and data dictionary: 63.05% average, open access is expressed by means or media for submitting data or information reports on average 63.61%, security (appropriate storage) on average : 91.3%, create, read, use, delete (CRUDE) average: 79.7%, average developer: 92.5%, average average network provider: 46.4%) Data analysis modeling shows that, health information systems can be ready to support a single data with standardized and quality input, process and output of data and information, data or information.

Conclusion: The model for strengthening the health information system to support one data set with outputs (standards, utilization, bridging, open access, and security) is recommended for strengthening the process components (monev, verification, technical guidance) and strengthening the input components (funding, human resources, governance, IS program, infrastructure, IS JKN, IS management)

Keywords: Health Information System, health service, one data.

Availability of Public Health Workers on Primary Health Care Facilities in East Java Province 2017

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Background: According to WHO, health human resources (HHR) includes all people who are engaged in actions and has a primary aim to strengthen health. HHR plays important roles in Universal Health Coverage (UHC), especially public health workers (PHW). Public health workers consist of health epidemiologists, health promotion and behavioral personnel, occupational health advisors, health administration and policy personnel, biostatistics and population personnel, and reproductive and family health workers. Today, Indonesia is one of 57 countries that are facing the HHR crisis while PHW are the integral part of HHR who are sharing the same purposes of primary health care (PHC) to reinforce health in Indonesia by promotive and preventive actions, especially in East Java Province. Indonesia Government set the standard of the minimum number of PHW which is stated in Permenkes No. 75 2014 Regarding Primary Health Care (Puskesmas). The availability of PHW contributes to the main problems of public health in Indonesia.

Aim: This study aims to find out the availability of PHW on PHC in East Java Province.

Method: This research design was descriptive study by collecting secondary data that came from relevant references to the main topic, from Rinakes 2017, and Health Profile of Regencies in East Java Province 2017.

Results: The result of study showed that the percentage of public health workers distribution on primary health care in East Java Province only covered 55% with 828 PHW personnel and 528 PHC facilities attained from 960 in total, while the 45% of PHC facilities did not accomplish the adequate number of PHW. PHW plays a big role in preventive and promotive actions in public health. The data indicates that the availability of PHW in PHC facilities does not meet the minimum number of standards, which should be fulfilled by 1 or 2 personnels in each PHC facility which is categorized by the location and readiness for inpatient services. This case will lead to misorientate PHC facilities on individual health services instead of public health services.

Conclusion: PHC facilities in East Java Province do not accomplish the coverage of PHW as the primary role of promotive and preventive actions which is lacking in number and do not attain the minimum number of PHW by 45% PHC facilities in total. So that, HHR who are involved in health promotion and prevention are not fulfilled properly. The main precedent cause is lack of fund optimization on public health services. Further studies are needed to discover the base factors that cause the lack availability of PHW in each PHC facility and occupy the number of PHW needs regarding the legit procedures that are applied.

Keywords: Human resources of health, primary health care, public health workers, promotive and preventive actions, public health

Patient Comfort and Satisfaction in the Interaction Process in terms of Nurse Caring Behavior

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Background: The convenience of the interaction process is a form of the success of nurses in providing good service, creating a conducive environment and striving for mutual welfare. If the patient is free from discomfort, it shows the patient's well-being and motivation to get well soon. Patient comfort is related to patient satisfaction in receiving nursing services. The low quality of nursing services is in line with the low level of satisfaction, so it is necessary to improve the quality of nursing services in order to increase satisfaction. One of the factors of comfort and satisfaction is the ability to provide information, caring, communication, politeness, responsiveness. Caring a nurse is a caring attitude that makes it easier for patients to achieve improved health and recovery. Caring behavior is a form of caring, paying attention to others, centering on people, respecting self-esteem, and humanity, commitment to preventing deteriorating health status, paying attention and respecting others

Aim: The purpose of writing a literature review is an analysis of a literature review of similar research or writing that has been done previously on a specific topic. The purpose of this writing itself is to what extent the patient's comfort in the interaction process is viewed from the nurse's caring behavior

Method: The design used is literature review by using several journals from several sources such as Google Scholar and Pubmed which were published from 2010-2020

Results: There is a relationship between patient comfort in the interaction process in terms of nurse caring behavior. And it can be seen that the lower the patient's comfort will be in line with the lower patient's satisfaction.

Conclusion: Convenience, Comfort, Interaction Process, Caring Nurse

THE EFFECTIVENESS OF TELEHEALTH-BASED HEALTH EDUCATION ON THE KNOWLEDGE AND SKILLS OF MOTHERS TREATING LOW BIRTH WEIGHT (LBW)

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Background: Babies with low birth weight (LBW) have a risk of experiencing health problems so they require care from the baby being hospitalized until the baby is sent home. Mother's knowledge and ability plays an important role in infant care to prevent LBW infant mortality and morbidity.

Aim: The purpose of this literature review is to determine the effectiveness of using telehealth-based health education to increase knowledge and skills of mothers in caring for LBW infants.

Method: This literature review was conducted by searching for data sources and selecting articles. The databases used are Google Scholar and Pubmed. The keywords used are telehealth or mhealth or app health and low birth weight and knowledge and skills. The inclusion criteria for the articles taken were those published in full text, in the 2015-2021 timeframe, the type of quantitative research, as well as articles that had the main content of using health education media about the care of LBW babies. The search results contained 38 articles and those that have been adjusted to the inclusion criteria, the remaining articles are 6 articles

Results: The provision of telehealth-based health education can increase the knowledge and skills of mothers effectively in caring for LBW babies compared to conventional health education, namely leaflets and demonstrations.

Conclusion: Telehealth-based health education can be used as an option to increase knowledge and skills so that mothers are able to care for LBW babies at home.

Keywords: LBW, Telehealth, Knowledge, Skill

LITERATURE REVIEW: TELENURSING AND ADHERENCE OF DIALYSIS PATIENTS

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Background: Health problems that arise in hemodialysis patients are non-compliance with fluid restrictions. The country with the highest incidence of ESRD in 2018 was the Jalisco region in Mexico, which was 594 people per million population (United States Renal Data System, 2020). One of the efforts to improve patient compliance is through education and monitoring. Telenursing is one of the modern information and communication technology systems in the health sector that can be used to patient monitoring and provide nursing services.

Aim: The purpose is to determine the effect of telenursing on adherence of dialysis patients.

Method: The research articles were obtained from three databases Proquest, PubMed and Google Scholar totally 27 articles. Search literature using keywords (Bahasa and English), telenursing OR text messaging OR telephone Follow-up OR short message system OR mobile phone text messaging AND adherence OR Compliance AND hemodialysis OR dialysis with the inclusion criteria of research articles from 2016-2020, primary articles, full text and research subjects are hemodialysis patients (either primary or secondary). The 7 articles obtained were critically assessed and analyzed using the Duffy's Research Appraisal Checklist Approach.

Results: Telenursing research showed an increase adherence in the presence of hemodialysis, fluid restriction, medicine, dietary, physical activity and intention to quit smoking also increased knowledge, quality of life and self-efficacy of dialysis patient.

Conclusion: Telenursing increasing adherence to care and treatment dialysis patient and improving health status in chronic diseases.

Keywords : Telenursing, Adherence, Dialysis

THE EFFECTIVENESS OF TELEHEALTH-BASED HEALTH EDUCATION ON THE KNOWLEDGE AND SKILLS OF MOTHERS TREATING LOW BIRTH WEIGHT (LBW)

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Aim: The purpose of this literature review is to determine the effectiveness of using telehealth-based health education to increase knowledge and skills of mothers in caring for LBW infants.

Methods: This literature review was conducted by searching for data sources and selecting articles. The databases used are Google Scholar and Pubmed. The keywords used are telehealth OR mhealth OR app health AND low birth weight AND knowledge AND skills. The inclusion criteria for the articles taken were those published in full text, in the 2015-2021 timeframe, the type of quantitative research, as well as articles that had the main content of using health education media about the care of LBW babies. The search results contained 38 articles and those that have been adjusted to the inclusion criteria, the remaining articles are 6 articles

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Keyword: LBW, Telehealth, Knowledge, Skill

LITERATURE REVIEW: FACTORS AFFECTING CANCELLATION ELECTIVE SURGERY

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Background: Elective surgical cancellation on the day operation is a problems which lead inefficient use of operating room with global prevalence rates varied is between 9 % - 31%. Cancellation elective surgery effect to surgical waits time, increase coast, physhological effects to patients, family and surgical team also reduce hospital performance.

Aim : To determine factors affecting cancellation elective surgery.

Method: The research articles were obtained from three data bases Proquest, PubMed and Google Scholar totally 377 articles. Search literature using keywords (Indonesian and English), “elective surgery cancelling” NOT “COVID 19” with the inclusion criteria of research articles from 2016-2020, primary articles, full text, removed duplicated and research subjects are elective surgery. 8 articles were reviewed that met all the inclusion criteria and objectives of this literature review. The 8 articles obtained were then carried out a critical appraisal which was then analyzed using Duffy’s Research Appraisal Checklist Approach.

Results: The results of the study that the percentage of cancelling surgery on the day of operation is 4.4 % until extremely high 31.6 %. The reason of cancelling are patient related factors 17.6 % - 80 %, surgeon related factors 2.5 % - 35.8 % and facility related factor 13.6 % - 33 %. Patient related factors which included lack of funds, changing of condition, absence of surgery, unable to anesthetists.

Conclusion: The cancelling rate of elective surgery still remaind high, important to identify factors that’s influence to cancellationto choose the right solution.

Keywords: cancellation factors, elective surgery

FACTORS AFFECTING CANCELLATION ELECTIVE SURGERY

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Background: Patient safety culture is the product of values, attitudes, competencies and behavioral patterns of individuals and groups that determine the commitment and ability of a health service organization to patient safety programs. Good patient safety can reduce patient safety incidents.

Aim: This study aims to determine the factors that influence patient safety culture in a hospital in Banyuwangi Regency.

Method: This study uses a correlational study design with a cross-sectional approach. The number of samples is 98 nurses with the technique of selecting Simple Random Sampling. The technique using multivariate analysis using multiple logistic regression analysis.

Results: The results of this study indicate that there is an influence between the variables of nurse job satisfaction, hospital facilities, and nurses' attitudes towards patient safety culture. With a p value of 0.000 each. The dominant factor that influences is the nurse's job satisfaction variable (p value = 0.001).

Conclusion: The results of this study can be used by nurses to improve and maintain the application of patient safety culture in hospitals and provide an evaluation of the implementation of patient safety programs in hospitals.

**LITERATUR RIVIEW: The Influence Of The Coaching Method On
Self Awareness of Patient Safety Culture In Inpatient Nurses At R.
Syamsudin, SH. Hospital Sukabumi City**

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Background :Patient safety culture is fundamental in the implementation of patient safety in hospitals, hospitals must ensure the implementation of patient safety in the health services provide to patients and play a 24 hour role in patient care.

Aim: This study aims to determine the effect of the coaching method on self awareness of patient safety culture.

Method: This study is a literature review which was analyzed using PIO by identifying cross-sectional study scientific articles published from 2016-2021, in English and full text. The databases used are PubMed, Scopus, Proquest, Science Direct and Google Scholar with a total of 5568 articles identified using the keywords coaching OR construction AND “Self awareness” AND “patient safety Culture” AND nurses AND influence.

Results: The results of the study obtained seven articles that discussed the effect of coaching on self awareness of patient safety culture. Patient safety is significantly influenced by coaching and education methods that involve the participation of nurse leaders.

Conclusion: The coaching program is used as a method to change the perspective of nurses to be more open and supportive of self-awareness in an effort to improve patient safety culture. Clinical coaching is influential in ensuring patient safety by regularly conducting real time interventions to prevent errors, omissions, or incidents from occurring in the treatment area. The clinical coaching role educates and supports staff to provide safe and high-quality care, making a valuable contribution to patient safety.

Keywords: coaching, self awareness, patient safety culture, nurse

Literature Review : Implementation of shift Handover Patients by Nurses with SBAR Approach

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Background: Hospitals must develop a service system that ensures the implementation of effective communication as part of the Patient Center Care (PCC) efforts. One of the six elements of Patient Safety Goals from patient care services are effective communication and patient care handovers are part of the effective communication. Handover patient care between nurses during ineffective shift exchanges often poses a risk to patient safety, so an approach method is needed to reduce this risk, one of which is the Situation, Background, Assessment, Recommendation (SBAR) communication method approach.

Aim : the purpose of this literature review is to find out the results of implementing patient shift handovers by nurses using the SBAR communication approach.

Method: The articles were obtained from 3 databases : PubMed, DOAJ and Google Scholar. Literature search using keywords : (Indonesian) : Perawat AND “timbang terima” AND SBAR, and (English) Nursing AND Handover OR Hand-off AND SBAR, with article inclusion criteria of a maximum of 5 years, primary article, full text, and the research subject is an inpatient room nurse. inpatients who do shift handovers. Out of 765 articles, 6 articles were reviewed and analyzed.

Results: The results of the study showed that almost all articles mentioned the benefits / positive impacts of implementing SBAR communication in shift Handover, and several articles added by discussing: 1) obstacles / challenges in implementing SBAR communication in carrying out handovers, 2) expectations of implementing SBAR communication in implementing handover.

Conclusion: the implementation of shift handover patients by nurses with SBAR approach can have a positive impact, especially for nurses and patients in improving patient safety.

Keywords: Handover, Nurse, SBAR

Maternal and Child Health Information System Design

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Background: Efforts to improve maternal and child health are carried out with various efforts that are in line with efforts to reduce maternal and infant mortality. Currently, the Maternal and Child Mortality Rate (MMR) is still high, making it a major problem in the world of health. This is partly due to the lack of accurate information on maternal and child health. One of the efforts currently being made is community empowerment where the program's performance needs to be improved. To support the process of implementing community empowerment, it is necessary to use internet technology tools to maximize maternal and child health information as an up to date source of information, interactive communication media and make it easier for health workers to implement it.

Aim: This study aims to develop a prototype of maternal and child health applications to assist pregnant women, mothers with toddlers in monitoring pregnancy and child development. The current COVID-19 pandemic has an impact on maternal and child health services.

Method: The method of designing this system is prototyping with the results of this research in the form of designing a maternal and child health system that can be used by the community easily on their cell phones.

Results: The results of this system requirements analysis were obtained from in-depth interviews with several stakeholders. It is hoped that this system can be tested directly at the field level and can be developed further, especially features that support community involvement in the use applications to improve maternal and child health services

Conclusion: Maternal and child health information systems can help pregnant women, mothers with toddlers more easily perform MCH services. This prototype has components that are in accordance with the content of maternal and child health books so that this system has the potential to be developed into applications that have a wider scope.

Job Satisfaction of Nurses in Indonesia: A Literature Review

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Background: Globally concerns about job satisfaction of nurses are increasing because they play an important role in the quality of patient care, as well as in Indonesia.

Aim: Determining a fuller and broader understanding of job satisfaction and related factors that affect nurse job satisfaction in Indonesia from the empirical literature.

Method: This research method is literature review. The data bases used in this literature review include Pubmed, DOAJ and SAGE Journal published in the period January 2016 – December 2020. The keywords used in this article search are nurse satisfaction, job satisfaction, Indonesia. Based on the keywords used, 984 related articles were obtained.

Results: A total of 10 research articles that met the inclusion criteria were included in this review. Factors that can affect the job satisfaction of nurses in Indonesia include leadership, work environment, career path, relationships with co-workers, salary, rewards, communication, opportunities, organizational commitment, work schedules, work stress.

Conclusion: It is very important to increase the job satisfaction of nurses. This study is expected to increase awareness of the quality of patient care and develop effective strategies to increase nurse job satisfaction to achieve patient satisfaction with nursing care received.

Nurse Leadership Style: A Literature Review

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Background: The development of medical services requires trained nursing leaders. Nurses must be fully prepared for this role based on internationally defined leadership abilities. Effective leadership in health care is essential in enhancing and enhancing the effectiveness of the health care system.

Aim: This study aims to assess the leadership style of nurses in the nursing team.

Method: This research method is literature review. The databases used in this literature review include Pubmed, Wiley and the SAGE Journal which were published in the period January 2016 - December 2020. The keywords used in this article search were nurse leadership style, impact of nurse leadership. Based on the keywords used, 26.704 related articles were obtained.

Results: A total of 10 research articles that met the inclusion criteria were included in this review. From this review it was found that leadership style has a positive influence on welfare, performance, cooperation in a nursing team. It was found that the most dominant transformational leadership style where all members have the opportunity to develop themselves.

Conclusion: The leadership style in a nursing team affects the final results of nursing actions that will be given to patients. Transformational leadership is needed so that all members always develop themselves and work together, and resonant leadership is needed to increase the spirit of self-development in members.

ANALYSIS OF FACTORS AFFECTING THE PERCEPTION OF NURSING STUDENTS ABOUT THE EFFECTIVENESS OF ACHIEVING THE TARGET OF CLINICAL PRACTICE

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Background: Nursing health education goes through two stages of education, namely the academic education stage and nursing clinical practice education. The achievement of clinical nursing skills is strongly influenced by the quality of clinical supervisors. The ineffective role of clinical supervisors can lead to low competency achievement of nursing students.

Aim: This study was to analyze the perceptions of clinical supervisors in clinical practice for nursing students at the Superior Cristal Institute.

Method: This research is a descriptive qualitative design with a phenomenological approach, taken by purposive sampling of ten clinical supervisor informants conducted by in-depth interviews.

Results: Student competency standards consisting of cognitive, affective and psychomotor. Clinical supervisor standards consisting of clinical practice implementation standards, competency achievements and clinical practice learning methods. Standards of clinical practice consisting of supporting factors and inhibiting factors of clinical practice.

Conclusion: The application of clinical practice of the nursing profession must meet educational standards. The findings of this study can be used to improve the quality of guidance for practical students by increasing various factors that influence clinical practice in improving the quality of nursing services.

Keywords: Perception, Clinical Advisor, Clinical Practice

INFLUENCE OF USE OF FLUID WARMER / INFUSION FLUID REHIBITION TO REDUCING THE EVENT OF CHARGING POST ANESTHESIA IN PATIENTS WITH SPINAL ANESTHESIA IN LAVALETTE HOSPITAL.

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Background: Post anesthetic shivering (PAS) or shivering after anesthesia is defined as a fasciculation of the skeletal muscles in the face, head, jaw, trunk, or extremities that lasts more than fifteen seconds.

Aim: The purpose of this study was to determine the effect of using a Fluid Warmer / IV fluid warmer on reducing the incidence of shivering after anesthesia in patients with spinal anesthesia at Lavalette Hospital.

Method: The research design used in this study was a quasy experiment with a control group. Sampling was taken using Accidental sampling technique. With a sample size of 30 research subjects, 15 subjects as the treatment group and 15 subjects as the control group.

Results: The average results before and after giving warm infusion and those not given warm infusion, it can be concluded that warm infusion can maintain body temperature, where warm infusion has a difference ($36.43 - 36.25 = 0.18$) and those who were not given warm infusion had the difference ($36.50 - 35.16 = 1.34$). The results of the analysis T-test, the value of $p = 0.047$, which means that there is an effectiveness of using a fluid warmer to reduce the incidence of shivering in patients with post-spinal anesthesia in the operating room of the Lavalette Hospital, Malang.

Conclusion: By giving warm intravenous fluids will result in changes in temperature in the blood vessels and then will be detected by the thermoreceptors on the hypothalamus, causing vasodilation of blood vessels which causes increased blood flow. Body temperature moves from the blood through the blood vessels to the surface of the body, so that the surface of the body warms up.

Keywords: intravenous fluid warmers, chills, post anesthesia and spinal anesthesia

The Analysis of The Nurse Unit Manager Supervision on The Performance of Nurses

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Backgorund: Performance issues in hospitals are the center of attention because they involve the efficiency and effectiveness of human resources in achieving organizational goals and visions. Many factors influence performance, including the supervisory factor from superiors which ultimately has an impact on the overall performance results as an organization.

Aim: The purpose of this study was to determine the relationship between the supervision of the nurse unit manager on the performance of nurses.

Method: The research design was correlational with the population of all nurses in the inpatient room totaling 67 nurse. Using a stratified random sampling technique generated 57 participants. Data analysis using the Spearman rho statistical test with a significance of $\alpha = 0.05$.

Results: The results showed that from 57 respondents, most of the respondents stated that the nurse unit manager did adequate supervision, namely 33 respondents (57.9%) and most of the respondents had sufficient performance, namely 32 respondents (56.1%).

Conclusion: Based on the research conducted, it can be concluded that there is relationship between the supervision of the nurse unit manager on the performance of nurses. The results of the study also prove that supervision can improve the performance of nurses because when supervising there are certain actions that are evaluated by the nurse unit manager towards nurses, so that if the evaluation is corrected by the nurse, it will be able to improve the performance of the nurse.

Keywords: performance, supervision, nurses

OUTCOMES OF MANAGEMENT DEVELOPMENT PROGRAM FOR EMPLOYEES OF NADHLATUL 'ULAMA HOSPITAL

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Background: Various management development interventions do not appear to have identified the characteristics of the role model, perceived control and understanding of Management Development Program (MDP) itself. The MDP effectiveness evaluation model also appears to have not received much attention. The effectiveness of MDP is often questioned, but determining the criteria for the effectiveness of MDP is still not the focus of discussion.

Aim: Research was analyzed of MDP characteristics, namely role model, perceived control and understanding to resulting three positive outcomes, namely (1) organizational commitment, consist of affective commitment, internalization, continuant commitment, and normative commitment; 2) utility, consist of intrinsic – extrinsic utility and organizational utility, and; 3) participative behavior, consist of participation on development programs, innovations and opinions sharing.

Method: Research taken totally sampling on all employees of Nahlatul Ulama Hospital (NUH) Jombang that consist of 100 employees on administration and managerial level. Researcher development of self-report to capture research variables. Research used correlational design with regression path analysis.

Results: Role model has positive effect to: 1) organizational commitment with $\alpha = 30,422$, $\beta = 2,501$, Std. Error = 0,203 and $\rho = 0,000$; 2) utility with $\alpha = 23,791$, $\beta = 0,933$, Std. Error = 0,178 and $\rho = 0,000$; 3) participative behavior with $\alpha = 25,560$, $\beta = 1,774$, Std. Error = 0,209 and $\rho = 0,000$. Perceived control have positive effect to: 1) organizational commitment with $\alpha = 22,056$, $\beta = 3,108$, Std. Error = 0,279 and $\rho = 0,000$; 2) utility with $\alpha = 20,186$, $\beta = 1,199$, Std. Error = 0,231 and $\rho = 0,000$; 3) participative behavior with $\alpha = 22,109$, $\beta = 2,000$, Std. Error = 0,293 and $\rho = 0,000$. Understanding of MDP has positive effect to: 1) organizational commitment with $\alpha = 35,428$, $\beta = 1,366$, Std. Error = 0,185 and $\rho = 0,000$; 2) utility with $\alpha = 19,400$, $\beta = 0,859$, Std. Error = 0,114 and $\rho = 0,000$; 3) participative behavior with $\alpha = 22,620$, $\beta = 1,331$, Std. Error = 0,142 and $\rho = 0,000$.

Conclusion: The higher MDP characteristics that consist of exist of role model, perceived control, and understanding will be followed by high of organizational commitment, utility and participative behavior as positive outcomes.

Keywords: Management Development program, organizational commitment, participative behavior, utility

Analysis Of Supporting Factors Of Patient Satisfaction In Outstanding Registration Services In Hospital: Literature Riview

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Background: Satisfaction with outpatient registration services in hospitals has a very important role. Because the quality of health services is an important factor that can form patient confidence in health care centers. The medical record work unit as one part that has a very important role in providing services to patients in particular is service to patients at the outpatient TPP (Patient Registration Place) which is the main place for patients to get information and where patients get first-stage service There are 5 factors supporting patient satisfaction including reliability, responsiveness, direct evidence related to the availability of health services, assurance and empathy.

Aim: The purpose of this study is to explain and identify the implementation of outpatient registration services in hospitals and identify factors that support satisfaction with the outpatient registration service process in hospitals.

Method: The research method used is Literature Review through searching by reading various sources of articles, namely Google Scholar and Garuda Portal. The articles reviewed were 8 articles that met the criteria for articles and research topics.

Results: In 8 articles, there are 75% (6 articles) using a questionnaire research instrument, 25% (1 article) using individual data collection, and 25% (1 article) using Accidental Sampling. It can be concluded from this journal that the procedure for serving patients is considered good when patients are served by officers with a friendly, polite, orderly and responsible attitude in accordance with the care services required.

Conclusion: There are similarities in supporting factors for patient satisfaction that must be met by health care facilities, ranging from improving appropriate, fast services, adding medical equipment, and health facilities. And for another important aspect, namely the speed of service which can be seen from the waiting time and the responsiveness of officers in serving patients at the registration section

Keywords: satisfaction, patient registration, outpatient, hospital

The Effect of Integrated Anc Services on The Satisfaction of Pregnant Mothers in Metatu Public Health Center

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Background: Maternal Mortality Rate should be prevented by early detection of high risk or complications during pregnancy, by conducting visits or antenatal care to available health services.

Aim: The purpose of this study was to analyze the effect of Integrated ANC services on the satisfaction of pregnant women at the Metatu Health Center, Gresik Regency.

Method: The design of this research is an observational quantitative study with a cross sectional approach with the focus of the research being directed at analyzing the effect of Integrated ANC services on the satisfaction of pregnant women at the Metatu Health Center, Gresik Regency with a population of 60 respondents and a sample of 54 respondents taken using the Simple Random Sampling technique.

Results: The findings showed that almost all of the 38 respondents (70%) had ANC services in the good category. Almost all respondents have satisfaction in the moderate category as many as 42 respondents (78%). The results of the study using Linear Regression obtained a p-value of $0.000 < 0.05$ then H_0 was rejected and H_1 was accepted so it was concluded that there was an effect of Integrated ANC services on the satisfaction of pregnant women at the Metatu Health Center, Gresik Regency. It is expected that respondents can carry out Integrated ANC on a regular basis and the service can remain satisfactory. 05, then H_0 is rejected and H_1 is accepted, so it can be concluded that there is an effect of Integrated ANC services on the satisfaction of pregnant women at the Metatu Health Center, Gresik Regency. It is expected that respondents can carry out Integrated ANC on a regular basis and the service can remain satisfactory. 05, then H_0 is rejected and H_1 is accepted.

Conclusion: The concluded that there is an effect of Integrated ANC services on the satisfaction of pregnant women at the Metatu Health Center, Gresik Regency. It is expected that respondents can carry out Integrated ANC on a regular basis and the service can remain satisfactory.

Keywords: Antenatal Care, Pregnant Women, Satisfaction

Development of E-Medical Record with Trigger tool for Primary Health Care

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Background: Trigger tools have been shown to be more sensitive and specific for adverse occurrences than traditional assessments of patient harm alone. The incorporation of trigger tools into an electronic health record (EHR) has the potential to increase the efficiency of adverse event detection.

Aim: The aim of this research is to develop the e-medical record with trigger tools.

Methods: This study's technique is a hybrid of WISDM and GTT. To accomplish the application project, we employed the PHP programming language, CSS, and JavaScript. To achieve technical design, we divided the I-EMR into two conceptual models: feature modeling and Unified Modelling Language. Feature modeling expressed the basic concept of the application, which is displayed by the feature of the application. Furthermore, we used Unified Modelling Language, which included Use Case Diagrams, Activity Diagrams, Class Diagrams, and Sequence Diagrams, to expound on the feature in depth.

Result: As a result, we created features such as patient registration (registration, visit history, and doctor schedule), payment management (payment verification and payment method), medical observation, global trigger tools (triggers data overview, review team, review process, and adverse events measurement), pharmacy service, data management (patient, doctor, clinics, health care facilities, etc.), and payment management (payment verification and payment method). In order to test the trigger tools, we used 600 data from four health facilities in Surabaya and found four patient safety triggers.

Conclusion: Patient safety triggers could be detected using an electronic medical record and trigger tools. More system development and enhancement are required to prevent incident.

Attitude of Midwives on Hepatitis B Immunization Status in Jakarta

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Background: Based on data from the Research and Development Agency of the Ministry of Health of the Republic of Indonesia and the world research parameter on Hepatitis B in 2013 estimated that as many as 7,000 health workers in Indonesia were infected with the Hepatitis B virus, this is due to the low vaccine coverage. Researchers had conducted a preliminary study of midwives working at DKI Jakarta Public Health Center in February 2021 with 45 respondents, it was found that 22.22% of midwives had received complete hepatitis B immunization while 77.78% had incomplete hepatitis B immunization status.

Aim: This research was conducted to observe the relation of the attitudes of midwives on the status of hepatitis B immunization in midwives who work in public health centers DKI Jakarta area.

Method: This is a quantitative research using cross sectional design with the dependent variable is Hepatitis B immunization status in midwives, the independent variable is Attitude, and the covariate variables are knowledge, cost, and length of work. The sample of this research were 294 midwives who worked in the public health centers DKI Jakarta area using cluster sampling technique and gave a questionnaire to the subject.

Results: The findings confirm that 75.9% of midwives had incomplete hepatitis B immunization status and 24.1% midwives had complete hepatitis B immunization status. The incompleteness of hepatitis B immunization status in midwives resulted in 70.5% of the midwives were supportive and 85.6% unsupportive. The results of the Logistics Regression analysis were carried out with an interaction test as well as a test confounding, there was no interaction between attitudes and knowledge and there were no variables of confounding. OR value obtained is 2.48 (95% CI; 1.321-4,654, P Value; 0.006)

Conclusion: The attitude of a midwife who does not support has an odds of 2.48 times higher incomplete hepatitis B immunization status than a midwife who supports hepatitis B immunization (95% CI; 1.321-4,654, P Value; 0.006).

Challenges and Enablers of Interprofessional Collaboration and Retention of Nusantara Team-Based Deployment for Comprehensive Primary Health Care in Indonesia's Underserved Areas: A Qualitative Study in 3 Provinces

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Background: Inadequacy and low retention of health workers in Indonesia remains a challenge to deliver comprehensive primary health care (PHC) services particularly in underserved and peripheral areas. A comprehensive health care services should cover the promotive, preventive, and curative care implemented by inter-professional team of health workforce. The Ministry of Health has initiated the Nusantara Sehat team-based (NST) Program, which consists of multi professions of health workers deployed at the PHC in underserved areas, aiming to improve the services delivery within 2 years of their deployment.

Aims: This study aimed to explore aspects influencing the challenges and enablers for interprofessional collaboration of NST in delivering primary health care services at remote areas, and sustaining the retention of health workforces after their deployment.

Method: This study applied a qualitative method by conducting series of semi-structured interviews and focus group discussions with the current NST recruits and alumni across 5 sites in Bengkulu, South Sulawesi, and East Kalimantan province.

Results: Internal and external barriers for interprofessional collaboration were found consistently across the study sites. Within the NST, there was lack of unity among different health workforces, affecting the dynamics of their teamwork. Moreover, the NST faced challenge to collaborate with the existing PHC staffs, due to negative perspectives following their higher incentives compared to the local workers. Pre-assignment training process, the common vision to achieve the healthy community, and the urge to adapt with the existing PHC staff enabled the interprofessional collaboration practice among NST recruits. Challenges also found to retain the NST as there were concerns about infrastructure disparities, career sustainability, family expectations, and gender perception to continuously work in rural areas. Yet, spirit of altruism, adequate incentives, and growing passion for primary health care attracting some of them to still contribute there beyond the deployment period.

Conclusion: Government's commitment in the form of macro and meso policies favouring the sustainability of NST, as well as the improvement of NST working arrangement is imperative to ensure the improvement of comprehensive health services delivery in underserved areas.

Keyword: interprofessional collaboration, retention, NST, primary health care, underserved

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Health Care Spending for Cardiovascular Disease under Social Health Insurance Schemes in Indonesia: Data Claim 2016-2018

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Background: The prevalence of cardiovascular disease continues to increase every year as well as the health care expenditure. Analysis of the distribution of cardiovascular expenditure is important because it can be used to respond to policy needs in health financing as well as to monitor and evaluate health service providers.

Aim: Objective of this study is to identify the amount of spending and health care utilization for cardiovascular in JKN schemes in Indonesia during 2016-2018, according to the age group, level of health facility, service level, severity, and demography.

Method: This study is part of the National Health Account (Disease Accounts) which analyzes descriptively the total JKN claims for cardiovascular disease in 2016-2018 both in primary health care facility and hospital. Disease classification is based on System Health Accounts (SHA) 2011 framework for Disease Accounts dimension issued by WHO.

Result: Total claim for cardiovascular disease increased significantly by IDR 2,5 trillion (32,5%) in 2018 compared to 2016. The largest spending was used for services in hospital reaching 90,6% in 2018 with the highest spending occurred in the age group 55-59 years (IDR 1.6 trillion). Moreover, cardiovascular spending was dominated by inpatient services (84% in 2018) at the hospital. In the other side, the average proportion of JKN funds in primary health care facility in 2016-2018 was only 8.3%. Based on the severity level, the proportion of spending was almost the same between mild (34.9%), moderate (34.8%) and severe (30.2%). The spending per admission has a wide range from IDR 1.9 million to IDR 140.5 million.

Conclusion: The highest access occurs in North Sulawesi Province while DKI Jakarta and DI Yogyakarta provinces receive a lot of referrals from other provinces. The increase in the cost of cardiovascular services continues to increase every year, but on the other hand, JKN has been proven to play an important role as financial protection for the participants due to cardiovascular disease. Preventive intervention through screening is needed to find cardiovascular patients early so that they can be treated immediately and can be avoided from getting severe.

Keywords: NHA, Disease Account, Cardiovascular, JKN
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Social Media Analysis in Monitorin Public Opinion on Measles and Rubella Vaccination: A Review

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Background: As one of the most significant population countries globally, Indonesia supports international public health, especially women and children. The low rate of Measles and Rubella (MR) vaccination in Indonesia is a challenge for creating national herd immunity and becomes a problem source for the international community.

Aim: The negative sentiment from society regarding the purpose and the effects of the vaccination is the primary factor of vaccine rejection. In line with the active use of social media, people can talk, share, receive and even change their perspective about vaccination based on information their find and read from widely used platforms such as Twitter and Facebook.

Method: In analyzing the social network nowadays, social media analysis can be used through social network analysis and sentiment analysis techniques. This study presents a comprehensive literature review of approached techniques used for social network analysis and sentiment analysis in vaccination programs worldwide.

Results: The results show that Twitter is a powerful platform. Most of the studies found in the literature focused on developed countries are fascinating since the case studies for developing countries such as Indonesia are scarce.

Conclusion: Therefore, this study is expected to gain collaborative information related to the techniques to analyze social media data for vaccination acceptance can be implemented in Indonesia.

Keywords: MR Vaccination, Social Media Analysis, Sentiment Analysis, Social Network

Maternal and Neonatal Health Care to Decrease Early Neonatal Mortality (Analysis of the 2007, 2012, and 2017 IDHS data)

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Background: The early neonatal period is a critical period for newborns, which 73% of neonatal mortalities occur in this period. Early neonatal mortality is preventable by the good quality of care received by the mothers and neonatal. This care including antenatal care, delivery by skilled birth attendants in health facilities, and postnatal care, to prevent, detect, and treat the causes of death in newborns.

Aim: Therefore, this study aims to evaluate the association of three health care during pregnancy, childbirth, and postnatal (antenatal care, health facility birth, and postnatal care) and early neonatal mortality in Indonesia.

Method: This cross-sectional study was conducted using 2007, 2012, and 2017 IDHS data. The sample was women of reproductive age who gave birth to live birth babies within 5-years before the survey. Newborns were excluded if they were not the last child.

Results: The early neonatal mortality rate based on 3 periods of the IDHS is 8.40 per 1000 live births. The annual trend showed a fluctuating rate of early neonatal mortality. Based on the three health care, health facility birth showed the most progressive coverage from 50% in 2002 to 83,84% in 2017. Meanwhile, complete (4 or more) antenatal care and postnatal visit (in the first 48 hours of birth) showed a slight fluctuation but increase from around 65% to 73% and 60% to 75%, respectively. Overall, the coverage of three health care during pregnancy, childbirth, to postnatal were increase from 30% in 2002 to 56% in 2017. This study found that these three health care if done all together could reduce almost 40% of early neonatal mortality (OR=0,60; 95% CI 0,31-1,19) compared to none, after adjusted by infant birth weight, maternal complications, place of residence, and wealth index. Mothers who received 2 of 3 health care have a 12% reduction (OR=0,88; 95% CI 0,46-1,67) and mothers who received 1 health care have a 15% reduction (OR=0,85; 95% CI 0,51-1,40) of early neonatal mortality.

Conclusion: Antenatal visits, health facility birth, and postnatal care) should be done all together comprehensively to decrease early neonatal mortality.

Keywords: Early neonatal mortality, antenatal care, health facility, postnatal care, Indonesia

Effectiveness of Directing Flow System Implementation to Increase the Number of Clinic Visitors in Technical Implementation Unit (UPT) Herbal Materia Medica Laboratory Batu City

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Background: Patient visits at the Clinical Implementation Unit (UPT) Herbal Materia Medica Laboratory Batu City were still low. The target set was 2500 people per year, but in 2019 it only reached 569 visitors. This was inversely proportional to the number of visits to the herbal mart unit to purchase herbal medicines. The number of visits to herbal mart was 2,412. It suggested that there was a lack of service flow so that visitors who seek treatment tend to cut the line by buying herbal medicines without going to the clinic.

Aim: This study objective was to analyze the difference in the number of clinic visitors before and after Directing Flow System implementation at Technical Implementation Unit (UPT) Herbal Materia Medica Laboratory

Method: The employed research method in this research was a pre-experiment one group pre-test-post-test design with a quantitative approach. The sample in this study was the number of visitors 30 days before and after the implementation of the intervention.

Results: he employed statistical test was the paired T-test. The results of statistical tests obtained the value of Sig. (2-tailed) is 0.000

Conclusion: It is suggested that Technical Implementation Unit (UPT) Herbal Materia Medica Laboratory consistently implement the Directing Flow System so that clinic visits continue to increase.

Keywords: Directing Flow System, visits, herbal medicine

Influence Cognitive Behaviour Therapy (Cbt-I) on Insomnia and Sugar Blood Levels to Patients with Diabetes Mellitus

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Background: Penderita diabetes melitus (DM) sering mengalami insomnia akibat gangguan metabolisme.

Aim: Penelitian ini bertujuan untuk menganalisis pengaruh CBT-I terhadap insomnia dan gula darah serta mengetahui hubungan insomnia dengan gula darah pada pasien DM di Puskesmas Balowerti Kediri.

Method: Desain penelitian adalah quay-experiment dengan control group menggunakan time series. Empat kali sebelum dan sesudah pemeriksaan dilakukan CBT-I untuk memastikan validitas internal. Sampel penelitian adalah 43 responden dengan menggunakan simple random sampling. Variabel dalam penelitian ini adalah CBT-I, insomnia dan gula darah. Data dikumpulkan dengan menggunakan Insomnia Severity Index (ISI) dan glukotes, kemudian dianalisis menggunakan Mann-Whitney.

Results: CBT-I decreased insomnia effectively ($p = 0.000$) and blood sugar levels two hours post pandial on first day ($p = 0.000$), second day ($p = 0.018$) and forth day ($p = 0.011$) There was influence of CBT-I towards insomnia and CBT-I towards blood sugar on first day, second day, and forth day. There was correlation between insomnia and blood sugar on first day, second day, and forth day

Conclusion: The stimulus control therapy, sleep hygiene, relaxation and cognitive behavior therapy at CBT-I that was carried out caused the patient to relax so that he got maximum sleep quality and reduced sleep latency. Good quality sleep helps decrease of cortisol which has an impact on lowering blood sugar levels.

Patient Safety of Nurse Caring Behavior in Patient with Risk of Fall

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Background: Patients with risk of falls is one of the risks of unwanted incidents within the hospital. The risk of the patient falling until an incident has an adverse effect on the patient, one of the adverse effects is the impact of physical injury which includes abrasions, torn wounds, bruises, even in some cases severe falls can result in fractures, bleeding, and head injuries.

Aim: To find out the relationship between Caring Behavior of Nurses and Patient Safety Risk of Falling.

Method: The research method used in the study is cross sectional. The population is all patient patients at risk of falling. The sample size is 67 respondents using purposive sampling technique. Independent variable of research is Caring Behavior. The dependent variable is the Patient safety risk of falling. Data was collected using a questionnaire, then the data were analyzed using the Spearman Rho test.

Results: The results showed that the nurse caring nurse was quite good as many as 35 respondents (52.2%), patient safety risk fell that was enough as many as 30 respondents (4.8%). The results showed that $p = 0,000$ which means that there is a relationship between Caring Behavior of Nurses and Patient Safety in Falling Risk.

Conclusion: Nurse Caring Behavior With Patient Safety The Risk of Falling has a significant relationship, because caring behavior give direct caring and responsif in each patient condition.

Patient Comfort and Satisfaction in the Interaction Process in terms of Nurse Caring Behavior

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Background: The convenience of the interaction process is a form of the success of nurses in providing good service, creating a conducive environment and striving for mutual welfare. If the patient is free from discomfort, it shows the patient's well-being and motivation to get well soon. Patient comfort is related to patient satisfaction in receiving nursing services. The low quality of nursing services is in line with the low level of satisfaction, so it is necessary to improve the quality of nursing services in order to increase satisfaction. One of the factors of comfort and satisfaction is the ability to provide information, caring, communication, politeness, responsiveness. Caring a nurse is a caring attitude that makes it easier for patients to achieve improved health and recovery. Caring behavior is a form of caring, paying attention to others, centering on people, respecting self-esteem, and humanity, commitment to preventing deteriorating health status, paying attention and respecting others.

Aim: The purpose of writing a literature review is an analysis of a literature review of similar research or writing that has been done previously on a specific topic. The purpose of this writing itself is to what extent the patient's comfort in the interaction process is viewed from the nurse's caring behavior.

Method: The design used is literature review by using several journals from several sources such as Google Scholar and Pubmed which were published from 2010-2020.

Results: There is a relationship between patient comfort in the interaction process in terms of nurse caring behavior. And it can be seen that the lower the patient's comfort will be in line with the lower patient's satisfaction.

Keywords: Convenience, Comfort, Interaction Process, *Caring Nurse*

Health Media In 4.0 Era "StrokeIndo": Provide The Information, Determine Risk Factors And Improve Preventive Behavior Of People In Indonesia

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Background: In Indonesia one of the causes of death due to stroke. Data from riskesdas 2018 showed that the prevalence of stroke was 10.9 per mill. Based on BPJS data, it is known that the cost of stroke treatment in 2018 amounted to 2.56 trillion. A large number of stroke survivors do not know that they previously had a risk of stroke. On the other hand, educational media for stroke patients is still less interesting and conventional.

Aim: Developing health media as an effort to provide information, determine risk factors, and improve preventive behavior of the community

Method: Media development "StrokeIndo" using P-Process theory approach. At the stage of needs analysis by conducting electronic surveys and involving respondents as many as 259 people Strategic Design Stage conducted for 1 month based on the results of the needs analysis. The mining and pretesting stage was conducted using an online survey involving 322 respondents so that the developed media can be evaluated by the public. Tahap implementasi

yaitu media StrokeIndo can use widely to community.

Results: At the analysis stage, most of the respondents were 99% of respondents knew about stroke and had heard about stroke either from friends, family, neighbors, or from articles. But for the analysis of the needs about the desired media can be known that as many as 63% want more information and educational media system with media content including risk factors, information, and education on how to reduce the risk of stroke. The pretesting stage obtained

results that 100% of respondents use StrokeIndo media and give appreciation. StrokeIndo media developed (accessible at Stroke Indonesia (stroke-indonesia.org)).

Conclusion: StrokeIndo media has been developed based on needs of the People of Indonesia. The media effectively provides information, the number of risk factors and ways of prevention in stroke. Another advantage is that StrokeIndo provides easy access to media anywhere, able to calculate and determine the number of risk factors owned.

Coverage of Hypertension Patients Receiving Health Services in Central Java in 2019: An Ecological Analysis

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Aim: This study aimed to analyze the relationship between the coverage of hypertension patients who receive health services and the availability of NCDs Posbindu (Integrated Post for Non Communicable Disease), the availability of hospitals, the availability of public health centers, and the availability of doctors in districts/cities in Central Java Province in 2019.

Methods: Ecological analysis was conducted on the availability of NCDs Posbindu (Integrated Post for Non-Communicable Disease), the availability of hospitals, the availability of public health centers, and the availability of doctors using secondary data from the 2019 Central Java Provincial Health Profile report. Apart from the coverage of hypertension patients who receive health services, four other variables were analyzed as independent variables. In this study, the units of analysis were districts/cities in Central Java Province, except Magelang City, which was excluded because it showed data outliers that could bias the analysis of other data sets. Data were analyzed using cross-tabulation.

Results: The results showed that the range of data coverage of hypertension patients receiving health services per district/city was relatively high (87,10). There was district/city showed that hypertension patients receiving health services were 100%, but there was also district/city which showed low coverage (12,90%). Cross-tabulation analysis on each variable showed that the availability of NCDs Posbindu, the availability of hospitals, the availability of public health centers, and the availability of doctors did not show a significant relationship with the coverage of hypertension patients who receive health services.

Conclusion: It was concluded that there was no significant relationship between coverage of

hypertension patients who receive health services with availability of NCDs Posbindu, hospitals, PHC, and doctors.

Portrait Of The Health Planning In Indonesia : Implementation Evaluation of the Health Planning in Public health center Bima District

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Background: The province of West Nusa Tenggara (NTB) is one of the provinces with a low IPKM score. Although the NTB Province IPKM score in 2019 increased compared to 2013, with a score of 0.5236 in 2013 to 0.6190 in 2019, there are still districts with low scores, Bima District with an IPKM score of 0.6006. Planning that is prepared properly and correctly can be equated with 70% of the work has been completed. On the other hand, if the plan is not prepared properly, it means that you are actually planning to fail.

Aim: The purpose of this study is to evaluate the work plan planning process at the Public health center

Method: The type of research is descriptive. The study was conducted in 16 Public health center Bima District. The informant is the Head of the Bima District Health Center. This study uses primary data and secondary data. Primary data obtained from questionnaires. Analyzing research data descriptively.

Results: All Public health center do mini workshop monthly, monthly the majority Public health center (94,4 %) every quarter according to the mini tribulanan Public health center match cycle management Public health centre. The Public health center also participates in deliberations with the village community and deliberations with the sub-district community. The Public health center has a proposed activity plan for annual (94.4%) and five-year (77.8%) planning which is prepared taking into account the strategic plan of the health office (77.8%) and the work plan of the health office (38.9%).Regarding the Public health center Performance Assessment (PKP), there are Public health center that say there is no PKP, but many have also implemented the Public health center Performance Assessment (PKP).

Conclusion: Only a part of the Public health center in the Bima district has planned a work plan that is guided by the strategic plan of the health office and the work plan of the Bima district health office.

Keywords: Public Health, Health System, Health Planning, Public Health Center

Opportunities And Challenges Of Implementing Telemedicine In Indonesia: A Scoping Review

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Background: Telemedicine is a recent and fast-growing area of development in healthcare. The use of telemedicine is increasingly being encouraged along with the Covid 19 pandemic in Indonesia. The emergence of public concern about the transmission of Covid 19 in health facilities and the increasing movement of patient safety has placed telemedicine as a recommended treatment method. But unfortunately, not all parties are ready with the implementation of telemedicine.

Aim: Thus, the objective of this scoping review was to identify opportunities and challenges of the implementation of telemedicine in Indonesia.

Method: The scoping review methodology guided by Arksey and O'Malley and Levac et al. was used. Comprehensive searches based on telemedicine concept in Indonesia were conducted in Emerald Insight, PubMed, Springer, Science Direct, Portal Garuda, neliti.com, and ResearchGate, with no limitations applied. Articles were screened at the title and abstract level and full text by two researchers. Researchers extracted data that were analyzed descriptively to map the available evidence.

Results: Research on telemedicine has been widely carried out in Indonesia since 2015, and increased sharply in the last two years, along with the Covid 19 pandemic. In line with advancing the information and communication technology industry, public literacy about telemedicine is increasing. The growth of various telemedicine Start-Up makes the growth of telemedicine reach various socio-economic circles. But unfortunately, not all regions can implement telemedicine. The unavailability of infrastructure such as the internet network is a big challenge for the implementation of telemedicine in Indonesia. The changing process from direct face-to-face meetings with health workers to long-distance communication, for some people, still raises doubts and dissatisfaction.

Conclusions: Although telemedicine in health care is increasingly in demand, its implementation has not been evenly distributed. The quantity and quality of resources especially for rural and remote areas are still a problem. Therefore, efforts to increase the use of telemedicine must be in line with equitable development throughout Indonesia and continue to provide continuous communication, information, and education to the community. Healthcare providers also need to increase their capacity and involve cross-sectoral and industrial sectors to support and promote telemedicine.

Keywords: telemedicine, medicine, communication technologies

Human Resource Management and Task Shifting in Indonesian Blood Services: Case Study in Malinau District Hospital

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Background: The lack of blood transfusion services is one of the problems related to high mortality rate in Indonesia. As much as 9% of untreated maternal bleeding is caused by unavailability of blood for transfusion in time. There are many factors affecting this problem, one of which is human resource management.

Aim: This paper is aimed to describe human resource management strategy in blood service in Indonesia, especially in Malinau Public District Hospital.

Method: The qualitative research was conducted in 2019 as a part of post training evaluation held by Indonesian Ministry of Health.

Results: The results showed that, due to lack of blood transfusion technician, Indonesia has implemented task-shifting health workers (i.e., Laboratory analysts and nurses work as blood transfusion technician). However, this strategy has some weaknesses, such as double burden of work (blood procedure is done by both a nurse and a laboratory analyst in a time, based on their respective expertise). Ideally, blood procedure is done by blood transfusion technician. Unfortunately, there are very few educational institutions that trained blood transfusion technician as input factor. The implementation of task-shifting procedure is still below the standard. The output is quite good, despite the limitation of the type of blood processing that can be done.

Conclusion: In conclusion, the fulfillment of blood transfusion workers is still lacking, both in quantity and quality. The government should arrange a roadmap to meet the need of blood transfusion workers.

Access of Health Information for Tuberculosis (TB) in Horai Quic Tribe, Ainaro, Timor Leste

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Background: Democratic Republic of Timor-Leste is one country with a high burden of Tuberculosis (TB) among countries in the Southeast Asian region. In addition, it is estimated that the prevalence and deaths of Tuberculosis (TB) are among the highest in the Southeast Asian region. Tuberculosis (TB) kills 100 people from 100,000 in Democratic Republic of Timor-Leste even though health services of Tuberculosis (TB) have been available for almost two decades. Demographically, most of the territory Democratic Republic of Timor-Leste is an area that is difficult to reach with population distribution, one of which is affordability of access to health information for Tuberculosis (TB) in Horai Quic Tribe, Ainaro, Democratic Republic of Timor-Leste. Access of health information is one part of Tuberculosis Services which is comprehensive services packages and delivered through a network of facilities in health services delivery system.

Aim: This study aims to obtain an overview and quantitative analysis of access health information for Tuberculosis (TB) in Horai Quic Tribe, Ainaro, Timor Leste.

Method: This type of research is a quantitative-qualitative study through indepth interview method of 30 respondents with cross-sectional. This research was conducted in Horai Quic Tribe, Ainaro, Democratic Republic of Timor Leste. The sampling technique uses a random sampling technique.

Results: There is data in the number of respondents who can access health information and an overview of access to health information for Tuberculosis (TB) in Horai Quic Tribe, Ainaro, Democratic Republic of Timor Leste.

Conclusion: From the results of study, it can be concluded that access of health information for Tuberculosis (TB) obtained in Horai Quic Tribe, Ainaro, Democratic Republic of Timor Leste is still low and influenced by several factors that is significant obstacles such as social, economic and cultural factors.

Keywords: Access, Tuberculosis (TB), Horai Quic

Analysis of Income and Expenses National Health Insurance of Fishermen In Medan City

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Background: Implementation of National Health Insurance (JKN) in Indonesia in the context of achieving universal health coverage, however, if Government imposes a new BPJS contribution rate through Presidential Regulation No. 75 of 2019 concerning National Health Insurance, the regulation increases fees twice the previous amount. This increase in fees greatly affects participants are not recipients of wages (PBPU), especially informal workers. Informal workers who dominate their existence in North Sumatra, out of 67.87 million informal workers 30% are fishermen. Based on BPS data in 2018 the number of fishermen in North Sumatra is 155.646 people, meaning that fishermen play an important role in achieving JKN target.

Aim: The aims of this study is to analyze the income and National Health Insurance (JKN) contribution fees for participants are not recipients of wages (PBPU) fishermen.

Method: This research is a mixed methods research where quantitative and qualitative research methods are used at the same time, the research design uses cross sectional design. Data collection methods used by observation, interview and documentation. The location of the study was conducted in the coastal area of Medan City covering 3 districts are Medan Belawan District, Medan Labuhan District and Medan Marelan District as many as 15 people.

Results: The results showed that the income of fishermen in Medan as much as 47% of monthly income of Rp. 1.000.000-Rp. 2.000.000. Ownership of BPJS Health Insurance is 60% and 40% without insurance, willingness to pay dues shows 70% are willing to pay class 3, as much as 20% are willing to pay class 2 and 10% are willing to pay class 1. Based on data from fishermen who class 3 with income which is under the UMR, assuming that if BPJS Health contributions are raised, then 20% of fishermen able to pay for class 2 will drop class 3 and 70% of fishermen able to pay for class 3 will drop out BPJS.

Conclusion: To the government so that class 3 participants are given the option to submit a subsidy of Rp. 12.000 according to the difference in the amount of the old premium and the new premium with the difference in subsidies can be assisted by the local government. Increasing BPJS Health membership can be done through more frequent socialization of BPJS Health and easier registration and payment of premiums.

Legal Protection of Medical Record During an Outbreak

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Background: Everyone has the right to privacy, including the confidentiality of health conditions. The medical record is kept in the health services but the content is owned. Medical record could open for the benefit of the patient's health, the request of law enforcement officials for the sake of law enforcement, patient requests, compliance from Undang-Undang, research, education, medical audit as long as there is no mention of the patient's identity. During an outbreak patient medical record for case investigation, some case personal patient data shared in mass media and share repeatedly in social media.

Aim : To find out how the law protects patient data during an outbreak and how legal sanctions apply to people who spread patient data without the patient's permission.

Method: This research is a normative juridical study, derived from primary, secondary and tertiary data.

Results: The results of this research are Undang-Undang No. 4 tahun 1984 Tentang Wabah Penyakit Menular does not yet regulate data protection for outbreak victims. Existing regulations only regulate data protection for patients not specific to the patient outbreak. The nine-month prison sentence can be imposed on anyone by deliberately disclosing confidential data that must be kept in accordance by the Criminal Code Chapter XVII article 2.

Conclusion: Existing regulation in Indonesia just has regulate medical record general patient, no specific regulation for medical record patient during an outbreak. Undang - Undang No.4 tahun 1984 Tentang Wabah Penyakit Menular should be replace.

Keywords: medical record, outbreak, legal?

The Impact of Pencerah Nusantara Program on Work Satisfaction of Health Workers in Remote Places in Indonesia

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Background: The management of human resources in healthcare institution is essential to enable the delivery of services for better healthcare quality. Health sector performance is critically dependent on health worker satisfaction, which may affect healthcare effectiveness, efficiency, and equity. Thus, analyzing determinants that may influence health worker satisfaction, such as psychological and physical elements, is crucial to assess potential drivers of healthcare quality.

Aim: This study aims to examine the effect of the intervention of Pencerah Nusantara (PN)—a nation-wide program that focuses in improving quality of primary health care—on increasing job satisfaction of health workers which has repercussions for improving the quality of health services.

Method: The data was collected from a population 554 health workers in eight public primary healthcare facilities (puskesmas) in eight Indonesia's remote areas. The research method was a descriptive analysis of pre- and post-intervention surveys from 2016 to 2019.

Results: The results denoted that the intervention of PN program through capacity building and enhanced healthcare management may significantly increase the work satisfaction of health workers from 2,8 in 2016 to 3,1 in 2019 (p-value < 0,05) as well as the quality of services from 0,49 in 2016 to 0,80 in 2019 (p-value < 0,05).

Conclusion: Pencerah Nusantara intervention may indicate that human resources could take a significant impact on healthcare quality. Therefore, there is a need to emphasize the satisfaction of health workers through periodic training and improved healthcare management in order to advance the quality of healthcare service.

Keywords: Health worker satisfaction, human resource management, healthcare quality

Optimization of Capitation Fund Rest Management in Primary Health Care

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Background: In the implementation of the National Health Insurance Program (JKN), there is a capitation fund provided by the Social Security Agency of Health (BPJS) in an amount that is in accordance with applicable regulations. A study conducted by the Corruption Eradication Commission (KPK) states that there is a capitation mechanism that causes a drastic increase in Primary Health Care fund revenue and exceeds the Primary Health Care needs each year. This causes more residual at the end of the year or commonly called SILPA Capitation. Since 2015, the National Social Security Board (DJSN) has found SILPA Capitation ranging from Rp. 400 million to Rp. 1.9 billion per Primary Health Care in a number of regions. The Supreme Audit Agency (BPK) officially discovered SILPA in 2017 with a 30% of the total capitation funds of Rp. 17 trillion in that year.

Aim: The purpose of this study was to analyze the obstacles to optimizing the management of the remaining capitation funds at Primary Health Care.

Method: The study was conducted descriptively using literature and secondary data that had been published by several agencies. Results: The results of the literature showed that there are no detailed regulations governing the management of SILPA Capitation, so there is concern that misuse of capitation funds in Primary Health Care and its networks. Another problem with the accumulation of the remaining capitation funds is also caused by the lack of flexibility in the use of funds so that Primary Health Care cannot absorb and maximize the excess budget for other needs.

Conclusion: BPJS must coordinate with the central government to immediately compile a national policy on guidelines and technical guidelines for the management and absorption of the remaining capitation funds at Primary Health Care and to conduct a review of the regional financial mechanism.

Keywords: optimization, capitation fund rest management, primary health care

Preparedness of Central Sulawesi Province General Hospital in The Dealing of Disasters

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Background: Central Sulawesi is one of the regions in Indonesia that is prone to disasters. In September 2018, there was a disaster in Central Sulawesi which resulted in damage and losses of up to IDR 18.48 trillion. In Palu City, 2,141 people died, while 44 health facilities damaged by the earthquake, tsunami and liquefaction were recorded.

Aim: The research objective was to determine the preparedness of the Regional General Hospital of Central Sulawesi Province in facing disasters.

Method: Qualitative methods with a case study approach and quantitative methods with descriptive models by using the Hospital Safety Index checklist. Data collection through triangulation techniques namely in-depth interviews, observation and documentation using interview guidelines.

Results: The research found that the readiness of human resources was sufficient, while the facilities and means for handling disaster victims were still lacking. Disaster management SOP is still lacking. Budget readiness in handling disaster victims is not specifically budgeted. Hospital health workers do not yet know about disaster preparedness, especially their duties and functions as a hospital disaster response team. Corrective action is required in the short term. The status of preparedness is adequate, but health facilities are judged to be resilient to patient safety and hospital staff and other essential services are at risk of functioning during and after a disaster. Overall, of the 3 stages in the preparedness process, there are still many team members who do not know these stages including other health workers.

Conclusion: It is recommended to immediately form a new disaster management team in the form of a Disaster Management Preparedness Team for Hospitals (Hospital Disaster Preparedness Team) and disseminate it to all Team members including all hospital employees, make improvements to HDP documents and simulation and training is necessary at least once a year. improve team preparedness in disaster.

Keywords: Hospital, preparedness, disaster, emergency respons

Development of Strategic Management Model for The Discovery of Region-Based on tuberculosis Cases

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Background: Tuberculosis (TB) is the third-largest cause of death after cardiovascular disease and respiratory tract disease, TB cases are even worse and many are not successfully cured. A fundamental effort that has not been made but can support TB prevention programs is to develop a new TB case discovery model.

Aim: The purpose of the research is to develop a management model strategies discovery of region-based tuberculosis case.

Method: This research is descriptive research utilizing primary and secondary data. Variables consist of geographical and demographic characteristics, resources, TB prevalence, and TB response process indicators. Based on the study on research variables, the planning model document of TB management based on the Health Center Perak Timur, and Kebonsari on optimizing the discovery of TB cases.

Results: The research provides an overview of aspects that need to be improved and focus on planning different TB countermeasures in each region

Patients Quality of Life Using Phacoemulsification and Sics Method

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Background: Cataracts are the second most common cause of visual disturbances in the world, amounting to 33% and the cause of 51% of blindness in the world. The rate of blindness caused by cataracts in Indonesia is the highest in Southeast Asia and is in the third place in the world, namely at 1.47%. Cataracts can only be cured by surgery, including phacoemulsification and SICS.

Aim: This study aims to analyze the differences in the quality of life of cataract patients at 7 days and 21 days post surgery for each of the surgical methods.

Method: This research use analytic observational study with a quantitative approach. The design of this study was prospective, namely following the patient from before surgery to D+ 21 postoperatively. This research was conducted at the Undaan Eye Hospital (RSMU) Surabaya. The study was conducted in January-March 2019. This study used the NEI-VFQ25 instrument to measure the quality of life related to vision. The sample consisted of 109 people for cataract surgery patients with phacoemulsification and 16 for cataract surgery patients with SICS. The sampling process was carried out using accidental sampling technique. The statistical test used was the Independent Sample T-Test.

Results: The average quality of life of cataract surgery patients with SICS was lower than that of phacoemulsification at D+ 7 postoperatively, which was 78.498 in SICS patients, while in phacoemulsification patients it was 81.28. However, research shows that the average quality of life of patients with cataract surgery SICS method is higher than phacoemulsification on D+ 21 post surgery, amounting to 89.05 at SICS patients, whereas in patients phacoemulsification at 88.81. There was no difference between the quality of life of patients with cataract surgery with SICS and phacoemulsification at D+ 7 and D+ 21 (p-value= 0.292 and 0.914).

Conclusion: Cataract patients who were operated on using the phacoemulsification method received a faster quality of life improvement at D+ 7 post surgery, whereas at D+ 21 post surgery, SICS measures could already exceed the results of operations with phacoemulsification measures.

Keywords: quality of life, cataracts, phacoemulsification, SICS

Accessibility of Women of Childbearing Age to Visual Inspection Test with Acetic Acid for Cancer Screening Services at Public Health Centers, Surabaya

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Background: The prevalence of cancer in Indonesia increased from 1.4 to 1.8 per 1000 population in 2018. The most common cancer suffered by Indonesian women is cervical cancer. Cervical cancer can be easily cured, if diagnosed early. Therefore, prevention efforts need to be made, one of which is early detection through Visual Inspection Test with Acetic Acid (VIA). The coverage of VIA examinations for women of childbearing age in the city of Surabaya is still low at 2.84% with an expected target of 10%.

Aim: The purpose of this study was to analyze the accessibility of women of childbearing age to VIA services at the Public Health Center.

Method: This type of research is observational with a cross sectional design. The population in this study were all women of childbearing age, aged 30-50 years in the city of Surabaya and the number of samples was 130 women of childbearing age. Analysis of the data used is logistic regression test.

Results: The results showed that based on the factors of health service providers, the variables that influenced the use of VIA services were affordability (R square=0.780); Proximity (R square=0.620); availability and accommodation (R square=0.503) and Acceptability (R square=0.082). Meanwhile, based on the characteristics of women of childbearing age, the variables that affect the use of VIA services are the ability to reach (R Square = 0.295); ability to perceive (R square=0.187); ability to pay (R squared = 0.112) and ability to seek (R squared = 0.061).

Conclusion: It is necessary to increase the coverage of VIA in the form of VIA training for Public Health Center midwives, opening consultation services, optimizing health promotion through the Integrated Healthcare Center for Toddler (Posyandu) and the use of social media, as well as the formation of VIA cadres in the community.

Evaluation of Health Record Management System in Primary Health Care: A Qualitative Study

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Background: The health record management system in Primary Health Care should be standardized nationwide and assessed regularly to improve the quality of health care as well as patient safety.

Aim: The aim of this study is to evaluate the implementation of accreditation standards for the health record management system after 4 years of practicing the national accreditation program for Primary Health Care.

Method: A qualitative method using in-depth interview was conducted amongst 7 respondents who involve in health record management system including health professional and management board. Puskesmas Ladongi Jaya is selected as it has been accredited for 2 years and located in a rural area in South Sulawesi. The discussions were transcribed and analyzed using Rapid Assessment Procedure.

Results: The identified challenges were categorized in two areas: retention and destruction activities and standardized documentation of patient records. The main barriers are classified into human resource capabilities such as lack of medical record staff and lack of knowledge amongst the health care staff. Secondly, infrastructure availability such as lack of medical record facilities and lastly management involvement.

Conclusion: This study has found that the implementation of accreditation standard regarding the health record management system in a rural area is not following the national accreditation standards particularly to the retention-destruction and health record documentation activities. Thus, further intervention in both activities is needed to deliver in rural Primary Health Care.

What is Community Choice in Healthcare?

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Background: In 2009, World Health Organization noted that around 30-50% of the Chinese population still uses the traditional medicine system to support their health. In Europe, North America and surrounding areas 50% of the total population, in San Francisco, London about 75%. This fact shows that traditional medicine has an important meaning, namely it supports life and has a progressive potential to be developed. Although they have different treatment methods, medical assistance and traditional medicine have the same goal, namely to provide the best health care for a patient. As time goes by, there are more and more businesses in the field of traditional health services in Indonesia. Generally, traditional medicine offers a more affordable price compared to complementary and integrated medicine. With the increasing cost of health care, many people turn to traditional medical services (Utami NAT, 2018).

Aim: This study aims to determine the description of the decision to choose treatment services in the community in South Kalimantan Province.

Method: This research was conducted online using a quantitative method with a cross sectional study design. Data collection was in April-May 2021 with the research area of ????people living in South Kalimantan. The sample used in this study were 303 respondents.

Results: The results showed that as many as 22 respondents chose traditional medicine services and as many as 281 respondents chose treatment services in health facilities such as health centers, hospitals and private clinics. The selection of health facilities is more chosen by the community because people are more interested in getting medical assistance when experiencing illness than traditional treatment. Although most of the community still stated that access to health care facilities in South Kalimantan Province was still quite difficult.

Conclusion: Based on the results of this study, it was found that most of the respondents chose to use health facility services over traditional medicine. Therefore, special attention is needed from the government to continue to improve the quality of service quality and health human resources so that people continue to choose health facilities to get treatment.

Equity considerations for optimizing national measles vaccination programs

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Background: Measles is a leading vaccine-preventable cause of child mortality and morbidity globally. Aggregate national measles vaccination coverage statistics in India, such as the 81% measles vaccination coverage documented for India in 2016, do not adequately reveal demographic and programmatic issues which hinder access to vaccinations among the most vulnerable children

Aim: this paper highlights equity issues that should be considered to assure measles vaccination for those who need it most.

Method: Using data from the 2015-16 India's nationally representative family health survey,

Results: First, the centrality of ethics in measles vaccination is discussed. Second, mapping of vaccination coverage on a district by district basis is one important approach to determining encumbrances to vaccination equity. Third, the wealth index is the indicator most commonly

used in equity monitoring. Fourth, unimmunized children are more vulnerable to poor health outcomes once infected, due pathophysiology of measles infections as well as their parents' often lack health knowledge and access to other preventive interventions and medical care.

Conclusion: These systematic, overlapping, deprivations are particularly important dimensions of inequity. Implications of findings for assuring equity in UAE's measles vaccination program are discussed.

Drawing the Landscape of Primary Healthcare Facilities in ASEAN Region

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Background: Primary healthcare facilities, being one of the main primary healthcare capacity elements, were subjected to variation depending on primary healthcare model that was undertaken by each country.

Aim: This paper aims to describe primary healthcare facilities landscape across ASEAN countries and issues identified as part of a bigger study of establishing ASEAN recommendation for quality in primary healthcare.

Method: A questionnaire on primary healthcare capacity was adapted from WHO Service

Availability and Readiness tool and distributed to ten ASEAN countries. Baseline data from the questionnaire was presented to 15 primary healthcare experts representing seven countries for validation during three-day in-person workshop. The quantitative data was supported by an in-depth expert consultation session to build narratives around the quantitative data including on five additional key areas of primary healthcare facilities; (i) gatekeeping function, (ii) patient listing, (iii) availability of emergency services, (iv) primary healthcare network organisation initiative and (v) link with public health, hospital, pharmacy and information system. Common issues were identified and country specific missing information

was retrieved from the literature.

Results: Facility density ratios for the 10 countries ranged from 0.3 to 5.6 per 10,000 population. The spectrum of facilities can be grouped into four categories according to extent of services provided and human resource capacity. Gatekeeping function were present with varying degree of implementation strictness. Only Indonesia has started working with patient listing. Emergency services are available in primary healthcare setting mostly in geographically challenging countries like Indonesia. Initiative to build primary healthcare networks among public and private sectors had started in Singapore and Philippines but not in others. Most countries' primary healthcare had direct link with public health, hospitals and pharmacy. Information system in primary healthcare was very well established in Singapore and Brunei. Two main issues identified were absence of national level master facility list including private sector and scarcity of primary healthcare network between public and private sectors causing maldistribution of workload.

Conclusion: Various model of primary healthcare facilities was undertaken by different countries depending on local needs and challenges with some similarities in characteristics. Issues identified need to be addressed to improve capacity of primary care in delivering quality healthcare.

Inter-professional collaboration between doctors and nurses in base hospitals of Monaragala district

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Background: In a multidisciplinary environment safety and quality of healthcare depends on the interactions between the various care providers. Therefore, collaboration between doctors and nurses, who are the two frontline care providers is important.

Aim: Objective of this study was to describe inter professional collaboration between doctors and nurses in Base Hospitals of Monaragala district.

Method: Methodology A descriptive cross sectional study was conducted among doctors (n=56) and nurses (n=111) in Base Hospitals of Monaragala district. A self-administered questionnaire and key informant interviews were used as study instruments. Perceived level of collaboration in doctors and nurses were assessed over three dimensions; communication, accommodation and isolation. In addition to that, Participants were asked to identify barriers for collaboration.

Results: The response rate was 90.4%. Median ICS scores for doctors and nurses were 35 (32.25–38) and 33 (30-36) respectively. The difference was statistically significant (P = 0.003). For the communication subscale doctors [13 (11-15)] and nurses [13 (12-14)] median scores were equal. Median scores for accommodation sub scale were 14 (13-15) and 13 (12-14) for doctors and nurses respectively. The difference was statistically significant (P=0.011). Median scores for isolation sub scale were 8 (7-9) and 6 (6-8) for doctors and nurses respectively. The difference was statistically significant (P <0.001). None of the sociodemographic factors were related to the perceived level of collaboration. Five main barriers for inter professional collaboration were identified.

Conclusions: Overall perceived level of inter professional collaboration was low in both professional groups. Nurses perception about the level of collaboration was significantly lower than doctors, particularly in areas of accommodation and isolation. Poor communication, lack of respect and trust, lack of role clarity, differences in priorities and lack of equal power are the barriers for doctor nurse inter professional collaboration. Measures need to be taken to improve level of inter-professional collaboration between doctors and nurses in Base Hospitals of Monaragala district. Interventions are particularly needed to improve the collaborative behaviour of doctors. Keywords: Inter-professional collaboration; Perception; Barriers; Doctor; Nurse

Citizen Voice: Evidence-based dialogue for Policy Change at local level among the Rural Elderly, India

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Background: The Nation's population is aging – need-to-change comes increased in healthcare. Rural Elderly healthcare is one of biggest challenges like poor access/affordability to healthcare, chronic disease, lack of policies on advanced directive, rehabilitative/palliative care, social-security etc. and huge demand/supply gap. Citizen participation in health policies and service delivery is receiving increasing attention, to develop people-centred health systems, improves in quality/accountability/equity of health services. Voice is the expression of demands of citizens' rights and accountability is the obligation of providers/decision-makers to meet demands/provide answers - rights-based-approaches and participatory governance.

Aim: To empower citizens' engage in non-confrontational dialogue with public service providers and local government to improve/ensure quality healthcare services.

Method: Data on anthropometry and blood samples were collected from the elderly to assess the health status (N=468) from three villages under from South 24 Parganas district, West Bengal. Citizen report/score cards were used to get feedback from service users about the performance/monitoring/evaluating the public services, followed by "Face-to-face dialogue/Interface meeting" where citizens/providers/policy-makers/decision-makers meet in common platform which creates a "conducive environment" to provide feedback and negotiate on improving/ensuring quality of healthcare service.

Results: Citizen empowered, organised, assessed gaps and raising demands/voices for improving services delivery enhanced, deeper insights into the contextual realities and participates constructively. Voices equip citizens to engage in evidence-based dialogue with providers/local government to improve quality/accountability of health services. The providers adopted citizen charter which makes them capable/accountable to respond effectively to demands. Accountability/transparency increased due to constant dialogues with providers. Supply and demand side complemented each other in increasing responsiveness towards demands for ensuring quality of service delivery, remarkable changes noticed in Face-to-face dialogue/Interface meeting where citizens' raised demands in presence of providers/local government/decision-makers and immediate actions were taken.

Conclusion: Active citizenship and engagement with local government helps to provide effective quality services, which catalyzes an alliance between citizens & government officials and developed healthy participatory system of local Health governance. Community driven tools shed more light on analytical assessment gaps and monitoring of services, make unheard voices heard, collective action and bottom-up influence for better service delivery and voice in interfaces between politicians and health technocrats.

Keywords: Citizen's Voice, Evidence-based dialogue, Interface meeting, West Bengal, India

Feasibility Test of Tele-rehab for Stroke Patients Using Computerized Cognitive Rehabilitation Platform

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Background: Stroke patients usually suffer primary cognitive impairment related to attention, memory, and executive functions. Most stroke patients are discharged after a short period of rehabilitation before full functional recovery is achieved. Continued rehabilitation is required after discharge, but there are problems with the cost, time and place. A platform is needed to overcome the limitations of conventional hospital-centered cognitive rehabilitation therapy and effectively link with therapists to home-based cognitive rehabilitation for stroke patients.

Aim: This study is designed to verify the feasibility of a new rehabilitation platform using a computerized cognitive rehabilitation program (COMCOG) to stroke patients. Also, the potential for future home cognitive rehabilitation methods is to be verified by comparing the effectiveness of cognitive rehabilitation training using this platform.

Method: Four patients with stroke completed a 2-week cognitive training using COMCOG. A therapist remotely pre-set various cognitive training programs appropriate to the patient's level and adjust the difficulty level. The assessment was conducted twice before and after the intervention. The trail making test, Geriatric depression scale, Subjective memory complaint questionnaire, Stroke Rehabilitation Motivation Scale, and the questionnaire for usability tests were performed.

Results: The average performance time of the trail making test was faster compared to before the intervention. Depression tests also improved from mild depression levels to normal levels with improved memory. The motivation for rehabilitation also showed high after the intervention. Also, the usability test showed high satisfaction with 97%.

Conclusion: The novel rehabilitation platform was feasible for stroke patients to continue and further extend rehabilitation beyond the hospital. Furthermore, it showed potential the applicability of various patients with reduced cognitive function.

Cost-effectiveness Analysis of Community-based Health Education Program for Smoking Cessation in Tainan, Taiwan

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Background: In Taiwan, tobacco and related hazards cause at least 27,000 deaths each year, 2.87 million people were ill because of smoking and second-hand smoke. It shows that smoking not only affects personal health, but also causes a huge burden on society. In order to assist smokers to quit smoking, there are many effective interventions, group therapy and smoking counseling services in community are the most commonly used intervention methods in the community.

Aim: First aim is to evaluate the effectiveness of group therapy and smoking counseling services in community intervention plan. Second, we discussed two smoking cessation intervention plans in the view of medical economics.

Methods: This study uses a cross-sectional survey, taking group therapy conducted by public health centers in Tainan City in 2019 and smoking counseling services in community in 2019 as the research object. Using probabilistic cost-utility analysis method to evaluate the cost-effectiveness of the group therapy and smoking counseling services in community.

Results: The quit rate of group therapy is expected to achieve 49.5%. The cost for each additional QALY is NT\$ 5,362.57. The quit rate of quitting smoking in the community health education and consultation service is 12.5 %, the cost of each additional quality-adjusted life year is NT\$ 1,323.4. If the smoking cessation status of people participating in mobile hospital is further used as the basic group (the smoking cessation rate is 14.4%). Considering the cost of being unable to work due to reduced QALY, the estimated incremental cost-benefit ratio of the group therapy is NT\$9,266, and the smoking counseling services in community is NT\$-7,273 (increased cost and reduced benefit). The cost-effective proportion of group therapy is almost 100%.

Conclusions: The quit rate in group therapy is higher than community health education and consultation service intervention plan. Taking into account the cost of being unable to work due to reduced QALY, group therapy are more cost-effectiveness and can be widely used in the community.

Keywords: Smoking Cessation, Group Therapy, Consultation Service, Cost-Effectiveness.

Establishment and enhancement of public health strategies for controlling COVID-19 outbreak in Taiwan

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Background: There is a new public health crisis threatening the world with the emergence and spread of 2019 novel coronavirus?COVID-19?. There have been 10,436,375 confirmed cases and 450,852 reported deaths to date?30/06/2020?among 187 countries. Due to successful COVID-19 response of Taiwan government, there were only 393 confirmed cases and 7 reported deaths to date?30/06/2020?. Since the disease spread through contact and droplet, and it may progress to pneumonia or acute respiratory distress syndrome ; lockdown strategies for fighting COVID-19 are eventful to minimize infected cases.

Aim: Because Taiwan has similar culture with China, the null hypothesis is the proportion of COVID-19 in Taiwan would be the same as it happened in China. We try to compare if any significant difference between the laboratory cofirmed COVID-19 cases under null hypothesis and true reported cases in Taiwan where lockdown strategies were engaged.

Method: The total number of China people is around 140,050,000 and the reported COVID-19 infected cases was 83,018 to date?30/06/2020?, so that the proportion of COVID-19 was 0.058% in China. We set a pseudo-control of Taiwan confirmed cases using the proportion of COVID-19 in China is 13,632 , and compare the pseudo-control with true reported 447 cases in Taiwan by Student's T test. And we set another pseudo-control of Taiwan death cases using the mortality rate of COVID-19 in China (4.75%) is 648, and compare this pseudo-control with true reported 7 cases in Taiwan by Z test. Besides, statistic data were collected with observational survey.

Results: After comparing the pseudo-control of Taiwan confirmed cases with true reported 447 cases by Z test, the p value <0.05, which means significant difference between true reported cases in Taiwan where lockdown strategies were engaged and without any protection strategies.

Conclusion: Public health strategies for controlling COVID-19 outbreak in Taiwan are efficient.

The Top 10 Icd-10 Diagnosis Codes At One Of The University Hospitals In Malaysia In 2020

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Background: International Classification of Diseases (ICD-10) is an international disease classification for diagnosis codes that plays an important role in the health system. It is used as a tool to monitor the quality, safety, and efficacy of healthcare service delivery.

Aim: This study aims to establish a descriptive analysis on the most common diagnosis codes according to ICD-10 classification at the University of Malaya Medical Centre (UMMC) to understand the magnitude of the burden at the centre.

Method: A retrospective review from the hospital information system for 781,629 hospital admissions and outpatient visits in 2020 was performed. All the cases were coded with ICD-10 by the certified medical officers. Then, the data code was checked for accuracy and quality of the data, by reviewing them through the discharge summary. If there was a discrepancy, the code was re-coded into the standard ICD-10. Finally, the final data were sorted accordingly.

Results: Data shows that among the cases presented to the hospital, the top 10 were I10 (Essential (primary) Hypertension), Z09.8 (Follow-up examination after other treatment for other conditions), R50.9 (Fever, unspecified), J06.9 (Acute upper respiratory infection, unspecified), E11 (Type 2 diabetes mellitus), E78.5 (Hyperlipidemia, unspecified), Z53.8 (Procedure not carried out for other reasons), J18.9 (Pneumonia, unspecified), A09.9 (Gastroenteritis and colitis of unspecified origin), and T14.0 (Superficial injury of unspecified body region). It was found that, the centre received and managed less severe cases, which are otherwise possible to be treated by the secondary and primary healthcare centres. The disproportionately high number of less severe cases treated in the centre resulted in inefficient use of tertiary health care resources. Apart from that, several codes that were used were 'unspecified' which made it difficult to conduct a thorough analysis on hospital statistics and burden.

Conclusion: Even though UMMC is a tertiary care centre, however, it is receiving patients who are stable and less severe which resulted in inefficient healthcare resource utilization. Also, wrong, and unspecified coding affects the hospital management and preparation for necessary planning in the future. Future intervention is needed to improve the coding errors and to improve the accuracy of diagnosis in the UMMC database.

JEE and SPAR in relation to the Universal Health Coverage (UHC): A Global Ecological Study from 96 Countries

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Background: In 2020, the pandemic situation due to COVID-19 brought up the importance of global health security preparedness and response. Since the revision of International Health Regulation in 2005, Joint External Evaluation (JEE) and Self-Assessment Annual Reporting (SPAR) have been adopted to track IHR implementation stage of each country. While the concept of Universal Health Coverage (UHC) supports global health security, there is no previous study supporting the relationship between the two concepts.

Aim: This study aimed to compare the level of different countries' universal health coverage related to the JEE and SPAR scores.

Method: A total of 96 countries were selected and analysed using a multigroup ecological study design. The independent variable was global health security index which measured by JEE 2016-2019 and SPAR 2019 from World Health Organization (WHO) and UHC data was extracted from World Health Statistics 2020. ANOVA was used to analyse the differences between JEE, SPAR, and UHC. For examining the association of JEE and SPAR as well as

global health security index with UHC, the Spearman's correlation analysis was applied. To confirm the correlation between global health security index and UHC, a scatter plot between JEE and UHC as well as SPAR and UHC were presented. Lastly, the effect of categories of JEE and SPAR on UHC was verified through multiple regression analysis.

Results: While correlation value between JEE and SPAR was 0.92 ($p < 0.001$), countries' external evaluation scores are consistently lower than self-evaluation scores. Some areas such as available human resources and points of entry were mismatched between JEE and SPAR. JEE was associated with UHC score ($r = 0.85$, $p < 0.001$) and SPAR was also associated with UHC score ($r = 0.81$, $p < 0.001$). The JEE and SPAR score showed a significant positive correlation with the UHC score after adjusting several confounding variables.

Conclusions: The study result supports that strengthening national health security would in turn contribute to the achievement of UHC. With the help of the empirical result, it would further guide each country to better implement IHR.

Keywords: Joint External Evaluation, Self-Assessment Annual Reporting, Universal Health Coverage

Persevere to adhere: A theory-based m-health intervention in increasing health examination adherence

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Background: Non-adherence to chronic disease prevention guidelines during health examination is associated with increased mortality and morbidity. Thus, improvement of primary health care is needed holistically, whereby periodic health examination is clearly the foundation in combating chronic diseases. Even though it is compulsory to be done by all military personnel in Malaysia, there is still a high prevalence of non-adherence. Poor adherence to periodic health examination leads to late detection of non-communicable diseases, thus, contribute to higher healthcare burden in the organization.

Aim: To develop, implement and evaluate the effectiveness of information-motivation-behavioral skills model-based mobile health education intervention in increasing periodic health examination adherence.

Method: A quasi experimental study was designed to test the effectiveness of the intervention among 420 military personnel in Klang Valley. Single blinding technique will be used. Intervention group will receive a theory-based m-health education intervention including a reminder system, whereby control group will be in the waitlist. Both groups will receive current standard care. Online self-administered questionnaire, the Military Lifetime Health Record system and the theory-based m-health education intervention are the study instruments. The intervention module consist of five components based on all of the model constructs. It will be delivered via videos, reading materials and practical skills exercises. The expected primary outcome is the increase in periodic health examination adherence, while increase in knowledge on general health, periodic health examinations and non-communicable diseases scores; personal and motivation scores; and self efficacy scores are the secondary outcomes, Follow up will be done at one month and three months post intervention. Descriptive and inferential analysis will be done. Baseline analysis will be using Chi Square test or Mann Whitney U test, bivariate analysis using repeated measures analysis of variance and multivariate analysis using generalized estimating equations. Confidence interval will be set at 95% with the level of significance at p less than 0.05. Intention to treat analysis will be applied in this study.

Availability of Public Health Workers on Primary Health Care Facilities in

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Background: According to WHO, health human resources (HHR) includes all people who are engaged in actions and has a primary aim to strengthen health. HHR plays important roles in Universal Health Coverage (UHC), especially public health workers (PHW). Public health workers consist of health epidemiologists, health promotion and behavioral personnel, occupational health advisors, health administration and policy personnel, biostatistics and population personnel, and reproductive and family health workers. Today, Indonesia is one of 57 countries that are facing the HHR crisis while PHW are the integral part of HHR who are sharing the same purposes of primary health care (PHC) to reinforce health in Indonesia by promotive and preventive actions, especially in East Java Province. Indonesia Government set the standard of the minimum number of PHW which is stated in Permenkes No. 75 2014 Regarding Primary Health Care (Puskesmas). The availability of PHW contributes to the main problems of public health in Indonesia.

Aim: This study aims to find out the availability of PHW on PHC in East Java Province.

Method: This research design was descriptive study by collecting secondary data that came from relevant references to the main topic, from Rinakes 2017, and Health Profile of Regencies in East Java Province 2017.

Results: The result of study showed that the percentage of public health workers distribution on primary health care in East Java Province only covered 55% with 828 PHW personnel and 528 PHC facilities attained from 960 in total, while the 45% of PHC facilities did not accomplish the adequate number of PHW. PHW plays a big role in preventive and promotive actions in public health. The data indicates that the availability of PHW in PHC facilities does not meet the minimum number of standards, which should be fulfilled by 1 or 2 personnels in each PHC facility which is categorized by the location and readiness for inpatient services. This case will lead to misorientate PHC facilities on individual health services instead of public health services.

Conclusion: PHC facilities in East Java Province do not accomplish the coverage of PHW as the primary role of promotive and preventive actions which is lacking in number and do not attain the minimum number of PHW by 45% PHC facilities in total. So that, HHR who are involved in health promotion and prevention are not fulfilled properly. The main precedent cause is lack of fund optimization on public health services. Further studies are needed to discover the base factors that cause the lack availability of PHW in each PHC facility and occupy the number of PHW needs regarding the legit procedures that are applied.

Keywords: Human resources of health, primary health care, public health workers, promotive and preventive actions, public health

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Competence Management for Hospital Personnel Performance in Katutura Intermediate Hospital, Windhoek, Namibia

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Background: Employees are the most valuable asset to the institution. The scarcity of qualified healthcare professionals has become a major problem to the public health sector let alone the workers performance. Competence Management is important for employees' continuous improvement. The hospital personnel not only required performance assessment but competence management may affect for better service. The domain of management for administrative or developmental needs tools to provides an outline to organizations whether they are fulfilling their vision and meeting customer-focused strategic goals.

Aim: This study aim to analyze the relationship between competence management in Intermediate Hospital and performance and analyze the competence management of Katutura Intermediate Hospital, Windhoek, Namibia.

Method: This study was a cross-sectional study followed a quantitative design approach and study was explorative and descriptive through active participation, conducted interviews and observations. Population employees consist of 20 doctors and dentists; 55 registered and enrolled nurses, 30 midwives, 30 administrators, and a total of 135 workers. E-mail communication instrument was used to collect the data on June until September 2016. Results drawn from this study analyze the Competence Management to hospital toward personnel performance in Katutura Intermediate Hospital Windhoek.

Results: The majority of respondents were middle aged group ?32 – 40 and minority adult ?45 – 50 of age. The study showed that Competence Management has evidence of a fairly high positive correlation toward performance 0,71. Competence Management among hospital personnel intermediate hospital focuses on capability 3.3, experience 3.4, skills 3.3, attitude 3.0, and knowledge 3.3.

Conclusion: Competence Management to hospital personnel performance indicates an average level. On the other hand, competence management variables all indicate an average level. It points out that the employees have to be capacitated by engaging them with various in-service training to enhance their competence. Also further training could be of immense importance to increase their level of competence. The result from employee perspective on their gradual improvement towards future career, promotion, salary increment and recognition.

Keyword: Competence Management, Hospital, Performance

Preventing Inaccuracy of Stock Opnam at Pharmaceutical Department's Dr Moedjito Hospital (Operational Research Using Problem Solving Cycle Method At Dr Moedjito Hospital)

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Background: Activities at pharmaceutical department's dr moedjito hospital, has several problems including doctors wrote a prescription not according to the hospital formulary, doctors did not want to replace drugs with different brands, every month stock opnam does not match, between amount recorded in stock card with available amount, having trouble contacting a doctor when a prescription can't be read. But from those problems have main problem is every month stock opnam does not match.

Aim: The purpose of this article to analyze cause of problem stock opnam and make decision which method we use. And all activities involve the teams. And determine root cause

Method: The method was chosen is PSC (Problem Solving Cycle). Problem solving cycle (PSC) do regularly which is carried out in stages through certain phases, it can help an organization to identify problems and found the solution. Implementation problem solving cycle (PSC), need to do continuously, therefore it is called a 'cycle'. The PSC method consists of 5 stages. These stages include (1) Problem Analysis, (2) Strategic Design, (3) Strategy Development, (4) Implementation, Monitoring, Evaluation, and (5) Follow Up and Feedback. To solve this problems, team do activities, i.e make new regulation about Stock Opnam with related units, reviewing old regulation, and improve applicable rules.

Results: Use PSC method was gotten 0% on november and desember so can explain that stock opname in pharmaceutical department match between amount recorded in stock card with available amount.

Conclusion: Problem solving method can be applied to solve problem by looking for priority issue. And PSC method can solve other problem in the pharmaceutical department.

Recommendation For Bars Model's Performance Appraisal Design In Jombang Muhammadiyah Hospital

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Background: Various obstacles and problems that arise in relation to human resource management are challenges that must be faced by management in managing the hospital as a whole. Based on the assessment using the PSC (Problem Solving Cycle) method, the priority problem in the Human Resource and General Department in Jombang Muhammadiyah Hospital (RSMJ) is the high number of late attendance, which indicates a low level of employee discipline. These problems can result in decreased employee performance which ultimately has an impact on the attained achievement of organizational goals.

Aim: The purpose of residency activities for stages I and II is to analyze the factors that cause the high number of late attendance by employees, determine solutions, and plan activities to overcome the problem of the high number of late attendance for employees.

Method: The PSC method consists of 5 stages. These stages include (1) Problem Analysis, (2) Strategic Design, (3) Strategy Development, (4) Implementation, Monitoring, Evaluation, and (5) Follow Up and Feedback. Data collection on problems through document search and interviews.

Results: The priority for alternative solutions is improving a more comprehensive performance appraisal design, which is determined using the BARS (Behaviorally Anchor Rating Scale) model. This model's performance appraisal system is considered accurate in assessing the work behavior of each employee because it combines the work behavior approach with the employee's personal characteristics. The result of PSC implementation at this residency, is the implementation of the BARS (Behaviorally Anchor Rating Scale) model performance appraisal design can reduce the level of employee absenteeism delay, based on a one month follow-up after implementation with a decrease in the number of late arriving employees at RSMJ.

Conclusion: The implementation of the BARS (Behaviorally Anchor Rating Scale) model performance appraisal design can reduce the level of employee late attendance at RSMJ.

Network Analysis of Psychosis : Scoping Review

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Background: The study of psychopathology and the symptoms that cause mental disorders has long been conducted. In an attempt to elicit an explanation, the concept of mental disorders as networks of interacting symptoms has begun to be considered in recent years. Since this is a reasonably new approach, especially on psychosis, it is crucial to study studies that have used this approach to understand the psychopathology of psychosis.

Aim: This paper aims to provide a scoping review on network analysis of psychosis.

Method: We explore how the data is analyzed with statistical tools and how the data is generated to understand the psychopathology of psychosis. We also will explore the advantages of using network analysis in psychopathology. The inclusion criteria were (a) studies that included people with psychosis risk as participants, (b) Subject of the studies is about psychiatry and psychology, (c) studies that investigated Psychosis risk (clinical high risk, early psychosis, basic symptom), and/or network analysis, (d) studies available in full text and (e) studies that were reported in English published in journals. We included studies of any design. The exclusion criteria were editorials or commentaries, studies only published as conference abstracts, studies about brain or neuro or physical aspect, studies about ultra high risk, studies about treatment or intervention.

Result: The results of data extraction found nine articles using a network approach or network analysis or network models. Among the nine studies, there is one article study about early psychosis, one article study about psychosis related to other mental disorders, seven articles studying symptoms of psychosis related to risk factors, e.g., stress, childhood trauma, related distress, depression, anxiety, environmental risk. Studies conducted on patients with psychosis and other mental disorders, in detail, involved samples with mental disorders, namely studies on psychiatric disorders regarding depression, mania, psychosis, and mental retardation.

Opportunities for Implementing E-Health in Indonesia After COVID-19 Pandemic

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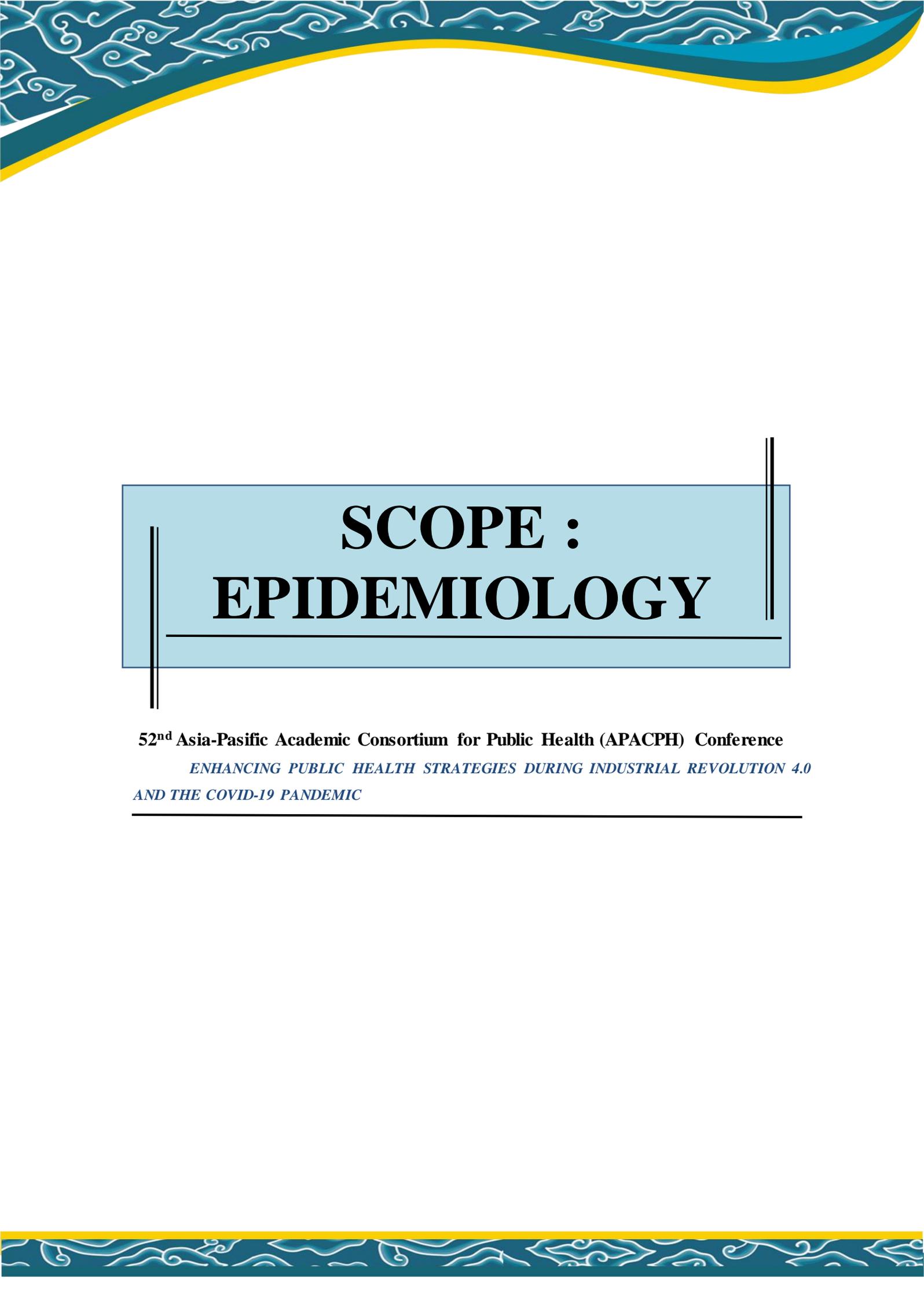
Background: The COVID-19 is still unfolding in almost all parts in the world with no certain predictions how long this pandemic will endure. The pandemic has transformed the way people interact, including in healthcare settings. **Aim:** This study aims to see how the opportunities for implementing e-health in Indonesia after COVID-19 pandemic.

Method: The method used is literature review by searching relevant articles through Google Scholar. The articles used are published from 2016 to 2020. Inclusion criteria are research which contain e-health information in Indonesia that are full text and open access. Exclusion criteria are non-full text and paid e-health articles. Author took all research designs and there is no language selection because all articles found are in English and Bahasa.

Results: Based on the search results, there are seven articles, four articles from Google Scholar and three articles from bibliography and other sources but only four articles suitable for the criteria.

Conclusion: It can be concluded that COVID-19 pandemic has driven the transformation of e-health application in Indonesia. The development of e-health in Indonesia has yielded promising results in providing health services, hence there is a need for further development of e-health system in several health service institutions so that can distribute throughout Indonesia and help to solve health problems in improving degree of public health.

Keywords: opportunities, e-health, COVID-19 pandemic



SCOPE : EPIDEMIOLOGY

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*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0
AND THE COVID-19 PANDEMIC*

Hospital Business Process Development: Application of Business Process Management Theory at Indonesian Urban Public Hospital

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Background: Long service time at Outpatient Unit in an Indonesian urban hospital (267,62 ± 136,41 minute) becomes problem for hospital management because of its inefficiency. Process as asset for an organization, especially core process like patient service should be well managed so it can boost patient satisfaction.

Aim: Implementation of Business Process Management at hospital is required to reduce service time.

Method: An operational research combining document review, stakeholder interview, focused group discussion, quantitative and qualitative process analyze, prioritization, and root cause analysis to give process redesign recommendation.

Results: There are five core process in outpatient unit and we focus our research on dispensing process in pharmacy. And then we made process model based on evidence and interview based discovery. Cycle time efficiency of prescription analysis process was the worst with value 0.31. With non value activities was 40% of all activities with the waste are overprocessing, waiting, and transportation. The selected problem was transportation of prescription to dispensing unit as waste. Based on the root cause analysis we suggest two recommendation. For short term redesign, we supported the use of basket to transport the prescription which embeded in the operational procedur. Whilst, for the long term redesign; we suggested the implementation of electronic prescribing integrated with information system. Then we analyzed and calculated the impact of the redesign especially using parameter of time. Short term redesign testing decreased the service time from 90 minutes to 87,76 minutes. Long term redesign decreases the service time from 90 minutes to 75,4 minutes. Both of the implementation assumed to reduce service time for 2.5 – 16.2 %.

Conclusion: Using Business Process Management in hospital setting was proven to be suitable in redesign service process aimed to reduce service time.

Keywords: business process management, outpatient, hospital, pharmacy, redesign

Review Article Low Carb and Gestational Diabetes Mellitus

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Background: In the world, Gestational Diabetes Mellitus (GDM) affects 16.5% of pregnancies. Gestational Diabetes Mellitus is a risk factor for the occurrence of Pre-eclampsia where pre-eclampsia is still the first rank cause of maternal death in East Java. Gestational Diabetes Mellitus occurs in the presence of hyperglycemia during pregnancy. Insulin sensitivity changes according to the needs during pregnancy which will continue to increase, encouraging the uptake of glucose into adipose stores. During pregnancy, there is an increase in placental hormones, estrogen, progesterone, leptin, cortisol, lactogen, and placental growth hormone so that insulin resistance increases.

Aim: This article describes the changes in the glycemic state in Gestational Diabetes Mellitus by limiting the intake of 50% of carbohydrates for pregnant women in a day.

Results: Recent findings indicate that limiting calories to 50% per day from complex carbohydrates and high fiber intake can control blood glycemic. Control of the number of carbohydrates and the role of other macronutrients and food quality has not been evaluated.

Conclusion: The culture and behavior of the people who consider carbohydrates as the main source of human energy is still a trend for the Indonesian people.

Keywords: GDM, metabolism, low carb

Determinants of health-related quality of life among systemic lupus erythematosus (SLE) patients in Hanoi, Viet Nam.

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Background: Systemic lupus erythematosus (SLE) is a chronic autoimmune disease, and its common symptoms impact on the patients' lives. Various studies have been conducted on SLE to identify its causes and treatments, and the research focus has shifted toward maintaining or improving health-related quality of life (HRQoL). Social support, mental adjustment, and satisfaction with life are important factors associated with HRQoL. However, awareness of SLE and attention of HRQoL are still low in low- and middle-income countries such as Viet Nam where the focus is on treatments. Therefore, the study of HRQoL among SLE patients in Viet Nam is warranted.

Aim: This study aimed to identify the determinants of HRQoL among SLE patients in Hanoi, Viet Nam.

Method: This cross-sectional study was conducted at the National Hospital of Dermatology and Venereology in Hanoi, Viet Nam from August to September, 2019. A structured questionnaire was used for data collection. It consisted of Short Form-36 to assess HRQoL, Multidimensional Scale of Perceived Social Support, Satisfaction with Life Scale, and the Mental Adjustment to SLE. Multiple linear regression was used to identify the determinants of HRQoL.

Results: This study included 134 SLE patients. Majority of them were women (n=129, 94%) and their mean age was 37.9 (SD 12.5, Range=18-66). Older patients were more likely to have a worse mental health status indicating lower HRQoL (B=-0.45, p=0.002, 95%CI=-0.73, -0.17). Patients who had more children were more likely to have a lower physical health status indicating lower HRQoL (B=-5.14, p=0.015, 95%CI=-9.27, -1.00). More helplessness/hopelessness was associated with a lower physical and mental health status (B=-1.85, p<0.001, 95%CI=-2.80, -0.90, B=-1.69, p<0.001, 95%CI=-2.57, -0.81). Having anxious preoccupation was associated with a worse mental health status (B=-1.04, p=0.005, 95%CI=-1.77, -0.32).

Conclusion: This study shows that SLE patients felt helpless/hopeless with their current situation. Older patients and those who had more children had lower HRQoL. Understanding how to manage their mental status is a key to better HRQoL of SLE patients

Relationship Of Long Working Time, Responsibilities, Work Shift, And Personal Factors With Mental Work Fatigue In Regional Disaster Management Agency (Study At Regional Disaster Management Agency Tuban) During Covid-19 Pandemic

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Background: Mental work fatigue is a total response from individuals who have a psychosocial influence experienced in a certain period of time. Regional Disaster Management Agency (BPBD) has quite a tough task, especially during the Covid-19 pandemic, such as serving in the funeral of the positive community for Covid-19 and as a task force for the prevention of Covid-19.

Aim: The purpose of this study was to determine the relationship between length of working time, responsibilities, work shift, and personal factors with mental fatigue in the workforce of the Regional Disaster Management Agency in Tuban during the Covid-19 pandemic.

Method: This study was an observational study with a cross sectional method. Data collection was carried out by observation, interviews, and questionnaires which were carried out on population is 66 workers. The measuring instrument used is the standard KAUPK2 questionnaire, responsibility, Pittsburg Sleep Quality Index (PSQI), and general questions.

Results: This study shows that the majority of working time is 7-8 hours, the majority of the responsibility is high to serve the community for 24 hours, the majority of the work shift is

morning, the majority sleep time is not optimal, and the sports habits of the majority of the workers are never. So, the length of working time, responsibilities, work shift, sleep quality, and sport habits are related to mental work fatigue of BPBD workers in Tuban Regency. While age, gender, and working period are not related. Mental work fatigue is related to length of time working, responsibilities, work shifts, sleep quality, and sport habits.

Conclusion: The higher of long working time, work shift, sleep quality, exercise habits, and responsibilities, it causes mental work fatigue occur faster.

Keywords: Mental work fatigue, Regional Disaster Management Agency (BPBD), Covid-19

Cellular Hypothyroidism in Schoolchildren Living in an Agricultural Area

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Background: A previous study revealed cellular hypothyroidism based on the reverse Triiodothyronine (RT3) in schoolchildren living in an agricultural area. However, to support the previous finding, the free Triiodothyronine (FT3)/reverse Triiodothyronine (RT3) ratio uses to diagnose cellular hypothyroidism adequately.

Aim: This study aims to identified cellular hypothyroidism using the FT3/RT3 ratio in schoolchildren living in an agricultural area.

Method: The study was a cross-sectional study with 55 schoolchildren. The method to analyzed FT3, RT3, Thyroid Stimulating Hormone (TSH)), and free Tetraiodothyronine (FT4) used the enzyme-linked immunosorbent assay (ELISA). The subject with the FT3/RT3 ratio is less than 0.2 then classified as cellular hypothyroidism. The method to analyzed organophosphate pesticide metabolites used the LC-MS-MS. Spearman correlation with = 1% was employed to correlate TSH versus FT, RT3 versus FT and RT3 versus FT3

Results: The levels of FT3, RT3, FT3/RT3 ratio, FT4, and TSH were 2.61 ± 0.27 pg/ml, 51.25 ± 45.05 ng/dl, 0.05 ± 1.51 , 3.71 ± 8.04 ml U/l, and 16.99 ± 2.45 ml U/l, respectively. Cellular hypothyroidism suffered 87% of the schoolchildren. There was a correlation between TSH versus FT4, FT3 versus RT (< 0.01), and was no correlation between RT3 versus FT4 (> 0.01).

Conclusion: The study concluded that the schoolchildren in an agricultural area suffered from cellular hypothyroidism

Evaluation Of Diarrhea Surveillance System In Badung Regency

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Background: Surveillance is a systematic and continuous monitoring of disease to enable effective and efficient countermeasures. One of the surveillance systems currently running in Badung Regency is for Diarrhea. A total of 6479 diarrhea cases reported in 2020, however, this figure is far from the case finding target of 21,000 cases.

Aim: This study aims to evaluate the ongoing diarrhea surveillance system and provide input for the improvement of the diarrhea surveillance system in Badung Regency.

Method: This is a qualitative study conducted at the Health Office and 13 Community Health Centers (Puskesmas) in Badung Regency from February to May 2021. The respondents were all surveillance officers at the Puskesmas in Badung. Data were obtained by observation, in-depth interviews, and questionnaires survey. The evaluated components are including personnel, methods of collection, data processing, and attributes of the surveillance system. The data obtained were analyzed descriptively by comparing the supposed target with the actual data found and describing the problems encountered in its implementation.

Results: Only 10 of the 16 (62.5%) Puskesmas surveillance officers received training on diarrhea surveillance, while 6 diarrhea surveillance officers had never received training since they had just served as managers of the program and the opportunity for training was hindered by the COVID-19 pandemic. Meanwhile, some private clinics/practitioners do not send data to Puskesmas, therefore, number of cases reported from Puskesmas to Health Office may be underestimated. There is also an issue of under-reporting due to independent selection of health services by diarrhea patients outside the catchment area of Puskesmas.

Conclusion: Surveillance system for diarrhea in Badung regency has not been performed optimally due to several factors including lack of competencies of the surveillance officers and in optimal reporting system such as low participation of private practitioners. It is necessary to conduct training for surveillance officers to optimally detect cases of diarrhea and to run the overall surveillance more effectively. Interventions in outreach to private practitioners regarding training in recording and reporting systems are also needed.

Keywords: Diarrhea surveillance, Badung Regency, Community health center

Analysis of neurological symptoms and urinary hippuric acid levels on shoemakers with continuous low-level toluene exposure

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Background: Occupational exposure to toluene causes many serious health hazards to workers, especially if an ambient environment increases the exposure during routine working hours.

Aim: This study was conducted to analyze the level of health risk of neurological symptoms and urinary hippuric acid levels due to continuous exposure to low levels of toluene by shoemakers.

Methods: This study was conducted on informal shoemakers in Surabaya who were exposed to low levels of toluene either continuously (n = 16) or intermittently (n = 6). Urine samples from 22 workers were taken at the end of the shift for urinary hippuric acid levels were measured using Visible Absorption Spectrophotometry. Sampling of toluene in the air was carried out with an active sampler pump, using gase-liquid chromatography. The demographic features of the workers were recorded through a short questionnaire and the prevalence of neurotoxic symptoms was measured by the German version of the Q18 questionnaire.

Results: The median of the eight airborne toluene levels was 4.33 ppm (range 0.21 – 1388.88 ppm). The mean urinary hippuric acid level was 1.01 g/g creatinine (range 0.13-2.34 g/g creatinine). The difference in the mean value of urinary hippuric acid between intermittent and continuous airborne toluene (p = 0.020). Workers with neurotoxic symptoms had significantly higher hippuric acid levels than those who did not (p = 0.009).

Conclusion: These data suggest that continuous exposure to low levels of toluene may be affects their urinary hippuric acid levels, and resulting symptoms of poor health. Based on these results, improving working conditions and maintain personal hygiene are required at these workplaces.

Keywords: Toluene; urine hippuric acid; shoemakers; neurotoxic symptoms; personal hygiene

Distribution of Environmental Factors on Malaria Cases in Muara Enim Regency

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Background: One of the factors causing the spread of this endemic disease is the habitat and environment of each region which can be viewed based on the population density, land use, and altitude.

Aim: to analyze the malaria cases, socio-demographic, the frequency distribution of water quality environmental, the frequency distribution of air quality environmental factors, the frequency distribution of social/behavioral environmental factors, socio-demographic factor relationships, and factors which have the most risk form malaria cases in Muara Enim Regency.

Method: A quantitative research design through an analytical survey research method and a case control approach was applied in this research.

Results: (1) there were 52 people (32.9%) and 106 controls (67.1%). (2) There was a relationship between sociodemographic factors and malaria cases, while no relationship found between education and malaria cases, and occupation is a protective factor. (3) The frequency distribution of water quality was 8.39, the turbidity level was 3.27, the electrical conductivity of water was 22.88, and the water hardness level was 58.13 with an SD of 18.77. This indicated that the water quality in Muara Enim Regency supported the growth of Anopheles mosquito larvae. (4) The frequency distribution of air quality was obtained at an average air temperature of 30.58, average air humidity of 70, and average wind speed of 22.75, indicating that the air quality supported the high malaria cases. (5) habitual behavior of going out at night have a relationship with malaria cases, while the habit of using mosquito nets, the habit of using mosquito repellent, the habit of hanging clothes have no relationship with malaria cases. Furthermore, the use of wire gauze is a protective factor. (6) The most dominant factor is the habit of going out at night.

Conclusion: There is a relationship between age, sociodemographic factors gender, sociodemographic factors and the most risk factor for the malaria cases is going out at night.

Keywords: Environmental Factors, Malaria Case, Muara Enim Regency

Strengths, Weaknesses, Opportunities and Threats in the Implementation of HIV Counseling and Testing During Covid Pandemic at the Public Health Center Puskesmas in Jember Regency

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Background: COVID-19 case that has hit all provinces in Indonesia has paralyzed community activities in various sectors. Public Health Center (Puskemas) is the first place chosen by the public to obtain health services. During the Covid 19 pandemic the number of people visits to the Puskesmas decreased. People are reluctant to visit Puskesmas to have their health checked because people are afraid of being infected by covid 19. Based on the preliminary survey, the problems faced during the Covid-19 pandemic in providing services at the Puskesmas are including HIV Counseling and Testing services where the number of HIV testing coverage is low, Health workers are also exposed to Covid 19 which cause the number of health workers is limited so that the Puskesmas is forced to lock down for 14 days. As a result of this the patient is diverted to another health service facility.

Aim: The purpose of this study was to evaluate the strengths, weaknesses, opportunities and threats in the implementation of HIV Counseling and Testing services during the COVID-19 pandemic in Jember Regency. It is possible to conduct an HIV Counseling and Testing during the covid-19 pandemic at Puskesmas in Jember Regency.

Method: This study uses qualitative method with an interview with 7 people to identify the SWOT on the PITC health workers of several Puskesmas in Jember Regency (Puskesmas Puger, Puskesmas Tanggul, and Puskesmas Sumber Jambe).

Results: The study result was analyzed through SWOT matrix to formulate the suitable strategy planning. However, there were several limitations on the implementation.

Conclusion: Providing training concerning PITC, Wearing PPE properly, enhancing health promotion, increasing covid-19 vaccination coverage can reduce the number of covid-19 transmission and increase HIV counseling and testing services coverage in Jember regency.

Bactivec and Chlorine as *Aedes Aegypti* larvicides in Vector Control of Dengue Hemorrhagic Fever

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Background: Dengue Hemorrhagic Fever (DHF) is an endemic disease that occurs throughout the year and is the fastest spreading transmission in the world. In mid-2020, dengue fever reached 71,633 cases which spread throughout the provinces in Indonesia. Riau Islands is a province where dengue fever is still quite high with morbidity rate in the Riau Islands is 56.35%. For 2020 cases in Batam City increased to 767 cases with a CFR of 0.52%. The main problem is the program to break the chain of transmission that has not been optimal, especially in vector control.

Aim: The research objective was to determine the effectiveness of Bactivec and chlorine against the mortality of *Aedes aegypti* larvae.

Method: This study was an experimental study using gram-positive bacteria *B. thuringiensis* (Bactivec) and chlorine with a total dose of 1.0 ml / l, 2.0 ml / l, 3.0 ml / l, 4.0 ml / l, and 5.0 ml / l which is applied with 1 liter of water that has been filled with 10 3rd instar larvae. Data analysis used a completely randomized design by looking at the percentage of larval mortality within 15 minutes. The data of mortality that obtained were analyzed using the Anova test.

Results: The results showed that Bactivec could kill *Aedes aegypti* mosquito larvae with a percentage of 30-90% and it is known that the difference in the average difference of dead mosquito larvae at concentrations between doses of Bactivec has a significant difference (0.000). Meanwhile, the number of *Aedes aegypti* mosquito larvae that died at a chlorine dose about percentage of 3.4-20%. It is known that the difference in the average difference of dead mosquito larvae at concentrations between doses of chlorine has a significant difference (0.001).

Conclusion: The conclusion of the statistical results is that there was differences in the number of deaths of *Aedes aegypti* larvae from each dose. The most effective dose of Bactivec was 3.0 ml / l, 4.0 ml / l, and 5.0 ml / l, while the most effective dose of chlorine was 5.0 mg / l.

Risk Factors For Outbreaks Dengue Hemorrhagic Fever (Dhf) In Buleleng Regency

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Background: Dengue Hemorrhagic Fever (DHF) an emerging disease that is transmitted through bite of *Aedes aegypti* mosquito vector. DHF Incidence in Buleleng Regency always high every year. Number of deaths in this year's period has doubled compared to the previous year.

Aim: The purpose this investigation to explore risk factors for DHF infection and recommended control measures.

Methods: A total of 76 cases DHF reported from 1 to 28 February 2021 were used in a case control study. A case was defined as individual with fever for 2 to 7 days accompanied by joint pain, rash and platelet count lower 100,000/mm³ and an increase hematocrit upper 20%. Controls as individual selected from the case environment and did not experience symptoms of DHF. Information about exposures was collected using a structured questionnaire. Cross table analysis and Chi-Square or Fisher-Exact statistical tests were used to estimate the Odds Ratio (OR) 95% Confidence Interval (CI).

Results: A total of 76 cases, 2 of them died. Attack Rate (AR) in urban and rural areas are 4 per 10,000 population and 1 per 10,000 population, with Case Fatality Rate (CFR) 0.62% and 0.14%. A total of 45 cases were male with an AR of 3 per 10,000 population and CFR 4.4%. A total of 46 cases were in the young age group with an AR 4 per 10,000 population and CFR 3.84%. The presence of larvae (OR: 2.01 95%CI: 1.3-3.03), the condition of open container (OR: 2.2 95%CI: 1.2-4.2) and the condition of open trash bins (OR : 3.1 95%CI: 1.7-5.4) in urban areas and the presence of larvae (OR: 2.5 95%CI: 1.1-5.3) and the condition of open containers (OR: 2.5 95%CI: 0.8-8.1) in rural areas was significantly associated with DHF infection.

Conclusion: There has been outbreaks of DHF in Buleleng Regency with 2 cases of death. The presence of larvae, the condition of open containers and the condition of open trash bins were significantly associated with DHF infection. Community empowerment in eradicating mosquito nests and fogging focus needs be done to limit area of transmission.

The Village Disaster Prepared Team Readiness To Increase The Resilience Of Volcano Eruption

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Background: A disaster was an event that could result in loss of property, life and the environment. Factors of natural, non-natural and human were the cause disasters (Nurjanah, et al, 2012). One of the disasters that occurred was volcanic eruption. Disasters happen without knowing who the victims were, it could be happen to anyone. Losses both physical and non-physical as a result of disasters often huge because the community is not ready. So that to reduce these impacts a good management must be carried out. The problems caused by disasters were very complex and required careful planning and direction (Kusumawardhani, et al, 2014). The role of the disaster prepared team was very important in increasing the resilience during volcanic eruptions. The disaster prepared team had a role as a companion, mobilizer, and motivator for the community in disaster prepared efforts (Asiah, 2019). The readiness of the village disaster prepared team should increase the resilience of the volcanic eruptions.

Aim: The purpose of this study was to determine whether there was relationship between the village disaster prepared team in increasing the resilience of volcanic eruptions.

Method: The research design used was cross sectional. The sampling technique used was total sampling with sample size of 30 respondents. The measuring instrument used was questionnaire.

Results: The results of this study indicate that the village disaster prepared team in Kebonrejo Village, Kepung District, Kediri Regency was in a good category. This was proved by knowing the knowledge of the village disaster prepared team which was 92% good, and the attitude in the positive category 89%. From the results of the analysis using the Spearman rho test, it showed a significance value of 0.001, which means that there was a relationship between the village disaster prepared team and an increase in the resilience of volcanic eruptions.

Conclusion: The readiness of the village disaster prepared team was a factor that greatly influence the increase of resilience of volcanic eruptions. Suggestions for the village disaster prepared team to maintain cooperation with various sectors so that the program could be carried out properly as an effort in increasing resilience during the volcanic eruptions.

Association of the status of implementation of smoking cessation at eating and drinking establishments with health status and mortality rate: Examination by prefectural data

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Background: As passive smoking measures are being promoted in restaurants, etc. in Japan, confirming the relationship between passive smoking measures and health status can be a basic survey necessary to evaluate passive smoking measures. However, such basic research has just begun in Japan.

Aim: The purpose of this study was to confirm the association of the status of implementation of smoking cessation at eating and drinking establishments with health status and mortality using prefectural data.

Method: The prefectural smoking cessation rate was calculated with using the data of "Tabelog®." The variables of interest were subjective symptoms, hospitalization rate, medical expenses (total, hospitalization, non-hospitalization), and the mortality rates of malignant neoplasms (lung cancer, stomach cancer, and colon cancer), heart disease, acute myocardial infarction, cerebrovascular disease, cerebral infarction, and pneumonia in each prefecture. The partial correlation coefficient was estimated between the smoking cessation rate and the variable of interest by using the prefectural smoking rate as the control variable.

Results: The smoking cessation rate showed a significantly negative correlation with medical expenses. When eating and drinking establishments were divided into "restaurant", "cafe", and "bar," it also indicated a significant negative correlation with the medical expenses in any category. It was negatively related to the mortality rates of cerebrovascular disease, cerebral infarction, and pneumonia. The negative correlation was stronger in females than in males.

Conclusion: These results suggest that the implementation of smoking cessation at eating and drinking establishments has the possibility to reduce the mortality rates of cerebrovascular disease, cerebral infarction, pneumonia, etc. and that it may reduce the medical expenses involved. Thus, it is important to implement the smoking cessation at eating and drinking establishments in line with the Revised Health Promotion Act.

The Health Educator For Youth (Hey) Project: Need Assessment Of Students' Knowledge, Attitudes And Participation On Peer Education Activities In Mental Health

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Background: Adolescence are at risk of experiencing mental health problems. Indonesia has the highest number of people with emotional disorders and depression. Patients with emotional disorders aged 15-24 years in East Java were 7.32% and depression was 4.94%.

Aim: The purpose of this study was to analyze the relationship between knowledge about mental health and attitudes about peer educators on student participation in peer education activities.

Method: This study was a cross sectional study conducted with the participation of students (12-18 years) in nine senior high schools in Surabaya, Indonesia (N = 375). This study used an online survey to assess students' knowledge of mental health and their attitudes and participation in peer education activities.

Results: More than 54.9% of students had low knowledge of mental health and negative attitudes toward peer educators. The statistical test results showed that there was no relationship between knowledge ($p = 0.652$) and student participation in peer education activities, while there was a relationship between attitudes ($p = 0.006$) and student participation in peer education activities.

Conclusions: Students had a low level of knowledge in regards to mental health issues. The result also showed negative attitudes that contributes to their doubts about participating in peer education activities. These results showed that the peer education program needs to improve the quality of peer educators and the quality of mental health materials. The HEY program can be a solution to improve the quality of peer educators in improving adolescent mental health. Schools need to show commitment in providing support to ensure the sustainability of the program. It is recommended to optimize the existing peer educator program through peer educator capacity building. The purpose of peer educator capacity building should not only emphasize on increasing knowledge, but also in shaping positive attitude and behavior through continuous mentoring of peer educator programs.

Keywords: knowledge, attitude, peer educator, mental health, students, good health and wellbeing

The Relationship between Physical Activity and Eating Habits in Overweight Adolescents In Samarinda, East Kalimantan

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Background: The nutritional status of adolescents greatly determines the state of nutrition and health in adulthood. Adolescents who experience excess nutrition continuously can lead to obesity and the risk of degenerative diseases. In East Kalimantan, the prevalence of nutritional status over the age of 13-15 years, there was an increase and an increase in non-communicable diseases, namely heart disease from 1.0% (2013) to 2.2% (2018) and stroke from 10.0% (2013) to 14.7% (2018). the first order of disease from 34 provinces.

Aim: This study aims to determine the relationship between physical activity and eating habits in overweight adolescents in Samarinda, East Kalimantan.

Methods: This research is an analytic observational study with a cross sectional design. The research subjects were 257 students. Sampling by purposive sampling method. The data analysis used was univariate, bivariate, and multivariate analysis using Independent T-Test.

Results: The results showed that there were differences in physical activity, energy levels, protein levels, and fat proportions in overweight subjects and normal nutritional subjects with $p < 0.05$. Bivariate correlation analysis test showed that there was a significant relationship between physical activity and food intake with the nutritional status of junior high school adolescents in Samarinda City.

Conclusion: There is a relationship between physical activity and food intake with adolescent nutritional status. Both nutritional status and normal nutritional status must maintain nutritional status so that excess weight does not occur as a trigger factor for obesity which has an impact on degenerative diseases and must increase physical activity including sport and other physical activities both at school and at home.

Keywords: Adolescents, Nutritional Status, Physical Activity, Eating Habits

Epidemiology of Adverse Drug Reaction in Single Center based on individual Case Safety Reports

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Background: Adverse Drug Reactions(ADRs) are on the rise as poly-pharmacy increases due to easier access to drugs, aging and increased chronic disease. The incidence and pattern of ADRs varies among countries and races. However, in Korea, there are still fewer ADRs reports than in developed countries, so it is unfortunate for Koreans to build information on drug safety.

Aim: In order to establish countermeasures against ADRs, We evaluate epidemiological characteristics about full data of ADRs versus Systemic anti-infective agents (ATC-J code) of ADRs.

Method: Data was collected by Individual Case Safety Reports at Seoul National University Hospital from January 2009 to December 2018.

Results: In total, 44,122 ADRs were reported. By ATC code, Anti-tumor agents and immunomodulators was 33%, Systemic anti-infective agents was 25%, and Nervous system was 15%. In full data, the average age in male was 46.2 and female was 48.51. In ATC-J code, the average age in male was 44.57 and female was 47.81. Using WHO-ART's System Organ Classes, In full data, Gastro Intestinal systemic disorder, Skin appendages disorder, Body as whole-General disorder were many in order. In ATC-J code data, Skin and appendages, Gastro-Intestinal systemic disorder, Liver and biliary system disorder were many in order. In full data and also in ATC-J code data, Type A ADRs were 95% and Type BADRs were 5%. In Full data, about severity ADRs, mild was the highest proportion (50%). In ATC-J code data, moderate was the highest proportion(49%).

Conclusion: Anti-tumor agents and immunomodulators was the highest proportion and Systemic anti-infective agents was the second highest proportion. This is considered to reflect the characteristics of a single hospital that had a lot of chemotherapy. In full data and also in ATC-J code data 60s, 70s and 50s were frequent in order. They all could be considered as vulnerable group. Furthermore, focusing on these group, ADRs active monitoring will be required.

Keywords: Adverse Drug Reaction, Pharmacovigilance, Adverse Drug Reaction Reporting Systems

Risk of Peripheral Arterial Disease in People with Diabetes Mellitus Type 2 in East Java, Indonesia

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Background: Peripheral Arterial Disease (PAD) is a condition when blood flow is blocked due to plaque buildup in the arteries. PAD is the most common complication in people with diabetes mellitus characterized by peripheral tissue perfusion disorders. It is the basis of various complications in patients with DM. These complications are stroke, cardiac arrest, kidney failure, amputation, and so on. Uncontrolled blood sugar levels in people with T2DM cause it was more quickly. The longer the patient has been suffering from T2DM, the PAD is getting worse.

Aim: This study aimed to determine the relationship between long-suffering diabetes and the occurrence of Pheripheral Arterial Dysesase (PAD) in type 2 diabetes mellitus patients in Kediri district, East Java, Indonesia.

Method: This study used an observational design using a cross-sectional approach. The population of this research was T2DM sufferers in the Kediri district. Data collection using random sampling technique and obtained 127 respondents. The old suffering data was obtained by interview, while the PAD data was obtained by measuring the Ankle Brachial Index (ABI) using a tensimeter. Data analysis using the Spearman Rank test with $\alpha = 0.05$

Result: This study found that most respondents (69%) suffered from T2DM in 1 year, and most of the respondents (40.1%) experienced moderate PAD. The Spearman rank statistical test found that P-value = 0.32 and had a relationship strength of 0.190.

Conclusion: There is a relationship between the length of time suffering from T2DM and the occurrence of PAD in T2DM sufferers in East Java, Indonesia

Keyword: Diabetes mellitus Tipe-2, PAD

Analysis Of Measles-Rubella Surveillance In East Java Province During Covid-19's Pandemic

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Background: Measles-Rubella are infectious diseases caused by paramyxovirus viruses and transmitted through sneezing and coughing droplets. This disease is very contagious and acute if it infects toddlers, especially with poor nutrition, complications can occur (Ministry of Health, 2019). The suspected measles-rubella discovery in the East Java Province in 2019 (668 cases), in 2020 decreased significantly (213 cases). The trend of discarded rate of measles-rubella cases in East Java Province 2019-2020 shows 13th ranked. The target for measles-rubella (MR) elimination in Indonesia in 2021 is that there is no transmission of the measles-rubella virus by adequate surveillance for 3 consecutive years (East Java Provincial Health Office, 2021).

Aim: Analyzing problems in the implementation of measles-rubella surveillance in East Java Province during COVID-19's pandemic.

Method: This study included in descriptive research evaluation type (evaluation study). Respondents in this study are the Provincial surveillance officer and health centers in East Java. This research was conducted in Surabaya by January 2021 while COVID-19 pandemic. Data were collected by in depth interview and observation then analyzing descriptively by fishbone diagram through system approach.

Results: Analysis of MR surveillance problems in East Java Province during the COVID-19's pandemic is the coverage of suspected measles-rubella cases by IgM not reached the target (89.47%) with a total score 684 (by CARL method). Based on a fishbone diagram with a systems approach, the determinans of this problem are the human aspect because the public health center surveillance officers are shifted to focus on COVID-19 surveillance, the mechanical aspect is the measles-rubella specimen examination laboratory then the tools are limited because focused on COVID-19 specimens, the money aspect is the measles-rubella surveillance budget are limited, the market aspect is underreporting cases, the method aspect is guidelines on measles-rubella surveillance still not fully understanding, the process aspect is socialization of measles-rubella characteristics not effective, the output aspect by decreasing number of confirmed cases (83%).

Conclusion: the under coverage of suspected measles-rubella cases by IgM as main problem on East Java measles rubella surveillance must be solved by system approach include input (5M), process and output aspects.

Keywords : measles-rubella, surveillance, system approach

Barriers for Tuberculosis Case Finding in Aceh Province: A Qualitative Study

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Background: Indonesia ranks third highest in tuberculosis (TB) cases after India and China. In Aceh Province, the number of tuberculosis cases increased every year, in 2017 recorded 7,342 cases, in 2018 (8,471 cases), and in 2019 increased to 8,647 cases. The Covid-19 pandemic has impacted the decreasing Case Detection Rate (CDR) therefore it becomes a concern and cause increasingly spread the risk of transmission and obstacles of the treatment.

Aim: The purpose of this study is to identify obstacles in the discovery of new TB cases and to explore the causes of these obstacles in relation to the discovery of new cases of tuberculosis during the Covid-19 pandemic in Aceh Province.

Method: This study used a qualitative method with in-depth interviews of 25 informants consisting of 3 informants in charge of the program, 6 informants of the Head of Health Centre (Puskesmas), 6 informants of TB Service Officers in Puskesmas and 10 informants of TB patients and their families. Furthermore, observations were also made on 6 Puskesmas in North Aceh Regency by observing the availability of medical examination equipment in accordance with standards. Data obtained from in-depth interviews are transcribed, coded, categorized and themed.

Results: During the Covid-19 pandemic, the barriers to detecting new tuberculosis cases were strongly felt by health officers. Obstacles to conducting home visits for contact investigation, on the other hand, patients experience access barriers for fear of being considered to experience Covid-19 because some symptoms of respiratory disorders are almost the same as Covid-19. Another obstacle is the refocusing of budgets and activities for Covid-19 control.

Conclusion: The situation of the Covid-19 pandemic has given health care workers obstacles in detecting new cases of tuberculosis as well as barriers to access to health services. Case detection strategies and innovations are needed to control transmission and optimize treatment by minimizing obstacles.

Keywords: Barrier, case finding, tuberculosis, qualitative

Malaria Vector Control Model In Coastal Area

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Background: Lifuleo village is coastal area with the highest malaria incidence and is classified as a high malaria endemic area.

Aim: The objectives of this study are to examine the components increasing the vector density of malaria, to intervene in order to overcome the problems, and to measure the success of interventions to obtain models and evaluate the application of malaria vector control models in coastal areas.

Method: The research designs used were exploratory research (I) and cross sectional study (II).

Result: Lifuleo village as a very prominent area for malaria transmission with close proximity of mosquito's habitat to the settlement, mosquito density is quite high and the behavior of the local community is very supportive of contact between humans and vectors. Control activities in the second year were focused on controlling adult mosquitoes and pre-adult mosquitoes, conducting environmental management interventions and community interventions using the IVC.

Conclusion: This model can be applied in the coastal area having the same characteristics with the research area as of it can assist the government in the elimination of malaria .

Keywords: Integrated Vector Control, Coastal Areas

A Subnational Analysis of the Burden of Injury in Taiwan from 2008 to 2015

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Background: As a global health problem, the burden of injuries has demanded more attention. However, nuanced and comprehensive measurements of injury burden are limited.

Aim: With the advantage of big health data, we aim to estimate the fatal and nonfatal burden of injuries outcomes for Taiwanese by adopting the analytical framework of the Global Burden of Disease project.

Method: The disability-adjusted life years (DALYs) which consist of years lived with disability (YLDs) and years of life lost (YLLs) were used to quantify the burden of injuries from 2008 to 2015. YLLs are calculated by summing the number of deaths multiplied by the remaining life expectancy at the age of death for each injury outcome. YLDs are calculated by combining nature of injury (N-code) and cause-of-injury (E-code) data via linking National Health Insurance research databases with Traffic Information Service databases. For those N-codes falling to link E-code information, a redistribution process was applied according to the marginal distribution across demographic characteristics.

Results: The major burden of injuries in 2015 was road traffic with a DALY rate of 504.78 per 100,000, followed by self-harm (413.94 per 100,000) and falls (244.9 per 100,000). In 2015, people were mostly injured between the ages of 20-50, and DALY rates are much higher in men than women. Road traffic predominantly affected males aged 10-30; the fatal events in the youth and young adults lead to larger YLLs. In general, the trend of the burden of injuries remains stable from 2008 to 2015. The DALY rates of self harm in men showed the trend of a decline with a 7.54 percent decrease. For populations aged less than 25, the subnational analysis showed that the burden of road traffic and unintentional injuries seems higher in central and eastern Taiwan, while self-harm and interpersonal violence are clustering in urban areas.

Conclusion: Understanding the burden of injuries at the subnational level is important to develop localized strategies. In Taiwan, the decline in rates for almost all injuries is not prominent in the past decade. Road traffic is still the main contributors to injuries burden, although it should be effectively prevented.

Keywords: burden of disease, DALY, road injury

Dengue Hemorrhagic Fever Case Forecast In Five Districts And City In East Java (Autoregressive Integrated Moving Average with Exogenous Variable (ARIMAX) Analysis

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Background: Dengue Hemorrhagic Fever is a viral disease transmitted by mosquitoes that attacks all over the world every year. Efforts to control programs have been carried out at both the central and regional levels. However, these measures have not been able to reduce the number of DHF sufferers. It is necessary to analyze the changing environment and predict various possibilities in the future. In connection with these problems, it is necessary to conduct research on determining the forecasting model.

Aim: Analyzing DHF case forecasting in Surabaya City, Gresik Districts, Sidoarjo Districts, Lamongan Districts, and Bangkalan Districts for DHF early alert system with exogenous variables.

Method: Sources of data used are secondary data from the Health Office of Surabaya City, Sidoarjo District, Gresik District, Lamongan District, and Bangkalan District. In addition, secondary data was also obtained from the Central Statistics Agency of East Java Province in the form of population density data and climate data from the Meteorology and Geophysics Agency. Then the ARIMAX test is carried out with exogenous variables that relate to DHF cases, for example, temperature, rain rate, humidity levels, and daily sun exposure.

Results: This study is still in progress in determining the fit model of ARIMAX for the forecasting stage. Therefore, the results of this study are yet to be determined.
Conclusion: This study is still in progress in determining the fit model of ARIMAX for the forecasting stage.

Conclusion: Therefore, the conclusion of this study is yet to be determined.

The Factor of Fishermen Mobility Affecting toward Malaria Incidence in Coastal of East Lombok Regency

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Background: malaria is a vector contagious disease which its existence still becomes emerging disease and re-emerging disease. The fishermen on coastal areas become the risky population toward malaria infection, it is caused by contact between fishermen and malaria's vector occurring on coastal areas.

Aim: knowing fishermen mobility factors affecting toward malaria incidence on coastal of East Lombok Regency.

Method: this is an observational study using cross sectional design, the population is the fishermen on coastal of East Lombok Regency, the sample is fishermen with the main source of income is from fishing by 691 people, data analysis using chi square test.

Result: of 691 interviewed fishermen, there are 189 people (27,4%) have been diagnosed malaria by health inspector, fishermen who make the visit are 366 people (53,0%), there are 110 fishermen (15,9%) admit that their visit destination is sub-district areas, 138 people (20,0%) have a visit to Regencies, 101 people (14,6%) visit province areas and 20 fishermen (2,9%) said that they have a visit to out of regions. the variable of fishermen affecting toward malaria incidence on coastal of East Lombok Regency is traveling habit ($p = 0,001$), while the duration in a single visit ($p = 292$), the destination of the fishermen trip ($p = 0,692$) and the number of visit time ($p = 0,565$) are not related to malaria incidence.

Conclusion: the mobility of fishermen becomes a vector affecting toward malaria incidence on coastal of East Lombok Regency excluding from the duration of visit, destination location and the number of visit time.

Keywords: Malaria, coastal, fishermen

The qualitative study of self-concept on leprosy patients' in Sumenep, Indonesia

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Background: Leprosy does not only develop physical issues but also psychological impacts, and the most feared of this disease is stigmatization. The lack of public knowledge and the wrong beliefs to leprosy could create the unpleasant stigma of perception, manner, and behavior on leprosy patients, becoming the central issue of the public health. Thus, it may influence to self-concept of leprosy patients.

Aim: To find out the concept of self-concept on leprosy patients' in Sumenep

Method: The study design used on this study was qualitative with Phenomenology approach. This study was conducted in a working area of Batuputih Public Health Center (Puskesmas) in March 2020, the total number of 7 leprosy patients and 1 key speak person of public health worker. The collection data technique used on this study is an intensive interview.

Result: The results of the study show that the self-concepts of leprosy patients involve self-identity, self image, self-esteem, self-ideal, and self-role. Self-identity (for the common cases, the patients forget their ages, knowing that they're having the disease, and all of them work as farmers), self-image (having paraesthesia, frightened, less acceptance to the disease, having experiences the change on physical issues, and those who believe that the disease will get worse when touching and bathing over the dead person, also the feast of the ceremony), self-esteem (feeling ashamed, pulling away from society), self-ideal (the intention for immediate recovery), self-role (the role of earning living is derailed for them to quit the work, which makes the change in a society role). Commonly, the leprosy patients experienced a change on self concept to negative side, but there are still some of them who keep it positively.

Conclusion: the leprosy patients have subjectively experienced a change on self-concepts which generate various perspectives. This is caused by the internal factors (inside oneself) also the external factor (environment). Thus, it is necessary to build cooperation between professionals and several parties to handle the issue comprehensively and not only focus on physical treatment but also the psychological health to help the process of recovery.

Keywords: Self-concept, Leprosy, Psychology.

Antiretroviral Medication Adherence for People With HIV/AIDS

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Background: Human Immunodeficiency Virus (HIV) is a type of virus that infects white blood cells which causes a decrease in the human immune system. Acquired Immune Deficiency Syndrome (AIDS) is a collection of symptoms that arise due to decreased immunity caused by infection with HIV. Antiretrovirals (ARVs) are medicine inhibit the replication of Human Immunodeficiency Virus (HIV). People with HIV/AIDS require treatment with antiretroviral (ARV) to reduce the amount of the HIV virus in the body it does not enter the AIDS stage, while people with AIDS require ARV treatment to prevent opportunistic infections with various complications.

Aim: To determine antiretroviral medication adherence of ODHA, to get information about the facts can influence ODHA in using ARVs, to analyze factors that influence ODHA in using ARVs, to get information about management treatment antiretroviral of ODHA.

Method: This research uses a systematic review method. Research information was obtained by utilizing the Google Sholar facility and the index of journals that contain publications (research articles).

Result: Factors related to antiretroviral medication adherence to ODHA include by family support, level of knowledge, peer group support, side effects of medicine, motivation, behavioral skills, psychology of PLWHA patients, boredom, stigma, health care facilities, therapy guidelines, characteristics of comorbidities. , perception, gender, health insurance, self-efficacy, social isolation, age, education level, income, duration of treatment with ARV, support from health workers, spiritual motivation, and utilization of health services for the last three years.

Conclusion: Adherence and family support are important role to healing ODHA. ODHA must obedient to treatment with antiretrovirals. Family support is important role to healing ODHA. So it is suggested to the families of people living with HIV to always giving motivation. PLWHA to always comply with the advice of health workers.

Keywords: Adherence, ARV, ODHA, Systematic Review

Risk Factors for Type 2 Diabetes Mellitus in Asia: Systematic Review

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Background: Diabetes Mellitus (DM) is a major health problem worldwide. DM is a group of metabolic diseases characterized by hyperglycemia resulting from impaired insulin secretion, insulin activity, or both. Type 2 diabetes is known as non-insulin dependent diabetes which is caused by the body's inability to use insulin effectively. Various kinds of complications can arise due to type 2 diabetes that is not handled properly. Type 2 diabetes mellitus also causes a decrease in the quality of human resources, due to disturbed physical and mental health and increased health expenses for treatment.

Aim: The purpose of this study was to record and determine the risk factors for the incidence of Diabetes Mellitus type 2 in Asia.

Method: The research in this study uses a systematic review. The search strategy used to obtain research articles using the online database facility via the PubMed page. The articles that have been obtained are selected based on publications published between 2016 and 2021 (5 years).

Results: The results of this study were obtained as many as 2.187 articles about the risk factors for Diabetes Mellitus Type 2 in Asia which were then filtered and eliminated for several reasons to obtain 30 articles which were considered feasible to be studied. From the results of this study, it is known that the risk factors for type 2 diabetes mellitus in Asia are mainly due to genetic variants, environmental factors and the existence of gene-environment interactions. There are also several environmental factors as risk factors for type 2 diabetes, including lifestyle. Unhealthy lifestyle behavior can cause various metabolic disorders in the body, causing gene damage related to type 2 diabetes.

Conclusion: Overall the results of this systematic study are useful for knowing the risk factors for the incidence of DM, especially type 2 diabetes, which can be modified so that risk factor control in DM needs to be done. to slow progress and complications.

Keywords: Asia, Diabetes mellitus type 2, Risk factors.

Human Leptospirosis Outbreak: A Year After Tropical Cyclone Cempaka

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Background: Last decade, climate variability and extreme weather have shifted the geographic and temporal patterns of neglected tropical diseases such as leptospirosis. Tropical cyclones in some developing countries not only cause flooding and material damage, but also increase the risk factors for tropical disease epidemics.

Aim: To analyze the spatial-temporal pattern between rainfall, flooding and cases of human leptospirosis after the Tropical Cyclone Cempaka.

Method: This ecological study uses monthly data on rainfall and human leptospirosis cases from November 2017-2018, as well as data on flood areas during the Tropical Cyclone Cempaka in Bantul. Spatial-temporal analysis was applied using free software QGIS 3.16 and time-series graphs.

Results: The peak of rainfall in the previous 3 months during Tropical Cyclone Cempaka (lag-3) correlated with the human leptospirosis outbreak ($r=0.5297$; $p < 0.05$). The worst flooding occurred in villages with cases of human leptospirosis around the riverbanks.

Conclusion: Tropical Cyclone Cempaka has an impact on high rainfall intensity and flood coverage followed by human leptospirosis outbreak 3 months later. It is recommended for cross sectoral cooperative in conveying information on monthly rainfall prediction as an early warning for disaster-prone areas and community groups at risk.

Keywords: humas leptospirosis, tropical cyclone, rainfall, flood

Return to activities after pulmonary rehabilitation: a case report of Covid-19 survivor

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Background: In the case of Covid-19, patient often still experience sequelae and find it difficult to return to their previous activities. Pulmonary rehabilitation programs can help patients improve their functional abilities after Covid 19 infection.

Aim: To report a case of Covid-19 survivors with a pulmonary rehabilitation program.

Method: We report a case of Covid-19 survivors. Mr. S, 40 years old, consulted from pulmonary outpatient clinic with pneumonia post Covid-19. The initial symptoms of the patient were anosmia, fever, cough, shortness of breath, and fatigue. Patients were hospitalized for 2 weeks with a history of non-invasive ventilator use and convalescent plasma therapy. Currently, 3 weeks after symptoms appear, the sequelae experienced by the patient were fatigue and shortness of breath during activity. The patient has not been able to return to work, namely selling and teaching the Quran at the mosque, as well as doing his hobby, namely cycling because of this complaint. From physical examination were found forward head posture, blood pressure 130/80 mmHg, heart rate 114x/minute, respiratory rate 22x/minute with oxygen saturation 97% without oxygen support. We also found minimal ronchi at right lung. Chest expansion were 2/3/3 cm at T2/T4/T6 levels respectively, and his count test was 12. We did submaximal exercise testing to measure his VO₂max, it was 12,418 ml/kg/min, equal to 3,5 METs. We provide a rehabilitation program consisting of posture correction, range of motion exercise, breathing exercise with diaphragmatic breathing, effective coughing, chest expansion exercise, incentive spirometry, endurance exercise with walking, and conservation energy technique.

Results: After completed rehabilitation program for 2 months, there were still persistence of symptoms. He still had shortness of breath when doing heavy exercise, but he was able to ride his bicycle. He also could teach students the Quran in the mosque, but he still tire easily. His count test was improve to 20, and VO₂max was increase to 22.716 ml/kg/min equal with 6.49 METs.

Conclusion: Covid-19 survivor may have difficulty to return to previous activities due to persistence symptoms, but rehabilitation program could give benefits in increase their functional capacity.

Parents' Knowledge and Perception of HPV Immunization in Badung Regency, Bali Indonesia

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Background: HPV immunization is an effective effort to prevent cervical cancer. Since 2016, Badung Regency has implemented a free HPV immunization program targeting school children with immunization coverage during 2016- 2018 reported to reach above 90%.

Aims: This study aimed to determine the parents' knowledge and perceptions of HPV immunization in Badung Regency, Bali, Indonesia.

Method: This survey used a cross-sectional design with the population being families in Badung Regency. This survey was conducted in March – June 2019. Calculation and sample selection were carried out in a systematic random manner by following the WHO guidelines for evaluating immunization coverage. A total of 216 families met the criteria as a sample where parents as a respondent. The variables studied were family and child characteristics, history of HPV immunization, knowledge and perceptions of parents on HPV immunization. The data collected were analyzed descriptively.

Result: Most of the respondents were mothers (70.83%), had high school education (51.85%), with a median age of 43 years (IQR=8 years). Each family has an average of 2.59 living children (SD = 0.81) and the average child eligible for immunization is 1.15 (SD = 0.39). The coverage of HPV immunization by recall was 82.32% (95% CI=77.56- 87.09). The most common sources of information related to cervical cancer and HPV immunization were in sub village (37.96%) and by health workers (36.11%). Of the 15 knowledge questions, the average respondent's score was 8.92 (CI = 8.46-9.38), with the proportion of correct answers related to immunization procedures was less than 50%. Respondents' perceptions regarding HPV immunization were quite good, most of which believed in the benefits and safety of the HPV vaccine.

Conclusion: The knowledge and perception of parents regarding immunization is quite good. However, the Department of Health needs to conduct more intense socialization, especially regarding the HPV vaccination procedure so that the acceptance of parents increases to give permission to their children.

Current insight of *Mycobacterium leprae*: a literature review

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Backgroud: *Mycobacterium leprae* is the agent of leprosy affecting the skin and peripheral nerves. Leprosy bacillus still cannot cultivate in vitro and the route of transmission in man is not clear either.

Aim: Therefore this systematic review underscores the current knowledge on *M. leprae*, reservoir's and its detection. This review aims to shed light on the knowledge gained to understand its pathogen employing genomics and proteomics.

Method: Electronic bibliography databases were used to search for peer-reviewed articles published from 2000 to April 2021. There are no restrictions on the type of article or method of study, all articles discussing *M leprae* were considered.

Results: A better understanding of environmental reservoirs and also the current method for detection of *M leprae* are discussed.

Association Between Depression and Blood Pressure in Elderly Hipertensive Patients

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Background: Good control of blood pressure in hypertensive patients can reduce the mortality and prevent the cardiovascular events, especially in older adults. Depression is a common problem among older adults result in elevated blood pressure. In Covid-19 pandemic, restrictions on public activity insist the older adults to stay at home. This condition can induce depression for elderly and affected their blood pressure.

Aim: To determine the association between Depression and Blood Pressure in Elderly Hipertensive Patients

Methods: A cross sectional analytical study was conducted on June 2021 in Prof. Dr. R.D. Kandou Hospital, Manado. Total sampling was used with a total of 104 elderly outpatients participants enrolled in this study. Geriatric Depression Scale (GDS) was used to determine the degree of depression in these subjects. (Mild depression if GDS > 4). Hypertension was determined by JNC VIII criteria, using sphigmomanometer. Blood pressure was unctrolled if more than 140/90 mmHg when the participant was relax for at least 5 minutes in sitting position. We used chi-square test to detemine the association between depression and blood pressure in this study.

Results: In this study we enroll 104 elderly patients on 65 to 84 years old, and 42 of them was depression according to Geriatric Depression Scale assessment. We found that 72 of 104 participants can achieve the target of blood pressure in elderly, and most of them (50 subjects) was not depression. There was a significant association between depression and blood pressure in elderly hipertensive patients. (O.R= 3,788, CI 95% = 1,581-9,076; p=0,002)

Conclusions: Depression is associated with the poor control of blood pressure in elderly hipertensive patients.

Spirituality And Stress Reaction In Hypertension Patient

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Background: Stress is a reaction that occurs in people with hypertension. Poor stress reactions produce low self-care abilities in people with hypertension. Good stress management is needed to maintain blood pressure so that it is well controlled. Spirituality is an important component that can affect a person's quality of life and also a source of strength.

Aim: The purpose of this study was to analyze the effect of spiritual factors on stress reactions in hypertension patients.

Method: This study uses an analytic observational approach with a cross-sectional approach as a research design. The samples in this study were as many as 90 hypertension patient who were taken using simple random sampling techniques. Research variables in this study include spiritual experience, spiritual openness, spiritual support, and stress response. This study uses a questionnaire as a research instrument. Data analysis was performed by linear regression test dengan level of significance 95%.

Results: The results showed that spiritual openness (p-value = 0.028) and spiritual support (p-value = 0.021) influenced the stress reaction of hypertensive patient. Meanwhile, spiritual experience was not significant (p value = 0.079).

Conclusions: Increasing stress management capabilities by providing adequate spiritual support is a major component that can reduce stress reactions in hypertensive patients so that they can control blood pressure and prevent complications. Therefore, health workers especially nurses need to provide spiritual resources as part of the process of providing nursing care to hypertension patients.

Malaysian Stakeholders View on The Facilitators and Barriers of Colorectal Cancer Screening

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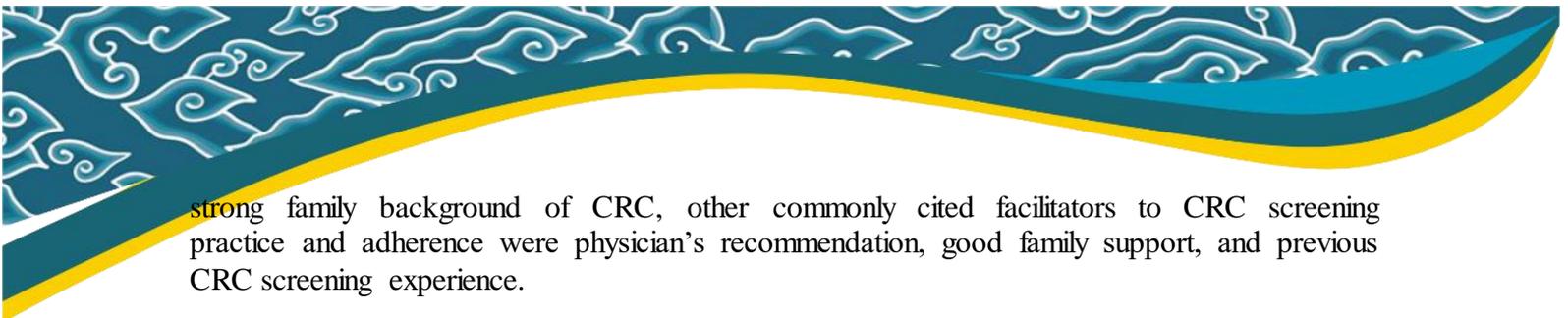
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Background: According to Malaysian National Cancer Registry (MNCR), over 70% of colorectal (CRC) cases in Malaysia present in the advanced stages of the disease (stages III and IV) leading to healthcare burden, poor survival rate, and poor quality of life among patients and caregivers as well as taxing the healthcare system and society at large.

Aim: This study aims to explore the facilitators and barriers to CRC screening behavior among Malaysians.

Method: Thus, a qualitative research approach was adopted. To obtain information from multiple viewpoints, data was sourced from in-depth interviews conducted using a semi-structured interview guide. A total of nineteen respondents comprising six general populations from various demographic and socioeconomic backgrounds, seven healthcare providers, and seven policymakers were interviewed. All interviews were transcribed verbatim and analyzed using a standard content analysis framework.

Results: From the analysis, personal deterrents such as poor knowledge and awareness, financial restraint, insurance issues, poor family support, and negative perceptions such as embarrassment, discomfort, and fear of screening procedures as well as results were identified to be some of the most significant barriers to CRC screening. Healthcare provider-related factors such as physicians support, and healthcare system-related factors such as insufficient resources, physical accessibility to healthcare facilities, lack of coordinated CRC awareness campaigns, and limited private-government collaboration are other notable barriers to low screening coverage in the community. However, the country's systematic referral and highly subsidized healthcare system was considered one of the main facilitators to CRC screening. The presence of an effective patient navigation system in public healthcare facilities promotes CRC screening uptake among the Malaysian population. Besides the



strong family background of CRC, other commonly cited facilitators to CRC screening practice and adherence were physician's recommendation, good family support, and previous CRC screening experience.

Conclusion: In conclusion, the proposed taxonomy of facilitators and barriers may serve as a useful framework for developing interventions, patient education, and counseling to enhance cancer screening behavior, especially to cater to lower socioeconomic subgroups. This may aid in raising the community with adequate health knowledge and awareness to assist in proper decision-making related to preventive health. Key word: Colorectal cancer, screening, facilitator, barrier



Analysis of the relationship between emotions with attention, memory, and speaking ability in children with autism spectrum disorders

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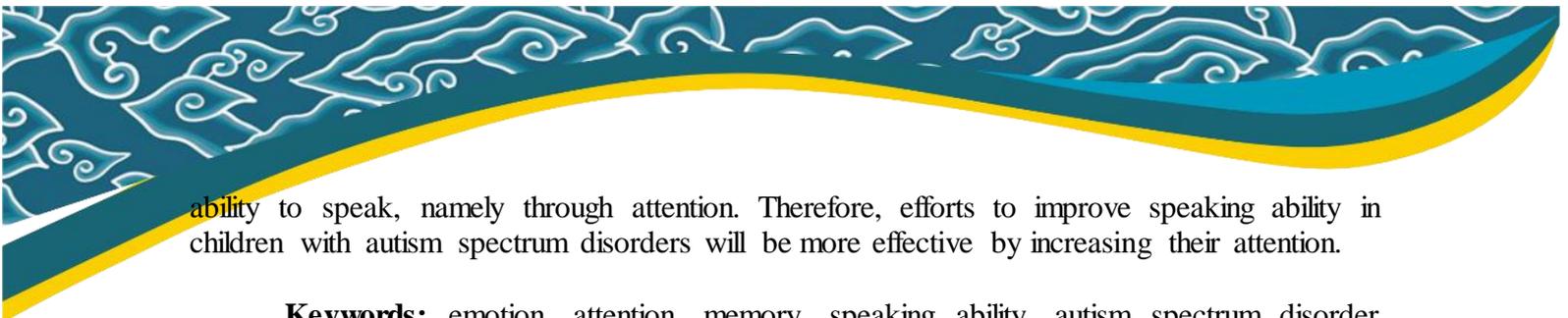
Background: Children with autism spectrum disorder (ASD) often have difficulty controlling emotions, difficulty maintaining attention, relatively poor memory, and difficulty speaking. It is well known that emotions affect memory, attention and learning. There has been no research on the relationship between emotions, attention, memory, and speaking ability in ASD children.

Aim: This study aims to examine the relationship between emotion and attention, memory, and speech in children with autism spectrum disorders.

Method: This study used an observational analytic with a cross sectional design. The sampling technique was purposive sampling. The number of samples used was 59 children with autism spectrum disorders aged 5-11 years. Emotional data were obtained using the Positive and Negative Affect Schedule for Children, Short Form/PANAS-CS), attention data were obtained using the inattention subscale from the Swanson, Nolan, and Pelham scales, version IV (SNAP-IV), memory data were obtained using the Observer Memory Questionnaire-Parent Form (OMQ-PF), and speaking ability data were obtained using the speech/language and communication subscale from the Autism Treatment Evaluation Checklist (ATEC). Furthermore, the data were analyzed using the Partial Least Square (PLS) with SmartPLS 3 software.

Results: The results showed that there was a positive effect of emotion on attention (p-value = 0,031) and memory (p-value = 0,042), there was a positive effect of attention on memory (p-value = 0,002) and speaking ability (p-value = 0,001), there was no influence between emotions on speaking ability, but through attention, and there was no effect of memory on speaking ability.

Conclusion: It was concluded that there is a direct relationship between emotion and attention, also with memory, and there is an indirect relationship between emotion and the



ability to speak, namely through attention. Therefore, efforts to improve speaking ability in children with autism spectrum disorders will be more effective by increasing their attention.

Keywords: emotion, attention, memory, speaking ability, autism spectrum disorder



Blood Pressure, Glucose levels and Mortality of Patients with Acute Coronary Syndrome

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Background: Acute Coronary Syndrome (ACS) is a major cardiovascular emergency that causes high mortality rates both in the world and in Indonesia. It is very important to detect risk factor in preventing death.

Aim: This study aimed to determine the relationship between blood pressure and glucose levels on the incidence of death in ACS patients

Method: The design of this study was an observational analytic study with a cross-sectional approach which was carried out by collecting medical record data for the 2020 Dr. Iskak Hospital. The sample size was 110 samples selected by simple random sampling. Data analysis used the Spearman Rank Correlation (Rho) test with a significance of $\alpha = 0.05$

Results: The results showed that 67 respondents (60.9%) had hypertension, 63 respondents (57.3%) had high glucose levels and 78 respondents (70.9%) experienced death. The results of statistical tests blood pressure with death obtained a p value = 0.000 and glucose levels with death also obtained a p value = 0,000.

Conclusion: Thus, there is a correlation between blood pressure and glucose levels with the incidence of death in ACS patients. This study recommended that individual health workers properly closely monitor blood pressure and glucose levels to reduce the incidence of mortality in ACS patients.

Dietary Pattern and Renal Impairment of Indonesian Adult with Diabetes Mellitus

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Background: Previous studies have shown that diabetics are more susceptible to experience kidney performance alteration. Dietary pattern is one of contributing factors in the decrement of glomerular filtration rate among diabetes patients.

Aim: This study was aimed to assess the relationship between dietary pattern and renal impairment among adults with diabetes mellitus.

Method: The study applied a cross-sectional study design with secondary data analysis using The Indonesian Basic Health Survey 2018 data. This study included 833 from 47,683 total subjects who met the inclusion criteria such as aged 20-59 years old and had been diagnosed with diabetes mellitus by medical doctors. Subjects with incomplete data in the eating pattern or creatinine serum were excluded from the study. The dietary pattern of several food types was measured using Food Frequency Questionnaires. Estimated Glomerular Filtration Ratio (eGFR) was calculated by Cockcroft and Gault Formula from creatinine serum data. The subjects were categorized to have renal impairment if eGFR < 90. The data were analyzed with logistic regression using SPSS ver 21.

Results: Almost half of the respondents were detected to have low eGFR (49,1%). The proportion of renal impairment was higher in men than women (53% vs 46.9%). The frequent consumption of fatty food ($P=0.046$; OR = 1.91; CI = 1.01 – 3.64) and preservative meat ($P=0.02$; OR = 1.77; CI = 1.22 – 2.56) increased the opportunity to have renal impairment among diabetics adult. Meanwhile, the consumption of sugary food and drink, salty food, seasoning, soft drink, and energy drink did not show a significant relationship to kidney function decline ($P>0.05$).

Conclusion: Frequent consumption of certain food types increases the likelihood to have renal impairment among diabetics. Therefore, dietary management is needed to prevent kidney dysfunction.

Keywords: dietary pattern, renal function, renal impairment, diabetes, health risk

Spatial Clustering of Dengue Hemorrhagic Fever Cases: A Case Study in Samarinda City

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Background: Dengue Hemorrhagic Fever (DHF) is an old disease that is still a problem in several countries, especially in the tropics. Some areas in Indonesia are still endemic for dengue. Samarinda is one of the cities that a high number of dengue cases in recent years. It takes a mapping of the distribution of DHF cases to determine the cluster of DHF cases so that the DHF control program can be more effective.

Aim: This study aims to find out the existence of clusters of dengue cases. This study also aims to determine the relationship between DHF cases in a cluster of DHF cases or termed spatial autocorrelation. This study aims to map clusters of DHF cases based on land use data. Method: This research was conducted in Samarinda City. Sampling locations are Makroman, Sungai Siring, and Lempake. Data on DHF cases were collected from surveillance data from the public health center. Data analysis to determine the location of the cluster of dengue cases using ArcGIS Online. Spatial autocorrelation analysis using Moran's I. In mapping the cluster of dengue cases based on land use data, the overlay method is used.

Results: Based on spatial analysis, there are several clusters of DHF distribution in Samarinda City. Z-score value $> Z / 2$ indicates that there is spatial autocorrelation in the cluster of DHF cases. This means that DHF cases are interconnected with others in the DHF case cluster in Samarinda City. The overlay of the DHF case map with land use data shows that the DHF cluster is located in a densely populated residential area.

Conclusion: There are several clusters of dengue cases in the city of Samarinda in dense residential areas. DHF cases interconnected with others in a cluster of DHF cases in Samarinda City.

Ecological Analysis of Children Tuberculosis (TB) in Indonesia

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Background: Tuberculosis (TB) in children is one of the causes of child mortality. Children and toddlers are very susceptible to exposure to tuberculosis germs, especially if there is a family that is confirmed to have Tuberculosis (TB) bacteriological notification.

Aim: The purpose of this study was to analyze the poverty rate, active integrated services post (Posyandu), and BCG Immunization related to Child TB Cases in Indonesia.

Method: The study design that was used is an ecological study approach (aggregate study) sourced from the 2019 Indonesian Health Profile data. Bivariate analysis was conducted using a scatter plot and Pearson correlation test.

Result: The results showed that the disparity in the percentage of Tuberculosis (TB) incidence in children was very high at 136.3% in West Java and the lowest in Aceh province at 9.6%. The results of the scatter plot and bivariate test showed that the greater the number of poverty rates, there is a tendency for the incidence of TB in children to be high, the more integrated services post (Posyandu) active in an area, the higher the TB incidence in children, and the more children being immunized with BCG, the cases of Tuberculosis (TB) in children are also increasing. It was concluded that the poverty rate and active integrated services post (Posyandu) had a positive relationship, while BCG immunization had a negative relationship with the incidence of Tuberculosis (TB) in children.

Conclusion: It is recommended that the government develop special policies on target areas with the highest poverty rates and increase the activity of integrated services post (Posyandu) in areas where the achievement of child Tuberculosis (TB) is still low, as well as increasing BCG immunization in areas with the most Tuberculosis (TB) cases in children to break the chain of transmission in the future.

Keywords: Tuberculosis (TB) children, integrated services post (Posyandu), BCG Immunization

Community knowledge relationship with environmental of Dengue Hemorrhagic Fever in the Region Working Of Bebesen Puskesmas, Kecamatan Bebesen Central Aceh District

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Background: Dengue Fever (DB) or Dengue Hemorrhagic Fever (DHF) is an acute febrile disease found in tropical areas with a geographic spread similar to malaria. Dengue fever is spread to humans by the *Aedes aegypti* mosquito. More than 100 tropical and subtropical countries have experienced dengue eruptions and dengue hemorrhagic fever, approximately 50,000 cases each year are hospitalized with thousands of people dying. The *Aedes aegypti* mosquito, which is a vector that plays a role in the transmission of DHF, lives indoors, in closets, dark places, and outdoors (Hasyimi, et.al, 2014).

Aims: The purpose of this study was to determine the relationship between public knowledge and prevention of dengue fever in the working area of Bebesen Public Health Center, Bebesen District, Central Aceh Regency.

Method: The research method used a cross sectional approach, with a sample size of 90 households in the working area of Bebesen Health Center, Bebesen District, Central Aceh Regency. Data analysis used the chi-square test.

Results: The results showed that there was a significant relationship between public knowledge on the prevention of dengue hemorrhagic fever, the value of $p = 0.000$ ($p < 0.05$) was obtained.

Conclusion: Health workers provide information and counseling to the public regarding the prevention of dengue so that cases of dengue fever can be obeyed and the community also keeps the home environment clean and carries out the PSN DBD movement. Where there is a significant relationship between public knowledge and prevention of DHF.

Keywords: DHF Prevention, Community Knowledge

Improved Public-Based Nutrition Surveillance System in Karangasem District in 2021

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Background: From 2016 to 2020 the number of cases of malnutrition in Karangasem Regency continued to decline. In 2016 the number of cases of malnutrition as many as 30 cases decreased to 17 cases in 2017, in 2018 there were 18 cases and increased to 29 cases in 2019 and in 2020 decreased to 24 cases.

Aim: To find out how the implementation of the malnutrition surveillance system in Karangasem Regency, it is necessary to evaluate the malnutrition surveillance system.

Method: Descriptive research method. Sampling used a total sample of 13 respondents consisting of 12 medical center and the health office (12 respondents from nutrition officers at medical center and 1 respondent from nutrition at the health office). Assessment on the quality of surveillance to detect malnutrition quickly. The main assessment is Completeness (completeness).

Results: The reporting system still uses manual reports with LB3 sheets and is sent in hard copy so that the majority (80%) of reports are not on time. Each report sent will be rechecked regarding data from the health office, so that all (100%) reports are complete.

Conclusion: The malnutrition surveillance system in Karangasem Regency is not timely because it still uses manual reports but the reports are complete. In this case, the participation of all parties is needed in monitoring and reporting cases of malnutrition so as to improve a surveillance system.

Keywords: surveillance system, malnutrition, participation

Sociodemographic, Behavioral, and Environmental Factors associated with the Incidence of Leptospirosis in Highlands of Ponorogo Regency, Province of East Java

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Background: Leptospirosis is a zoonotic disease that globally spread and potential to become outbreaks. In Indonesia, the incidence of leptospirosis tends to increase with case fatality rate ranged from 5-12%. Ponorogo is one regency in Province of East Java, Indonesia that has high incidence of leptospirosis. Most cases (80%) occurred in highlands. Several factors that are thought to be associated with leptospirosis are age, gender occupation, environmental factors, and behavior.

Aim: This study aimed to identify sociodemographic, behavioral, and environmental factors associated with incidence of leptospirosis in highlands of Ponorogo regency, Province of East Java.

Method: The study used case control design conducted in 15 villages in highlands of Ponorogo regency. The sample was consisted of 28 cases of leptospirosis and 112 nonleptospirosis (ratio 1:4). Variables of this study were demographic characteristics, behavioral factors, and environmental factors. Data was collected by interview using questionnaire and observation of environmental conditions. Data was analyzed using chi square and logistic regression.

Results: The result showed that sociodemographic characteristics associated with the incidence of leptospirosis were education ($p=0.019$) and occupation ($p=0.003$), behavioral factor associated with the incidence of leptospirosis was practice ($p=0.007$), and environmental factors associated with leptospirosis were house density ($p=0.013$), livestock ownership ($p=0.004$), distance from house to cowshed ($p=0.024$), having cows ($p=0.010$), and the presence of rats in the house ($p=0.050$). The result of logistic regression analysis showed that variables dominantly associated with the incidence of leptospirosis were education (low), house density (crowded), livestock ownership, and distance from house to cowshed (less than 10 meters).

Conclusion: Sociodemographic (education and occupation), behavioral (practice), and environmental (house density, livestock ownership, distance from house to cowshed) factors were associated with the incidence of leptospirosis in highlands of Ponorogo Regency, Province of East Java.

Keywords: leptospirosis, sociodemographic, behavioral, environmental factors, highlands

Restaurant Customers' Perception and Contribution to The Implementation of Regional Smoke Free by Law in Bali Indonesia

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Background: Smoking in restaurant has become a public health issue as 85.4% adults are exposed to tobacco smoke in restaurants. Bali Province through Smoke-Free by Law (SFL) No. 10 in 2011 has regulates smoke-free at restaurant, however the compliance rate at restaurants remains low and no significant improvement from years, both in Denpasar as capital city and Badung as tourism center in Bali. One potential strategy to escalate SFL compliance is through active participation from community, the restaurants' customers.

Aim: This study aimed to assess restaurant customers' perceptions toward SFL compliance, their attitudes and willingness to participate in the implementation of SFL at restaurants.

Method: This was a cross-sectional study conducted in Denpasar City and Badung District, Bali in November 2019 to January 2020. A 400 restaurant customers' was selected using quota sampling from 100 randomly selected restaurants in Denpasar and Badung. Data of SFL compliance at restaurants, customers' knowledge to SFL, perceptions, attitudes and willingness to contribute were collected via interview using structured questionnaire and were analysed descriptively.

Results: Result showed that based on customers' evaluation, SFL compliance at restaurant was low. 69.0% customers have heard about SFL, but only 30.8% knew that it should be implemented at restaurants and only 45.3% aware of sanction for any violations. Despite of that, most of them were agree that at restaurants smoking cigarette should be prohibited (77.8%) including e-cigarette (79.8%), 64.8% were agree tobacco ads should be banned and 75.5% were agree cigarettes sales to be banned. Unfortunately, there were misunderstanding regarding smoke-free area among customers, where 86.8% and 64.3% were agree to the provision of designated smoking room and ashtrays at restaurant respectively. More than half were willing to actively participate to support SFL at restaurants by informing the SFL to manager/owner of restaurants (60.8%), informing violations (58.8%) to manager/owner of restaurants, and report violation to the authority (33.3%) via the reporting system favourably hotline (32.0%), instant messaging-apps (26.0%) and mobile app-based (15.0%).

Conclusion: It's potential to improve and create comprehensive implementation of SFL at restaurant according to customer's supports. Government should strengthen enforcement of SFL at restaurants and establish reporting systems for public use.

Keywords: smoke-free law, restaurant, customer perception, participation

Perceived Loneliness, Peer and Parental Relationship with Smoking: A Cross-sectional Analysis of Adolescents across South-East Asia

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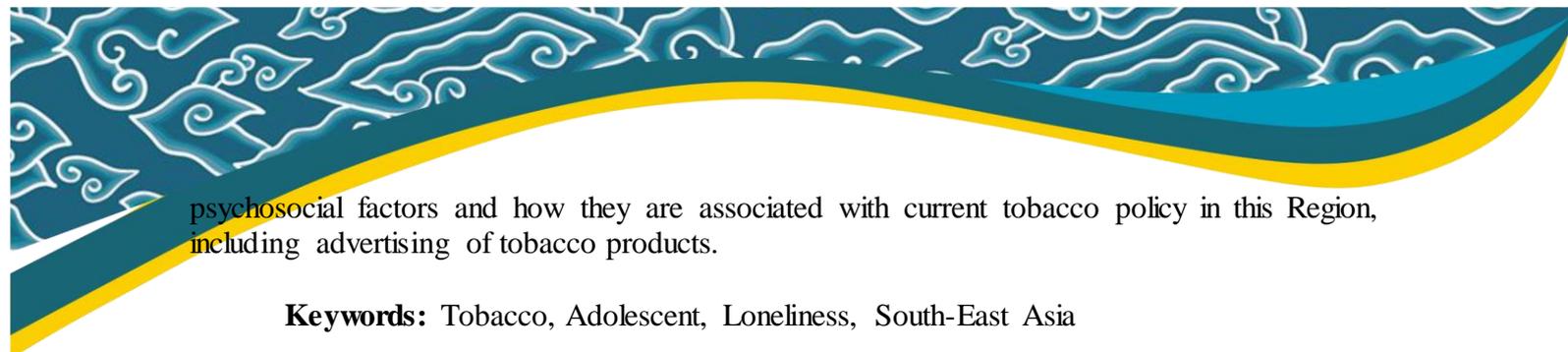
Background: Tobacco use is a leading cause of preventable death in the South-East Asian Region. Global estimates indicate 98% of smokers start in adolescence. Targeting factors associated with smoking among adolescent populations could help lower the prevalence of tobacco use in the Region.

Aims: This study aims to understand if perceived loneliness and relationships with friends and parents were associated with smoking among adolescents in South-East Asia. It was predicted that loneliness or relationship factors would be associated with smoking.

Method: Data came from the Global School-based Student Health Survey (survey year range: 2012-2015). The countries included were Brunei, Indonesia, Laos, Malaysia, Philippines, Thailand, Timor-Leste and Vietnam. A total of 64,578 (Males= 48.5%) adolescents completed the survey, aged between 13-18. Participants self-reported cigarette use in the last 30-days. They also self-reported feelings of loneliness, number of close friends and perception of parents understanding their worries. Multiple logistic regression was used to examine the associations between loneliness, number of close friends, parental understanding, and smoking.

Results: Prevalence of any cigarette use in the past 30 days was 10.6%. Only 1.4% reported daily use, indicating most self-reported smoking adolescents were intermittent smokers. Self-reported feelings of loneliness were associated with smoking status (OR=1.62 [1.62-1.63], $p<.001$). Smoking status was also associated with the lack of close friends (OR=1.14 [1.13-1.15], $p<.001$), and parental understanding (OR=1.17 [1.17-1.17], $p<.001$). The model including interaction terms showed a greater association for males compared to females for loneliness (OR=1.21, $p<.001$ [1.20-1.22]). Females however showed greater association to number of close friends (OR=2.60, $p<.001$ [2.57-2.63]) and parental engagement (OR=2.10, $p<.001$ [2.08-2.12]).

Conclusion: Adolescent smoking behaviour was associated with perceived loneliness and relationships with peers and parents. This information shows that psychosocial factors can be associated with smoking behaviour for adolescents in South-East Asia. This research could be an indicator that adolescents are more likely to take up smoking if they are perceiving feelings of loneliness. This suggests a need for research on measures for



psychosocial factors and how they are associated with current tobacco policy in this Region, including advertising of tobacco products.

Keywords: Tobacco, Adolescent, Loneliness, South-East Asia

Prevalence of *Leptospira* sp. in Rats and Chickens from Dense Settlements in South Denpasar, Indonesia

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Background: Leptospirosis is a zoonosis disease that can be transmitted directly or indirectly from animal infected by *Leptospira* to human. Rats are known as the main reservoir of *Leptospira*, while chickens, which are commonly bred by Indonesian households, has also been reported as carrier of *Leptospira* elsewhere. Studies on leptospirosis are lacking in Bali, particularly dense area in Denpasar city with potential risk factors in terms of the environmental sanitation condition.

Aim: This study aims to identify the occurrence of *Leptospira* sp. in rats (*Rattus norvegicus*, *R. tanezumi* and *R. tiomanicus*) and chicken (*Gallus gallus domesticus*) living in urban dense settlements in South Denpasar, Indonesia.

Method: In April 2021, 20 rats and 30 chickens were captured from houses and the surroundings in four different settlements. The blood serum from samples were tested for *Leptospira* antibodies by Microscopic Agglutination Test (MAT) which conducted at B2P2VRP Salatiga, Indonesia, using 15 serovars of *Leptospira* namely Bangkinang, Grippotyphosa, Icterohaemorrhagiae, Canicola, Pyrogenes, Hardjo, Hebdomadis, Pomona, Djasiman, Robinsoni, Bataviae, Mini, Sarmin, Manhao, and Rama.

Results: The sera with agglutination were obtained from two *R. norvegicus* (10%) of 20 rats and two (6.7%) of 30 chickens. The serogroups found in rats were Bataviae, Djasiman, and Icterohaemorrhagiae with titers 1:80, 1:80 and 1:160 respectively. The serogroups found in chicken were Icterohaemorrhagiae (titer 1:40) and Robinsoni (titer 1:20).

Conclusion: The study findings show that *R. norvegicus* is a rodent reservoir in the study site, while chicken potentially exposed to *Leptospira* sp. from their living environment in urban settlements. This indicate that there is a risk of Leptospirosis in the study site and thus preventive measure and surveillance need to be continuously taken. Further research need to identify the *Leptospira* sp. in reservoir animals using larger sample size and examine the prevalence of Leptospirosis in human in Denpasar.

Keywords: *Leptospira*, chickens, rats, urban, dense settlements

Analysis of Personal Hygiene with Signs and Symptoms of Urinary Tract Infection in

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Background: Signs and symptoms that occur in urinary tract infections are pain, altered urine elimination and gastrointestinal symptoms.

Aim: The purpose of this study was to analyze the effect of personal hygiene with signs and symptoms of urinary tract infections in young girls at SHS 2 Karang, Trenggalek Regency.

Method: This study used a cross sectional design. The population was 164 female students at SHS 2 Karang. The sample was 116 students using the stratified random sampling technique. The independent variable is personal hygiene behavior, while the dependent variable is signs and symptoms of UTI. The results used logistic regression test.

Results: The results obtained by most of the respondents had sufficient personal hygiene for 77 female students (66.4%). Almost half of the respondents had never experienced UTI signs and symptoms in 83 female students (71.6%). There is a relationship between personal hygiene and signs and symptoms of urinary tract infections at SHS 2 Karang (p value 0.000 <0.05). If personal hygiene gets better, the signs and symptoms of UTI will be less.

Conclusion: Young women or female students as the nation's future golden generation should be more concerned with personal hygiene so that the rate of urinary tract infections can be reduced.

Keywords: Personal Hygiene, Signs and Symptoms of UTI, Young Women

Central Obesity as a Risk Factor for Diabetes Mellitus

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Background: Diabetes Mellitus (DM) is a non-communicable disease characterized by high blood glucose due to impaired carbohydrate, lipid, and protein metabolism as a result of insulin function insufficiency. Indonesia is the only country in Southeast Asia which is ranked seventh among the 10 countries with the highest number of sufferers, which is 10.7 million people. The prevalence of DM in Blitar Regency is 2.6%, ranking 23 out of 38 regencies/cities in East Java, so it is estimated that there are 4,718 people who are not diagnosed and do not know they have diabetes.

Aim: This research aims to analyze central obesity in influencing the Diabetes Mellitus in Blitar Regency.

Method: This research use analytic observational with a case control approach with a sampel of 200 control groups and 200 case groups by using the Accidental Sampling technique. Analysis used was Cochran-Mantel-Haenszel (CMH) test by calculating the Odds Ratio value to state the magnitude of the risk of getting the disease.

Results: The results showed as many as 28% of respondents had DM with central obesity and as much as 22% of respondents had DM without central obesity. The results from the analysis showed there was someone who is centrally obese will be at risk of developing DM by 2,466 times greater than those who do not have central obesity. The value of Asymptotic Significance (2-sided) shows a significant result, which means that it can represent the entire population. The values of the Lower Bound and Upper Bound Common Odds Ratio indicate that at least respondents with central obesity are at least 1.647 more to suffer from DM and at most 3.693 are more at risk.

Conclusion: The results of this study were an influence between central obesity with the Diabetes Mellitus.

Keywords: Diabetes Mellitus, DM, Cental Obesity, Risk Factor

Literature Review: Family Caring Method to Preventing Decubitus in Stroke Patient

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Background: Stroke is a medical emergency condition that often causes death and disability recorded worldwide. About 5.5 million people died and 44 million people living with the residual effects of stroke. Stroke results weakness of the extremities and impact from prolonged bed rest that gives one of the complications called decubitus. Decubitus as result of prolonged pressure on the Protruding bone surface area, so that depressed area and over time the local tissue is ischemic, hipox and developes into necrosis. Cause of the patients' inability to take care of their own bodies, therefore family caring is important roles in decubitus treatment in stroke patients.

Aim: To collect and analyze the results of research relate the treatment management with family caring methods to prevention decubitus in stroke patients

Method: this study used a research article from 2015-2021 with a data based of pubmed, google scholar, sciencedirect, and research gates and using certain keywords. The keywords for this review included decubitus, pressure ulcers, pressure injuri, stroke, family caring.

Results: The author filtered 315 literature study from four databases (pubmed, google scoolar, sciendirect dan research gate) for review. That as many 15 articles that considered relevant and 8 articles were included of treatment management with family caring to preventing decubitus for patient stroke. Based on the analysis of 8 articles, it can be seen that the family caring method can reduce the risk of decubitus in stroke patients.

Conclusion: The Family caring method can prevent the risk of decubitus in stroke patients.

Analysis of Diabetes Mellitus Determinants in Blitar

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Background: Globally, non-communicable diseases cause the highest number of deaths whose numbers continue to increase. Diabetes Mellitus is one of non-communicable disease with a high prevalence.

Aim: The aim of this study was to determine the risk factors that affect Diabetes Mellitus.

Methods: This study used case control design that using secondary data from the results of the examination at the PTM Posbindu in Kab. Blitar. The number of cases were 172 and controls were 344. Controls were selected by purposive sampling technique. Data were analyzed univariately and multivariately with Multiple Logistics Regression Test.

Results: This research showed that the risk factors for Diabetes Mellitus were age 45 years (OR=2.895; 95%CI= 1.662-5.044), family history of diabetes mellitus (OR=13,416; 95%CI= 7.515-23,948), unbalanced diet (OR=2,957; 95%CI= 1.709-5.118), abdominal obesity (OR=2.555; 95%CI= 1.265-5.158), and hypertension (OR=9.62; 95%CI= 5.448-16.988). Gender, smoking behavior, lack of physical activity, and body mass index were not risk factors for Diabetes Mellitus.

Conclusion: Age, family history, unbalanced diet, abdominal obesity, and hypertension are risk factors for Diabetes Mellitus.

Effect of Human Characteristics on Motorist Accidents

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Background: Traffic accidents in Indonesia from 2018-2019 increased by 4.87%. Accident cases in 2018 amounted to 109,215 while in 2019 there were 116,411 cases. West Java Province is one of the provinces that experienced an increase in accident cases from 2018-2019. Accident cases in 2018 amounted to 7,602 cases while in 2019 there were 7,685 cases. According to the report of Indramayu Police Satlantas, in 2019 there were 645 traffic accidents, with 267 deaths. Of the 645 known accident cases as many as 548 cases of accidents experienced by motorcycle accidents. The causative factors of traffic accidents in Indonesia include human factors 93.52%, factors from the vehicle aspect of 2.76%, road factors as much as 3.23% and environmental factors as much as 0.49%.

Aim: Research objective to determine the influence of human characteristics on traffic accidents in motorcyclists.

Method: The method in this study uses analytical research design with cross sectional approach. Dependent variables in this study were traffic accidents and independent variables were age, gender, education, driver's license and driving behavior. Sampling techniques using snowball with a population of 644 from the number of accident cases in 2019 and samples in this study as many as 93 motorcyclists in Indramayu District. Test the influence between free variables and bound variables with Chi-Square Test and Dual Logistics Regression.

Results: The results of this study showed that there is no effect between age, gender, education, ownership of driver's license with traffic accidents. There is an effect between driving behavior and traffic accidents. Of the five factors that have an effect on traffic accidents is driving behavior with a value of $\text{Exp}(B) = 4,221$, motorists who have poor driving behavior have a 4.22 times chance of a traffic accident.

Conclusion: Conclusion in this study there is an influence of driving behavior on the incidence of traffic accidents in motorcyclists. Kata

Keywords: Traffic accident, Driving behavior, age, gender, education, driver's license

First Aid Training Hospital Pre Handling in Victims of Traffic Accidents on Knowledge, Attitude and Skills of High School Students in SMA Negeri 1 Wates Kediri District

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Background: One effort to reduce the number of traffic accidents is to provide counseling about First Aid Training in handling pre-hospital treatment of traffic accidents by high school students.

Aim: The purpose of the study was to improve (knowledge, attitudes and skills) of high school students in handling traffic accidents in SMA Negeri 1 Wates, Kediri Regency. The design used in research is quantitative.

Method: The population of all students in SMA Negeri 1 Wates, Kediri Regency is 105 people. The sample size is 67 respondents, using simple random sampling technique. Independent variables are knowledge, attitudes and skills of students. The dependent variable is first aid training in handling pre-hospital.

Results: Statistical test results found that the knowledge variable p value $0,000 < \alpha = 0.05$, meaning that knowledge affects the handling of accident victims, attitude p value $0,000 < \alpha = 0.05$, meaning that attitude influences the handling of accident victims, Skill variable p value $0,000 < \alpha = 0.05$, meaning that the skill has an influence on the handling of accident victims.

Conclusion: Knowledge, attitudes and skills of students influence the handling of pre-hospital for traffic accident victims in Kediri Regency.

Keywords: Knowledge, Attitude, Skill, First Aid Training

Effect of extract ciplukan (*Physalis angulata*) on proinflammatory cytokine TNF- α and levels of leukocytes in Wistar strain male rats with Rheumatoid Arthritis

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Background: Rheumatoid arthritis is an autoimmune disease resulting in inflammation of the joints in a long time. Inflammatory condition of rheumatoid arthritis on several proinflammatory cytokines will increase one of which is TNF- α which is the key of inflammation in rheumatoid arthritis. In addition to inflammatory cytokines, leukocyte levels is one of the immun system may also have increased. Some ways you can do to reduce the inflammatory response, such as the provision of antiinflammatory drugs Inventory was either in the form of the active substance or in form of a plant. Ciplukan leaf extract, is one way that can be done to reduce inflammation respon because the content of the form 24-Cyclosteroid Physalin B, Epoxyphysalin B, With a physalin A, B With a physalin, Physalin D, Physalin L, H and With angulatin Physalin influential as an anti-inflammatory and specifically to reduce levels of cytokines TNF- α and can normalize the levels of leukocytes.

Aim: This study aims to prove the effect of leaf extract ciplukan to the decrease of proinflammatory cytokines TNF- α and leukocyte levels in Wistar strain male white rats with Rheumatoid Arthritis, in the Laboratory of Pharmacology and Physiology Universitas Brawijaya Malang.

Method: This study uses the design of True Experimental Design, with a population sample of 20 mice were divided into 5 groups and using total sampling technique. Data collection using the ELISA method to measure the levels of TNF α and micros methods to measure levels of leukocytes in the serum. Further data analysis Parametric test One-Way ANOVA. The analysis with the use of parametric tests One-way ANOVA, the α 0,05; on TNF α levels obtained p-value = 0.002 whereas the levels of p-value = 0.000 for leukocyte levels.

Results: From the results of the study concluded, the most effective dose to reduce levels of cytokines TNF- α and leukocyte levels of the dose of 1000 mg / kg / day, due to dosing, the levels of cytokines TNF- α and leukocytes of all samples, 100% decrease.

Conclusion: Active substances in extracts of leaf ciplukan poliphenol Physalin which is able to act to protect body cells from free radical damage by binding to free radicals, preventing inflammation and inflammation in the body's cells.

Keywords: TNF- α , leukocytes, Ciplukan leaf extract, Rheumatoid Arthritis

The Effect of Warning on Cigarette Packs on The Smoking Interest of Adolescents

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Background: Smoking is a habit of a person's life behavior that can interfere with health for himself and for those around him. Smoking is a smoking behavior that is in demand by both men and women. Even though most people already know the dangers of smoking, in fact smoking has become a culture.

Aim: The purpose of this study is to analyze the effect of warning on cigarette packs on adolescent smoking interest at MTs Al-Hasan Ma`Arif Kraton Mojo Kediri.

Method: The design of this research is quantitative research with a cross sectional approach with the focus of the research being directed at analyzing The effect of warnings on cigarette packs on adolescent smoking interest at MTs Al-Hasan Ma`Arif Kraton Mojo Kediri with a population of 95 respondents and a sample of 77 respondents taken with the Simple Random Sampling technique..

Results: The findings show that halmost half of the respondents were afraid to see the warning picture of oral cancer as many as 32 respondents (41.6%). Most of the respondents have an interest in consuming cigarettes as many as 46 respondents (59.7%).The results of the study using Dummy Regression showed that the p-value was $0.000 < 0.05$, then H_0 was accepted and H_1 was rejected, so it was concluded that there was an effect of warning on cigarette packs on adolescent smoking interest at MTs Al-Hasan Ma`Arif Kraton Mojo Kediri.

Conclusion: It is expected as a human being to maintain mutual comfort and safety together. Where as an active smoker so as not to smoke close to small children and other people who don't smoke

Keywords: Cigarette Packs, Interests & Youth

Indonesian Health in Crisis: Association between Cognitive Function and Depression based on Indonesian Family Life Survey

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Background: Depression is defined as the loss of joy because of traumatic and stressful life experience. Impaired cognitive function is frequently studied to be related with depression. The occurrence of depression affects every aspect of life and hamper the productivity.

Aim: This study examined the cognitive function in relation with depression among productive age group in Indonesia.

Method: We used data of longitudinal survey of socioeconomic and health based on fifth wave of Indonesian Family Life Survey (IFLS) from October 2014-April 2015. Household member with age of 15- 64 years old were included in our analysis. Depression was examined using Short Center for Epidemiologic Studies Depression Scale (CESD), cognitive function was measured using Telephone Interview for Cognitive Status (TICS). Simple linear regression analysis was performed to examine the association between cognitive function and depression.

Results: 20257 household members were included. Most respondents were at productive age group (15-49 years) (82.51%), male (56.5%), and at primary school education (51.87%). More than half respondents had good cognitive function (59.6%) and no depression state (82.4%). A simple linear regression analysis showed that a household member with good cognitive function had significant 0.78 (95% CI 0.54 – 0.85) lower risk of being depressed in comparison with a household member with poor cognitive function.

Conclusion: This study found significant association between cognitive function and depression among the productive age group. Further research to explore other variables related to depression other than cognitive function is recommended. Health care providers are suggested to provide education, counselling, and training session related to healthy lifestyle and positive mindset to prevent depression.

Keywords: Cognitive function, depression, productive age, health risk, productivity, mental health

Malaria Prevention Strategy for the Indonesia Army Assigned in Malaria-Endemic Region within Ri-Papua New Guinea (PNG) Regional Border

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Background: Indonesian Army sends Indonesia-PNG Border Security Task Force to the operation area of Papua which known as Malaria endemic area. The assignment during 10 months in the endemic area allows the soldiers to be exposed to malaria infection. In January 2007 there were 216 soldiers became malaria victims. In addition the Army Directorate for Health in 2008 found that malaria is the sixth highest disease suffered by soldiers, with the number of patients amounted to 35,216 people.

Aim: The aim research is to find out the strategy and implementation of malaria prevention conducted by Indonesian Army in pre deployment at home base and deployment at operations area.

Method: This study used qualitative methods with in-depth interviews and direct observation in operation area. This research focused on the promotive, preventive, and prophylactic antimalarial for the malaria preventive implementation

Results: Indonesian Army strategy to prevent malaria by implementing the vector transmission mapping in case of Anopheles sp widespread nearby environmental security posts. The environmental management obstacle was due to the local culture/custom clash (Hak Ulayat). The research found the gaps in the implementation of malaria prevention on border security task force infantry battalion 323/Raider i.e. the absence of promotion media for malaria prevention, the lack of insecticide support for daily clothes, personnel did not use Long Lasting Insecticide Nets (LLINs) and repellent, Indoor Residual Spray (IRS) were less effective, and did not meet the environmental management.

Conclusion: There are some gaps between guidelines and implementation of malaria prevention at home base and in the operation area. The center of health TNI policy through the Field Manual of Malaria Control was not distributed to Task Force personnel. The Discipline of personnel for the prevention of malaria such as the use of mosquito nets and anti-mosquito lotion was still far from the goal. In addition, the main gap encountered in the operating area was the difficult management of the environment due to conflict with the local custom (Hak Ulayat). Besides personnel also did not receive anti-malarial prophylaxis during pretest or surgery. Eventually, it is necessary to have self-discipline for all of personnel and the partnership with various parties to actualize environment management which is aimed to reduce the malaria risk in operation area of the border security task force. There should be a doctrine of the implementation of malaria prevention given at the time of the commander. There also need the support of anti-mosquito for clothes and mosquito net permethrin

Keywords: endemic malaria, border security task force, malaria prevention strategy

Increasing The Knowledge About Tuberculosis Disease in Families Who Have People With HIV/AIDS in Kupang City, East Nusa Tenggara, Indonesia

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Background: Tuberculosis (TB) is an infectious disease and a major cause of health problems. Tuberculosis is one of the top 10 causes of death in the world. TB is a leading cause of death for people living with HIV/AIDS (PLWHA) and a major contributor to antimicrobial resistance. Families of people with HIV/AIDS have a big role in preventing TB.

Aim: The purpose of this study was to see the difference in knowledge of the families of PLWHA before and after the intervention about TB disease

Method: This study used a quasi-experimental study design with pre and post-test methods conducted in Kupang City, East Nusa Tenggara, in June-July 2021. The sample of this study was 50 families who have families with HIV/AIDS and taken by purposive sampling. Data were analyzed using dependent t-tests.

Results: The results showed an increase in the pre-test and post-test scores with an average pre-test of 18.18 and a post-test of 21.68. The statistical results showed that there were significant changes before and after the intervention ($p < 0.001$).

Conclusion: There are differences in respondents' knowledge about TB disease before and after being given intervention. The government needs to encourage families to understand about TB disease so that it could prevent the emergence of TB disease in PLWHA.

Keywords: Tuberculosis, HIV/AIDS, PLWHA, Knowledge

The Impact of Changes in Oral Functioning, Social Support and Spiritual Aspect on The Psychosocial Well-Being Among Oral Cancer Patients in Malaysia: Secondary Data Analysis

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Background: There is growing concern regarding the psychosocial needs among oral cancer patients with restricted oral-functioning due to cancer and its treatment. The current management strategies focus mainly on providing clinical care; with little emphasis given to other aspects of care.

Aim: The aim of this research project is to determine the relationship between the changes in oral functioning (OF), social support (SS) and spiritual aspect (SA) with the psychosocial well-being (PSWB) among oral cancer patients in Malaysia.

Method: This is a secondary data analysis on the individual-level HRQoL dataset among cohort patients diagnosed with oral cancer between 2008 till 2015, collected from the Malaysian Oral Cancer Database and Tissue Bank System (MOCDTBS) to examine potential association between HRQoL sub-scales of OF, SS, SA and PSWB across three different visits namely; at baseline (pre-treatment), 1 month; and 3 months-post treatments. Descriptive analysis of HRQoL sub-scales, including correlation and linear regression were undertaken for overall and by the disease-treatment characteristics. This was followed by hierarchical multiple regression analysis in exploring the combined role of SS and SA in explaining the relationship of interest between OF and PSWB.

Results: There was a significant deterioration in OF and improvement in PWSB among a cohort group of Malaysian oral cancer patients at their first review visit. At subsequent visits, the PSWB sub-scale continued to demonstrate significant improvement, including the OF and SS sub-scales. In multivariate analyses, SS was the most important predictor for PSWB across all cancer staging or treatment modalities; also mediating the enhancement of OF among the late-stage group at baseline. Nevertheless, SA less likely contributed to OF enhancement except at baseline and second review visit among those treated with combined treatment.

Conclusion: The findings provide some insights on how both SS and SA can contribute to improve PSWB among oral cancer patients presenting with compromised oral function. An integrative approach comprising a combination of social and spiritual supportive care with treatment modalities including the repair of oral function could be one model of holistic patient care for oral cancer patients in Malaysia.

Keywords: oral cancer; psychosocial well-being; oral functioning; social support; spiritual aspect

Complete dose of Hepatitis B vaccination among children in Indonesia and factors associated: a community-based cross-sectional study

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Background: Indonesia is rated as an intermediate-to-high hepatitis B virus endemic region. Although vaccination is considered the most effective way in preventing hepatitis B infection, the completeness of this specific vaccination among Indonesian children remains low.

Aim: This study aimed to assess the completeness of hepatitis B vaccination among children and the potential associated factors in Indonesia.

Method: A community-based cross-sectional study through secondary data from the 2017 Indonesia Demographic Health Survey was conducted in 34 provinces of Indonesia. Participants were mothers with children aged 12 – 59 months and had completed data on hepatitis B vaccination status and other independent variables. The outcome of interest was children's hepatitis B vaccination, categorized as complete and incomplete doses. Binomial logistic regression was employed to assess the possible associations.

Results: A total of 7,860 mothers with children aged 12 – 59 months were included in this study. The overall completeness of hepatitis B vaccination among children was relatively high (89.8%). In the adjusted model (AOR), the following factors were associated with the completeness of hepatitis B vaccination among children: living in Java (AOR= 2.62; 95% CI 2.10 to 3.27), lesser Sunda Island (4.14; 2.96 to 5.77), Kalimantan (2.91; 2.10 to 4.04), and Sulawesi (2.13; 1.68 to 2.70) compared to living in Sumatera, whose parents had secondary and higher education (father: 2.02; 1.22 to 3.33 and 2.09; 1.18 to 3.71; mother: 2.48; 1.48 to 4.16 and 1.97; 1.11 to 3.51, respectively) compared to those with no education, children with working mother (1.20; 1.02 to 1.41), children belong to middle and high economic status (1.55; 1.23 to 1.97 and 1.54; 1.23 to 1.93, respectively) than those with low economic status, whose mother used media irregularly and regularly (1.52; 1.03 to 2.25 and 1.80; 1.32 to 2.44, respectively) compared to those who never used, having health insurance (1.33; 1.14 to 1.57), and had greater family size (1.90; 1.56 to 2.31).

Conclusion: These findings highlight that access to health provider and information related to vaccination as well as affordability of vaccination were strongly associated with the completeness of hepatitis B vaccination among children in Indonesia.

Keywords: Children, Complete dose, Hepatitis B, Vaccination.

Strengthening Tuberculosis Case Finding Management in Hospital: A Case Study of Rumah Sakit Paru Goenawan Partowidigdo

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Background: Regulation stated that health service facilities are required to record and report every TB disease incident. TB cases in hospitals can come from various service units including outpatient, inpatient, and emergency department. The TB inventory study 2016-2017 showed that TB cases found in hospitals but not reported to the SITT were still high. TB case finding is the basic data for TB case notification through SITT. However, this is considered the responsibility of the DOTS team. In fact, if the TB patient is not referred to the DOTS team, the DOTS team does not know of any TB cases that have been found and as a result no notification of the patient's case is made.

Aim: This study aims to identify how the DOTS team of RSPG in finding TB cases from various service units so that they can be recorded and reported to the SITT.

Method: The design of this research is a case study at RSPG with data collection in-depth interviews and document review.

Results: TB cases found by the outpatient, inpatient and emergency department were communicated through the DOTS team through a TB form filled out by each unit. The DOTS team routinely communicates through social media groups or through personal communication. Based on this information, the DOTS Team provides a label or a "DOTS TB" stamp on the medical records of suspected TB or TB patients to be referred to the DOTS team. The DOTS team will record the progress of treatment for the TB patient on a regular basis to SITT. In addition, the hospital has integrated SIMRS with SITT so that the DOTS team can identify patients with the ICD 10 code for TB and at the same time check whether the patient has been registered as a TB patient or not.

Conclusion: Routine communication between health workers and through social media groups, giving "labels" or markers on patient medical records as well as the integration of SIMRS with SITT improves TB case discovery by the DOTS team so that TB case reporting to SITT is optimal. Keyword: Tuberculosis, SITT, case finding, notification.

Strengthening Technical Assistance for Routine Immunization Training (START) Long Term Assessment 2020

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Background: Expanded Program on Immunization (EPI) in Indonesia has been implemented since 1977.. Indonesia is a sovereign archipelago with 16,056 islands (Wahyono, 2018). in which approximately 60% of its population live in the urban areas. EPI launched Strengthening Technical Assistance for Routine Immunization Training (START), a project to strengthen immunization capacity at the local level via on-the-job training and supportive supervision by a cadre of experts.

Aims: After long term implementation, it is required to evaluate the START activities in order to identify long-term contributions of the START project to improve knowledge and capacity and to strengthening EPI practices at the district and health center level in Indonesia.

Methods: This assessment is also considered as evaluation study. This evaluation compared data before, during and after intervention in order to know the effect of START activities. The qualitative approach used in-depth interview, observation and secondary data collection in order to know the implementation of START and obstacles during implementation of START. This independent evaluation was conducted after more than one year the project implemented.

Result: This evaluation was implementend in districts where the START had been implemented in 24 health centers, 12 districts in the four provinces, the gap between OA (pre) and evaluation were positive number ranging from 8-92.3% for all topics: micro-planning, vaccine management, recording and reporting, monitoring and evaluation and also supportive supervision. The secondary data showed the pattern of left out, drop out DTP1-3 and drop out DTP1 to measles in some districts increased, and others decreased. Qualitative. The training covered micro planning, vaccine management, recording and reporting, and monitoring and evaluation and also supportive supervision.

Conclusion: S TART activities had contributed to a change in EPI implementation practices at district and health center during the project , statistically showed from the test (with pvalue<0.05). The effect of START was no longer sustained after its completion. Identify the roles, responsibility and competencies of the human resources for the EPI program in all level from national to health centers that were managerial or service delivery function on EPI.

Correlation between Period of Residency and Insecticide Net with Malaria Incidence in An Endemic Area of Central Java

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Background: Malaria is a vector-borne disease associated with ecology, environmental factors, and the presence of vectors. Indonesian National Malaria Program commits to eliminate malaria in 2030. The annual parasite incidence (API) in Indonesia is decreasing, but there are several provinces with API above the national average including Central Java. In 2015, the API Central Java was 0.06, unfortunately, Purworejo is still known as a malaria-endemic area in Central Java.

Aim: This research aimed to explain the causal effects of the period of residency and insecticide net used on malaria incidence.

Methods: A case-control study was performed between September to October 2016 in Purworejo. The case group were 131 persons who suffered from malaria during 2016 by the medical record, while the control group were 131 persons of cases' neighbors who never suffered malaria along with their life. A structured questionnaire was used to interview both case and control groups. Logistic regression was used to analyze the data.

Result: An identified potential health risk of malaria in Purworejo is living in the area (period of residency) for 19-34 years (OR= 1.61; 95% CI: 0.85-3.05) and period of residency >34 years (OR=2.05; 95% CI: 1.04-4.06) adjusted by confounders (gender and education). After adjusted by gender and education, we found that the Insecticide net was a strong protective factor for malaria incidence (OR=0.18; 95% CI: 0.09-0.37).

Conclusions: Period of residency 19-34 years and >34 years were found as potential risk factors for malaria incidence. Those means who lived in an endemic area for a longer period, are prone to suffer malaria. Besides, insecticide net showed as a strong protective factor against malaria. Insecticide net can be a solution for all residents of endemic areas.

Keywords: Malaria, endemic area, period of residency, insecticide net, environmental factors.

Factors Associated with the Incidence of Hypertension in the Group of Young Adults Aged 19-24 Years in South Borneo Province (Riskesdas 2018)

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Background: Hypertension is considered as a public health problem because of its high prevalence in many countries, has a strong relationship with NCD, and the increase cases in young adults due to the increasing prevalence of obesity due to lifestyle changes. The group of young adults also had high cases of unconscious and uncontrolled hypertension when compared to the group of older adults. The highest prevalence of hypertension founded in Indonesia is in the South Borneo Province (44%) based on the results of the 2018 National Health Survey. As for the group of young adults aged 18-24 years in South Borneo, there was an increase in cases from 2013 (11%) to 2018 (22%).

Aim: To determine the prevalence of hypertension, the relationship between the incidence of hypertension and its various risk factors, and also the most dominant risk factor associated with hypertension in young adults aged 19-24 years old in South Borneo Province in 2018.

Method: This study used a cross-sectional using secondary data from National Health Survey in Indonesia (Riskesdas 2018). The total sample used are 1,459 samples. The variables studied were hypertension, demographic characteristics, nutritional status (BMI and waist circumference), lifestyle (physical activity, alcohol, and smoking), dietary patterns (sodium, sugar, fat, vegetables, and fruit consumption), and stress. Bivariate analysis was performed using the chi square test and multivariate using multiple logistic regression.

Results: Amongst hypertensive young adults, it was found that diastolic hypertension had the highest prevalence (14.1%) and prevalence of total hypertensive was 20.9%. The results of statistical tests using chi square showed that there was a relationship between gender ($p = 0.001$), BMI ($p = 0.001$), and abdominal circumference ($p = 0.001$) with the incidence of hypertension in young adults. While, the results of statistical tests using logistic regression showed that abdominal circumference was the most dominant factor (OR = 2,463) associated with the incidence of hypertension.

Conclusion: It is found that gender and nutritional status associated with hypertension among the young adults aged 19-24 years in South Borneo.

Keyword: Hypertension, Young adults, Aged 19-24 years old, Gender, Nutritional Status

Analysis of Demographic and Environmental Risk Factors towards Annual Parasite Incidence of Malaria in East Nusa Tenggara Province Year 2018

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Background: Although the decreasing number of malaria cases has been happening in Indonesia since the past few years, some regions in Indonesia still have higher malaria endemicity, including East Nusa Tenggara (ENT) Province. With total malaria cases of 17,192 in 2018, ENT Province was in the third place of province with the highest Annual Parasite Incidence number (3.42) making ENT Province as the province with moderate malaria endemicity.

Aim: This thesis aims to discover important factors which have the potential in increasing the number of malaria Annual Parasite Incidence (API) in ENT Province year 2018 by analyzing correlation of demographic and environmental risk factors. IR

Method: This study used ecological study design with analysis unit of districts/ city and data gotten from document of ENT Province Health Profile (Public Health Office of ENT Province), ENT Province in Number (Central Bureau of Statistics), ENT Province Health Survey (Ministry of Health). Data were analyzed using univariate, bivariate (Spearman correlation test), and spatial (overlay technique) analysis.

Results: The result showed that the number of societies with low education, high risk jobs, improper waste disposal behavior are still high. Further, variables which have a significant correlation with malaria API are low education level (P-value = 0,005; $r = 0,588$), behavior of open defecation (P-value = 0,008; $r = 0,564$), humid floor (P-value = $<0,003$; $r = 0,613$), and roof made from leaves (P-value = 0,001; $r = 0,652$). Besides, behavior of open defecation was found to be spatially correlated with malaria API.

Conclusion: The result of this study highlights the importance of malaria prevention that should focus on intensifying clean and healthy lifestyle (especially the using of healthy latrine and right ways of cleaning the house which has been adapted by societies' condition). Besides, in strengthening malaria prevention and control measures, other efforts that need to be escalated including providing comprehensive knowledge with more effective ways so that the information of malaria prevention can be well absorbed by the societies.

Keywords: Malaria, environmental risks, demographic

The Use of Hormonal Contraceptive and High-Risk Human Papillomavirus (HR-HPV) Infection: A Case-Control Study

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Background: The use of hormonal contraception has been associated with High-Risk Human Papillomavirus (HR-HPV) infection. However, the existing study results are not conclusive. There is very limited relevant data available in Indonesia.

Aim: The main purpose of this study is to evaluate the association between the use of hormonal contraceptives and the infection risk of HR-HPV.

Method: This is a case-control study from the HPV test results using Hybrid Capture 2 of a cervical cancer screening program held by the Indonesian Cancer Foundation, Jakarta branch, in 2019. The case group is subjects with positive HPV test results. The control group is randomly selected from the screening participants with negative HPV test results, with a ratio of 2 controls to 1 case., and frequency matched based on the area of domicile. Data is analyzed using multivariate analysis, unconditional logistic regression. Subgroup analysis is conducted based on the type of hormonal contraceptives used (contraceptive pill and contraceptive injection & implant).

Results: The number of cases in this study is 172 and 344 subjects in the control group. The prevalence of HR-HPV infection from the whole screening program is 6,56%. The crude Odds Ratio (cOR) 0,64 (95% CI 0,39-1,04, p=0,06) and adjusted OR (aOR) 0,97 (95% CI 0,53-1,79; p=0,93) for HR-HPV infection in current user of hormonal contraceptives. Whilst the association in the past users of hormonal contraception prior the test is cOR 0,55 (95%CI 0,37-0,83; p=0,002) and aOR 0,53 (95% 0,34-0,82; p=0,005).

Conclusion: There is no significant association between the current user of hormonal contraceptives and the risk of HR-HPV infection. On the other hand, there is a significant negative association in the past user group.

The Influence of Paradoxical Intensionsesi 1 Logotherapy on Resistance Anxiety in The Class II Institution of Kediri City Institution

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Background: Living in the prison can causing anxiety to the prisoner. The major factor of anxiety is feeling worry their society won't accept them again, ashamed, and a lot of people stay away from ex-prisoner. Anxiety is a psychosocial problem that can be cured by several psychotherapy, one of psychotherapy is logotherapy paradoxical intention session 1.

Aim: The purpose of this study is to determine the effect of paradoxical intention session 1 on the anxiety of detainees in the Kediri Class II A Correctional Institution.

Method: The design of this study was pre-experimental with a one-group pretest posttest design approach. The population studied were detainees who were in Class II A Correctional Institution in the City of Kediri totaling 109 people, with a random sampling technique obtained by a sample of 78 people. The independent variable paradoxical intention logotherapy session 1 with dependent variable prisoner anxiety. Data was collected using a questionnaire sheet. Data analysis using the Wilcoxon test at $\alpha = 0.05$.

Results: The results of the study before logotherapy showed that the majority of respondents in a panic situation were 33 respondents (42.3%) and after logotherapy showed that the fraction of respondents in severe anxiety were 18 respondents (23,1%). The results of the analysis obtained p-value (0,000) (0.05) then H_0 was rejected and H_1 was accepted which means that there is an effect of paradoxical intention session 1 on the anxiety of prisoner at the Kediri Class II A Correctional Institution with output rank negative rank 30 data, positive rank has no data, ties 48 data from a total 78 data.

Conclusion: Decrease anxiety was not significant caused of age, education, length of detention, and logoterapi given as session 1, length of administration, and provider of logotherapy.

Keywords: Anxiety, Logotherapy Paradoxical Intention Session 1

Front of Pack Label: A hope for NCD prevention in Indonesia

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Background: The Indonesian Food and Drug Authority has recently launched the front of pack label (FoPL) to respond to a significant increase of non-communicable diseases and obesity in the last decade. The policy is also an answer to the WHO call to promote healthier food choices. In Indonesia, FoPL is implemented by putting a green tick "healthier choice" logo in the front package of qualified processed food and beverages. At this moment, FoPL is valid for drinks, instant noodles and pasta, and soon to be expanded on other packaged food.

Aim: This paper is a commentary that aims to offer critiques and suggestions based on current literature and best practices around the world.

Results: Discussion The FoPL is unquestionably needed to promote a healthier diet for consumers with lower education and those who need to adjust their daily intake. The policy also encourages food companies to offer better products. Several steps should be conducted to achieve optimum impact from this policy. The mandatory system can be an option instead of voluntary because of low participation reported in other countries. Extensive research is required to determine whether tick label format has a considerable impact on consumer choice, product reformulation and public health outcomes. The FoPL should also be included in the national NCD strategic plan to maximise public health impact. Lastly, nutrient criteria should be reviewed regularly and remain free from the industries pressure to ensure the consumers right to choose healthier products.

Conclusion: The FoPL is a promising policy to encourage healthy diets and control NCD in Indonesia, and it should expand for broader types of food and drink. Sufficient research and good governance are the keys to ensure it has an optimum impact on public health.

Level of Knowledge, Income, and Family Support on Treatment Compliance with Hypertension Patients in Salamrejo, Trenggalek Regency

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Background: Hypertension is an abnormal increase in blood pressure which one of the management is obediently in medication.

Aim: This study aims to determine compliance with hypertension sufferers in treatment in terms of knowledge level, income level, and family support in Salamrejo Village, Trenggalek Regency.

Method: This study used an analytic observational study design with a cross sectional study. The sample consisted of 92 people with the Simple Random Sampling technique. The variable measured in this study was the compliance of hypertensive patients with treatment.

Results: The results showed that most respondents with hypertension had adherence to treatment (63%). And analyzed using the chi square statistical test, it was found that the sig value (2-tailed) $0.000 < 0.05$ there was a relationship between the level of respondent's knowledge on the compliance of hypertensive patients with treatment, the sig value (2-tailed) $0.003 < 0.05$ there was a relationship between levels Respondents' income on compliance with hypertension sufferers in treatment, sig value (2-tailed) $0.000 < 0.05$. There is correlation between family support of respondents with hypertension sufferers' adherence to treatment.

Conclusion: Based on the results of this study, it can be concluded that the higher of knowledge, level income, and family support, the higher compliance of hypertension sufferers in taking medication.

Keywords: Level knowledge, income level, family support, hypertension, obedience

Antihyperglykemi Activity, Repair And Regeneration Kidney Function, Fraction-Fraction Of Ethanolic Extract Of Africa Leaves (*Vernonia Amygdalina Del.*) in Rats With Diabetic Nephropathy

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Background: Diabetes mellitus (DM) type 2 can cause complications such as diabetic nephropathy (DN). An increase in serum creatinin and BUN as well as decreased serum albumin into the parameters of the presence of damage to the kidneys. Africa leaves (*Vernonia amygdalina Del.*) can be used as a treatment on the conditions of this study. This research purpose is to know antihyperglykemi activity fractions-fraction ethanol extracts of Africa leaves, repair and regeneration kidney function.

Aim: This research purpose is to know antihyperglykemi activity fractions-fraction ethanol extracts of Africa leaves, repair and regeneration kidney function.

Method: This research used 35 white male wistar rats conditioned DM type 2 for 24 days. Rats were divided into 7 groups, group I, group II negative control using STZ-NA 65 mg/kg and 230 mg/kg, group III positive control with glibenklamid 0.45 mg/kg, Group IV ethanol extracts of africa leaves 400 mg/kg, Group V fraction n-heksan 100 mg/kg BB, Group VI fraction of ethyl acetate 100 mg/kg, and Group VII water fraction 100 mg/kg. Data analysis using ANOVA test followed LSD Post Hoc.

Results: The results showed that administering fraction-fraction of ethanolic extract of africa leaves at doses 100 mg/kg BB can lower glucose levels on rat with diabetic nephropathy. Administering fraction-fraction of ethanolic extracts of africa leaves at dose 100 mg/kg rat can improve kidney function and effect on kidney regeneration rat with diabetic nephropathy.

Conclusion: Administering fraction-fraction of ethanolic extract of africa leaves at doses 100 mg/kg BB can lower glucose levels on rat with diabetic nephropathy. Administering fraction-fraction of ethanolic extracts of africa leaves at dose 100 mg/kg rat can improve kidney function and effect on kidney regeneration rat with diabetic nephropathy.

The Effectiveness of EGCG in Preventing Resistance of Mycobacterium tuberculosis to Fixed Drug Combination (FDC) Anti Tuberculosis Drugs

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Background: Tuberculosis is a global health problem, and there is even an increase in cases of multidrug-resistant tuberculosis in the world.

Aim: To find out the effectiveness EGCG in Preventing Resistance of Mycobacterium tuberculosis to Fixed Drug Combination (FDC) Anti Tuberculosis Drugs

Method: The anti-tuberculosis activity of EGCG was determined by broth dilution method using Middlebrook 7H9 media at concentration of 50, 100, 150, dan 200 ppm, then the potential of FDC Anti Tuberculosis Drugs before and after combined with the EGCG was observed.

Results: The results showed that the activity of EGCG at concentration 50 ppm and 100 ppm could inhibit the Mycobacterium tuberculosis growth by 80%, at concentration 150 ppm by 90%, and at concentration 200 ppm by 100%. FDC Anti Tuberculosis Drugs activity before combined with EGCG was ? 90% at 5 ppm, after combination at 0,5 ppm.

Conclusion: In conclusion, EGCG can increase FDC Anti Tuberculosis Drugs activity.

Keywords: EGCG; FDC Anti Tuberculosis Drugs; Mycobacterium tuberculosis

The Effectiveness of Spiritual Approaches and Deep Breathing Relaxation on Changes in Depression Levels in the Elderly

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Background: Psychological changes in the elderly include feelings of loneliness, fear of loss, fear of facing death, anxiety, feelings of uselessness, dependence and neglect and depression. Early detection proper treatment of depression can improve the quality of life for the elderly.

Aim: The purpose of this study was to determine the effect of a spiritual approach and deep breath relaxation on changes in the level of depression in the elderly at the Tresna Werdha Blitar Social Service Unit.

Method: The design of this research is a pre-experiment, one-group pre-post test design with a population of all elderly people in the UPT Social Services Tresna Werdha Blitar with a total of 80 respondents. The sample is part of the population with a purposive sampling technique of 40 respondents. The collected data was processed using the Wilcoxon Match Pairs Test statistical test with a significance of $\alpha = 0.05$.

Results: The results showed that from 40 respondents, before the spiritual approach therapy and deep breath relaxation were carried out, most of the respondents had a mild level of depression in the elderly, namely 26 respondents (65.0%). depression, namely 23 respondents (57.5%). The results of the Wilcoxon Match Pairs Test analysis showed that the p-value = 0.000 which is less than the α value (0.05), it can be concluded that H0 is rejected, meaning that there is an effect of the spiritual approach and deep breathing relaxation on changes in the level of depression in the elderly at the Tresna Social Service Unit. Werdha Blitar.

Conclusion: This spiritual approach and deep breath relaxation therapy is effective in overcoming depression in the elderly so this needs to be done continuously, in collaboration with the local health center and involving the participation of the orphanage staff.

Keywords: Spiritual Approach, Deep Breath Relaxation Therapy, Depression

Analysis Use of Gadgets With Toddler Development (2 - 4 Years)

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Background : The high rate of developmental delays (2-4 years) in Gembongan Village, Blitar Regency. The development of toddlers is still doubtful / deviant / late.

Aim: The purpose of this study was analyze the relationship between the use of gadgets and the development of toddlers (2 - 4 years).

Method: The research design used correlational analytic with cross sectional approach. The population in this study were all mothers and toddlers (2 - 4 years) with a sample size of 48 respondents who were taken using simple random sampling technique. The independent variable is the use of gadgets while the dependent variable is the development of toddlers (2 - 4 years). The instruments are the observation sheet and KPSP. Data analysis using Spearman Rank.

Results: The results showed that a small proportion of respondents (20.8%) medium and high use of gadgets with the development of toddlers were categorized as deviant and doubtful. The value of sig (p) = 0.008, α = 0.05, $p < \alpha$, then H1 is accepted, meaning that there is a strong enough relationship between the use of gadgets and the development of children aged 2-4 years.

Conclusion: The longer and more frequent use of gadgets can affect the development of toddlers 2 - 4 years old. So, with this research it becomes a reference or literature for the midwifery profession to in order to provide insights to parents to reduce the use of gadgets in toddler.

Keywords: Use of Gadgets, Development, Toddler

Disparity in the Hospitals Utilization among Regions in Indonesia

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Background: The utilization of hospital services is a benchmark for the success of a health care referral system. Indonesia as the largest archipelago in the world encounters challenging conditions along with lack of infrastructure posed economic and health disparity among its regions. Disparities as a result of this development also have an impact on the accessibility of health care facilities. Regions with good economic movements tend to have good accessibility to health care facilities.

Aim: For this reason, reducing disparity to achieve universal health services is the goal of health planners and policy makers.

Method: Chi Square test was used to test dichotomy variables and t-tests was performed for analysing the difference among continuous variables. These tests were employed to assess the hypothesis that there was significant regional difference in the access of health care in Indonesia. Estimation using multinomial logistic regression test was used to study the disparity between regions in hospital utilization.

Results: The results of this study showed that disparities between regions in Indonesia exist in term of hospital utilization. The disparities in hospital utilization among regions in Indonesia were associated with: marital status, socioeconomic status, education level, occupation and insurance ownership. However, the difference in odds ratio for mortality between regions decreased compared to the previous period.

Conclusion: Disparities in the hospital utilization among region in Indonesia was associated with complex factors from individual characteristics through geographic barriers.

Tuberculosis Predictive Index For Type 2 Diabetes Mellitus Patient Based On Biological, Social, Housing Environment, And Psychological Wellbeing Factors

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Background: Tuberculosis coincidence with type 2 Diabetes Mellitus is one of the double burden of disease that many developing countries currently deal with, including Indonesia. Several factors were considered as risk factors of it.

Aim: The purpose of this study was to develop a predictive index of tuberculosis on Type 2 diabetes mellitus patients based on their biological, social, environmental factor, and their psychological well-being as well.

Method: This case-control study involved 492 respondents consisting of 246 types 2 diabetes mellitus patients with tuberculosis coincidence as case group, and 246 diabetes mellitus patients without tuberculosis as a control group. The variables studied were biological factors (age, gender, glycemic control, tuberculosis clinical symptoms, complaint related to diabetes complications, body mass index, duration of diabetes mellitus), social factors (knowledge, Attitude, and practices related to tuberculosis, income, family history of tuberculosis, history of intensive contact with previous tuberculosis patients, history of occupation with the high risk of tuberculosis infection), the quality of the housing, and psychological well-being. Data analysis was conducted using a logistic regression test.

Results: The results showed that the predictive index formula was as follows- $3,218 + 0.867 \times \text{Age (below 50 years)} + 1.339 \times \text{gender (male)} + 1.493 \times \text{history of contact with previous patient} + 1.089 \times \text{Glycemic control (poor)} + 1.622 \times \text{tuberculosis clinical symptoms (>3 symptoms)} + 1.183 \times \text{Body Mass Index } (\leq 18,5\text{kg/m}^2) + 0.891 \times \text{Duration of diabetes mellitus } (>10 \text{ years}) + 0.454 \times \text{area of ventilation } (>10\% \text{ area of floor}) + 0.583 \times \text{Psychological well-being (bad)}$.with sensitivity 82.9% specificity value 65.0% and accuracy of 74.0%, positive predictive value 70,4% and negative predictive value 79,2%.

Conclusion: It is suggested that health workers, especially in primary health care facilities, will be able to increase the awareness of the risk of coincidence of Diabetes Mellitus with tuberculosis.

Parents' Knowledge and Perception of HPV Immunization in Badung Regency, Bali Indonesia

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Background: HPV immunization is an effective effort to prevent cervical cancer. Since 2016, Badung Regency has implemented a free HPV immunization program targeting school children with immunization coverage during 2016-2018 reported to reach above 90%.

Aims: This study aimed to determine the parents' knowledge and perceptions of HPV immunization in Badung Regency, Bali, Indonesia.

Method: This survey used a cross-sectional design with the population being families in Badung Regency. This survey was conducted in March – June 2019. Calculation and sample selection were carried out in a systematic random manner by following the WHO guidelines for evaluating immunization coverage. A total of 216 families met the criteria as a sample where parents as a respondent. The variables studied were family and child characteristics, history of HPV immunization, knowledge and perceptions of parents on HPV immunization. The data collected were analyzed descriptively.

Result: Most of the respondents were mothers (70.83%), had high school education (51.85%), with a median age of 43 years (IQR=8 years). Each family has an average of 2.59 living children (SD = 0.81) and the average child eligible for immunization is 1.15 (SD = 0.39). The coverage of HPV immunization by recall was 82.32% (95% CI=77.56-87.09). The most common sources of information related to cervical cancer and HPV immunization were in subvillage (37.96%) and by health workers (36.11%). Of the 15 knowledge questions, the average respondent's score was 8.92 (CI = 8.46-9.38), with the proportion of correct answers related to immunization procedures was less than 50%. Respondents' perceptions regarding HPV immunization were quite good, most of which believed in the benefits and safety of the HPV vaccine.

Conclusion: The knowledge and perception of parents regarding immunization is quite good. However, the Department of Health needs to conduct more intense socialization, especially regarding the HPV vaccination procedure so that the acceptance of parents increases to give permission to their children.

E-Cigarettes For Smoking Cessation: Perceptions Of Use Between Developed And Developing Countries

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Background: E-cigarettes or vaping are currently increasing in popularity among smokers globally.

Aim: This study aims to compare e-cigarette users between developed and developing countries to identify similarities/differences regarding perceptions of use and associated harm.

Method: A cross sectional survey was conducted among members of different popular online forums in Australia and Bangladesh, who were current or ex-users of e-cigarettes. Data were collected anonymously using Qualtrics.

Results: There were 567 study participants primarily from Australia (261,46%), Bangladesh (161,28%) and USA (83,15%). Mean age was 40(\pm 13.4) years and 429 (80%) were men. Almost all of the participants (95%) had nicotine in the e-liquid. The average amount of e-liquid used, nicotine strengths and duration of use in Australia, Bangladesh and USA were 9.1(\pm 7.6), 6.4(\pm 7.3), 9.3(\pm 7.6) ml/day; 7.5(\pm 11.1), 4.3(\pm 2.0), 8.4(\pm 7.2) mg/ml, and 22.8(\pm 22.0), 20.1(\pm 46.7), 49.5(\pm 25.9) months respectively. The most commonly cited reason for using e-cigarettes was to reduce/quit cigarette smoking, although there was a significant difference between users of Bangladesh and Australia (80% vs 95%, p <0.001, ORs 0.24, 95% CIs 0.12-0.45), Bangladesh and USA (80% vs 94%, p <0.01, ORs 0.20, 95% CIs 0.07-0.58). More than three-quarters of respondents perceived e-cigarettes as less harmful and two-thirds perceived them as less addictive. The majority of respondents (87%) did not try to stop using e-cigarettes, however, intention to discontinue in the next five years was more in Bangladesh than Australia (85% vs 75%, p <0.05, ORs 1.89, 95% CIs 1.12-3.19), and USA (85% vs 61%, p <0.001, ORs 3.52, 95% CIs 1.88-6.58).

Conclusion: This study warrants precautions for promoting e-cigarettes for smoking cessation in developing countries like Bangladesh.

Keywords: E-cigarettes, smoking, cessation, developed countries, developing countries

Management of paracetamol intoxication in rat model of liver injury using chloroform extract of *Bauhinia purpurea* L. leaves

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Background: Paracetamol (PCM) overdose has been known to result in liver injury and there is a need to seek for antidotes to treat PCM-induced liver injury (PILI).

Aim: This study aimed to determine the hepatoprotective activity of chloroform extract of *Bauhinia purpurea* leaves (CEBP) against PCM-induced liver intoxication in rats.

Method: The extract (50, 250, and 500 mg/kg), pre-administered orally to rats (n=6) once daily for seven consecutive days followed by the hepatotoxicity induction using 3 g/kg PCM (p.o.), significantly ($p < 0.05$) reversed PCM toxic effect by increasing the serum level of AST and ALT, and activity of endogenous catalase (CAT) and superoxide dismutase (SOD) while reducing the liver weight/body weight (LW/BW) ratio.

Results: These observations were supported by the histopathological examination and scoring. CEBP also possessed low TPC value, low free radical scavenging activity when measured using the diphenylpicrylhydrazyl (DPPH)- and superoxide anion (SOA)-radical scavenging assays, but high antioxidant capacity when measured using the oxygen radical absorbance capacity (ORAC) assay. Phytochemical analysis of CEBP revealed the presence of flavonoids, triterpenes and steroids.

Conclusion: In conclusion, CEBP exerts hepatoprotective activity via a non-free radical scavenging pathway and its ability to activate the endogenous enzymatic antioxidant defense system.

Keywords: *Bauhinia purpurea*; chloroform extract; hepatoprotective; paracetamol intoxication; non-free radical scavenging; antioxidant capacity; endogenous enzymatic antioxidant system; flavonoids; triterpenes

Under-Diagnosis Of Severe Asthma Among Preschool Children Of Rural Sri Lanka

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Background: The global prevalence of severe asthma symptoms among 5-6- year-old children is 4.9%, and according to the International Study of Asthma and Allergy in Childhood (ISAAC) study, the prevalence of asthma among 6-7-year-old children in the Asia Pacific region range from 4.8% in Indonesia to 10.9% in Sri Lanka to 23.0% in Japan. However, published data on severe asthma among preschool children of rural Sri Lanka is scarce.

Aim: To determine the symptom prevalence severe asthma and the proportion of diagnosed severe asthmatic children among preschool children of a rural geographical location in Sri Lanka.

Method: A descriptive cross-sectional study was conducted at 36 preschools of the Anuradhapura District of Sri Lanka, selected by multistage cluster sampling with probability proportionate size. The symptom prevalence and risk-factors of severe asthma were assessed with the validated ISAAC questionnaire.

Results: Severe asthma was defined as ? 4 wheezing episodes or wheeze affecting speech or ? 1 night per week sleep disturbance in those who had wheeze in the past 12 months (current wheezers). Results The participants were 548 (51.7%) boys and 512 (48.3%) girls, aged 3-6-years. At least one wheezing episode was reported in 323 (31.7%) children and 247 (23.3%) current wheezers. Severe asthma symptoms were reported in 76 (7.1%; 95% CI 5.7-8.8) current wheezers, of which only 27 (38.6%; 95% CI 28.0-50.2) had been previously diagnosed and 38 (52.8%; 95% CI 40.7-64.7) also had exercise-induced wheeze. Severe asthma associated with male sex and allergic-rhinoconjunctivitis ($p < 0.03$). Severe asthma symptoms were present in 3 out of 6 current wheezers with eczema and allergic-rhinoconjunctivitis, although statistically not significant ($p=0.16$). None of the current wheezers with eczema ($n=7$) had severe asthma ($p=0.2$). passive smoking (OR 1.7; 95%CI 0.9-3.1), living in a house with a cement floor (OR 0.4; 95% CI 0.2-0.7), having pet dogs at home (OR 2.3; 95% CI 1.0-5.4) and frequent consumption of skipjack tuna (OR 1.9; 95% CI 1.1-3.3) were independent risk factors.

Conclusion: significant proportion of preschool children from a rural geographical location had severe asthma with associated preventable risk factors and the diagnosed proportion of severe asthmatic children was low.

Keywords: preschool children, severe asthma, International Study of Asthma and Allergy in Childhood, health of rural children

Polysubstance Use Among Malaysian Adults: Findings From The National Health And Morbidity Survey 2019

Wan Shakira Rodzlan Hasani

Background: Polysubstance use is the use of more than one non-prescribed licit or illicit substance either concurrently or simultaneously. It is a common phenomenon, but little is known about how severity and various substances use in Malaysia.

Aim: To determine the prevalence of polysubstance user and its associated factors among adults in Malaysia.

Method: This is a secondary data analysis from National Health and Morbidity Survey (NHMS) 2019. NHMS 2019 is a cross-sectional population survey, design with twostage stratified random sampling. A total of 10,472 Malaysians above 18 years participated in this survey. Data on substance use were obtained through validation self-administer questionnaire. A Multivariate Multinomial Logistic Regression analysis was applied using STATA software.

Results: The overall prevalence of polysubstance user was 4.6% (95% CI: 3.68, 5.77) with estimated to 982, 230 Malaysian adults population while for single substance user was 25.3% (95% CI: 23.85, 26.87). The multinomial model showed a higher likelihood of adult using single or polysubstance was observed among males (single user aOR=15.8, poly user aOR=89.6) compared to female, aged 28-40 years (single user aOR=2.0, poly user aOR= 4.8) and aged 41-59 years (single user aOR=1.8, poly user aOR=2.7) compared to 60 years and above, Chinese (single user aOR=2.2, poly user aOR=11.4), other Bumiputeras (single user aOR=2.5, poly user aOR=21.7) and other ethnicity (single user aOR=1.4, poly user aOR=5.0) compared to Malay, rural area (single user OR=1.2, poly user OR=1.77) compared to urban area, those who had job (single user OR=1.5, poly user OR=1.7) compared to unemployed.

Conclusion: Our study highlights multiple factors significantly associated with substance use among adults in Malaysia. This result can assist in developing specific prevention programs targeting these high-risk groups.

Biopsychosocial Factors Associated With The Effectiveness Of The Smoking Cessation

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Background: Smoking is an important risk factor for human health. Smoking cessation significantly reduces the morbidity and mortality rate from tobacco-related diseases. Limited studies had investigated that the role of biopsychosocial factors in smoking cessation at different age groups.

Aim: The goal of this study is to explore the association between the biopsychosocial factors and failure to quit smoking.

Method: A total of 307 smokers who had failed to quit smoking, aged 15–85 years, were included from January to June 2019. Biological, psychological, and social risk factors were compared in different age groups (adolescents, middle-aged, and older adults). Data were collected through the telephone interview including personal characteristics, psychosocial characteristics, and quality of life. The Chi-Square test was used to evaluate the relationship among the biopsychosocial factors and failure to quit smoking.

Results: Of 307 participants, the male/female smoking rate ratio was 9.59 (90.6% vs. 9.4%). The average cigarette consumption and duration of smoking were 20.4 cigarettes per day and 26.11 years, respectively. Smokers in all age groups faced common challenges such as cigarette cravings (90–94.4%) and habitual smoking (80–91.6%). The depression symptom and psychosocial stress had a significant impact on adolescents than that of middle-aged adults and older adults. The effect of the living/working environments in adolescents (50%) was significantly higher than that of middle-aged adults (48.7%) and older adults (25%).

Conclusion: The study shows that the different age groups had significant differences in the challenges of smoking cessation. The depression symptom, psychosocial stress, and living/working environments were an important risk factors in adolescents.

Keywords: biopsychosocial model, smoking cessation, age, cigarette

Current state of Influenza Vaccination and Factors Affecting Vaccination Rate among Korean Clinical Research Coordinator

SeoWon Kim

Background: Influenza is a contagious disease that infects many patients in a short period. The spread of influenza during the clinical research can lead to severe impact the high-risk subjects. Clinical research coordinators are the people who contact with patients most directly and for extended period. There are no investigation regarding clinical research coordinators in South Korea.

Aim: This study was conducted to investigate factors influencing influenza vaccination rate and current state of influenza vaccination among clinical research coordinators.

Method: The participants were 274 Korean clinical research coordinators. The data which were collected using self-report questionnaires in March to April 2019 were analyzed using the RStudio 1.2.5033 and Microsoft Power BI: Data Visualization.

Results: 72.63% of clinical research coordinators had received vaccination in 2017. 82.48% of them was contract workers and 77.01% of them has not been educated regarding influenza. There was a positive correlation among 2017 vaccination compliance, influenza vaccination education, knowledge and compliance ($p < 0.05$). The most common reasons for non-vaccination were high cost of vaccination, miss the period and busyness.

Conclusion: In order to increase the Influenza vaccination rate, it is necessary to apply a compulsory rule for contract workers and provide high-quality education program focusing on improving clinical research coordinators' accurate knowledge regarding influenza vaccination and risk of infection. Additionally, it is necessary to improve labor condition of clinical research coordinators.

Establishing a new model of community screening service for breast cancer high-risk groups

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Background: Breast cancer (BC) has the highest recurrence rate for women in Taipei, we established a new community screening service model for family-history groups of BC, which combining hospitals to engage and notify the second-degree relatives of BC patients to screen cancer in early stage and better recovery.

Method: The screening database of citizens was analyzed intelligently and visually in casemanagement. We cooperated BC therapeutic hospitals in establishing referral mechanism and doctor reminder system for in-hospital second-degree relatives who aged 40-69 of BC patients.

Results: In 2017, the program launched and found “prior to surgery” is the best time for intervention to the relatives. The willing of screening increased 3.5%-6.5%. Until 2020, we recruited 12 hospitals, 6,293 people completed screening and 662 were positive(10.52%) and 54 confirmed as BC(8.58%) were higher than general population (8.68%/5.8%).And the number of family-history groups undergoing screening increased 6.3%.

Conclusion: Establishing referral mechanism for family-history groups of BC and reminder system have remarkably improved effectiveness of BC prevention.

Association between dietary patterns and stroke in patients with type 2 diabetes mellitus in China: a propensity score-matched analysis

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Background: Although multiple epidemiological researches have extensively concentrated on dietary patterns and their effects on stroke in a general population, little was known regarding the association between dietary patterns and stroke in patients with type 2 diabetes (T2DM).

Aim: This study aimed to examine the impact of different dietary patterns on stroke in patients with T2DM in China.

Method: Participants were 13731 T2DM patients aged ≥ 18 years recruited with stratified random cluster sampling method from December 2013 to January 2014 in China. After collecting dietary data using a quantified food frequency questionnaire, latent class analysis (LCA) was used to identify dietary patterns and propensity score matching (PSM) was used to eliminate confounding effects. Survival time was defined as the time from date of diagnosis with T2DM to date of diagnosis with stroke. Cox proportional hazards models and subgroup analysis were used to analyze the association between dietary patterns and stroke in patients with T2DM.

Results: Two dietary patterns were identified: 61.2% patients were categorized in the High-fat dietary pattern, showed higher probability to consume moderate to high consumption of poultry meat, livestock meat, aquatic products, soybean products, whole grains, eggs and fresh vegetables, while 38.8% patients were characterized by the Balanced dietary pattern with higher probability to consume moderate consumption of rice and noodles, livestock meat, aquatic products, eggs, fresh vegetables, soybean products and low consumption of whole grains, poultry meat, fresh fruits and salted products. Compared to the High-fat dietary pattern, the Balanced dietary pattern was negatively related to the stroke risk (HR=0.64, 95%CI: 0.54-0.76) after adjusting for confounding factors in the propensity-matched cohort. The protective effect of the balanced model did not differ significantly across subgroups except for level of physical activity (interaction P=0.044).

Conclusion: Our findings suggest that in T2DM patients, maintaining a balanced dietary pattern, especially with moderate consumption of foods rich in quality protein and fresh vegetables might decrease the risk of stroke in China. Notably, we should also strengthen the comprehensive management of health-related behaviors especially moderate to high level of physical activity and Balanced dietary pattern to prevent stroke effectively.

Smoking Intention and Associated Factors among College Students: Findings from A Cross-sectional Survey in China

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Background: Tobacco is widely known as a very harmful addictive substance, so the focus of tobacco control is on preventing the transition from a potential smoker to a real smoker.

Aim: This study aimed to investigate the prevalence of smoking, awareness of smoking hazards and smoking intention among China college students, and explore the associated factors of smoking intention.

Method: A total of 1041 college students was recruited by convenience sampling method and complete an anonymous online survey. Global Adult Tobacco Survey (GATS) revised version was used to measure their smoking behaviors, smoking intention, and awareness of smoking hazards. Multiple linear regression model was used to assess factors associated with smoking intention.

Results: Out of 1041 participants, 12.7% reported to have cumulatively smoked for 6 months. Multiple linear regression model revealed that smoking intention may be influenced by: gender ($B=0.3855$, 95%CI: [0.1907,0.5803]), smoking-attempting behavior ($B=1.2985$, 95%CI: [1.0830,1.5139]), companion's smoking behavior ($B=0.4877$, 95%CI: [0.3884,0.5870]), attitude towards smoking's influence in social contact ($B=0.8536$, 95%CI: [0.7099,0.9974]), awareness of smoking hazards ($B=-0.1221$, 95%CI: [-0.1861,-0.0581]). In addition, differential dominance conditional process model revealed that when students were female, monthly allowance had an indirect effect on smoking intention (Effect=0.0753, 95%BootCI: [0.0169,0.1437]) through influencing the degree of recognizing smoking's benefit in social contact. Monthly allowance had a direct effect on smoking intention (Effect=0.2056, 95%BootCI: [0.0790,0.3323]) when students were male, and an indirect effect on smoking intention (Effect=0.0407, 95%BootCI: [0.0003,0.0884]) through influencing the degree of supporting tobacco control.

Conclusion: This study provides sufficient evidence to support the implementation of systematic intervention strategies to prevent smoking effectively among college students. The state should pay more attention to high-risk groups such as men, actively carry out tobacco control education in colleges, and strengthen supervision of the tobacco market to prevent potential smokers transitions into smokers.

Associations between Social Capital and Health among Chinese Adults: Examining the Mediating Role of Stress Coping Ability

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Background: Although studies showed positive associations between social capital and health, less is known about the mediators of the association in China.

Aim: This study aims to examine whether stress coping ability mediated the association between social capital and health.

Method: We employed data from the 2010 Chinese General Social Survey, a nationally representative cross-sectional survey in mainland China. Health outcome was a factor score constructed by three health items. We measured social capital by frequency of socializing, civic participation (i.e., voting in neighborhood committee elections), and trust. We conducted multivariable linear regression models to assess the association between social capital and health, adjusting for sociodemographic and socioeconomic factors, lifestyle factors, and region of residence. We conducted mediation analyses to assess the mediating effect of stress coping ability on the association between social capital and health.

Results: We included 1,458 and 2,045 Chinese adults (> 18 years) from rural and urban China, respectively. Frequency of socializing and trust were associated with better health in both rural (Frequency of socializing (? (95% CI) comparing with Never): Sometimes: 0.22 (0.05-0.39); Often/Always: 0.30 (0.11-0.49); Trust (? (95% CI) comparing with Strongly distrust/Distrust): Trust: 0.13 (0.00-0.26); Strong trust: 0.18 (0.01-0.35)) and urban areas (Frequency of socializing (? (95% CI) comparing with Never): Seldom: 0.18 (CI: 0.03-0.33); Sometimes: 0.22 (0.08-0.37); Often/Always: 0.29 (0.13-0.44); Trust (? (95% CI) comparing with Strongly distrust/Distrust): Trust: 0.14 (0.05-0.23); Strong trust: 0.18 (0.03-0.32)). Stress coping ability significantly mediated 31.52% and 44.43% of the association between frequency of socializing and health in rural and urban China, respectively. Only in urban but not rural China did stress coping ability significantly mediate 27.27% of the association between trust and health.

Conclusion: Stress coping ability mediated the association between social capital and health, although the degree of the mediating effect varied between different social capital dimensions and between rural and urban areas. Health interventions to improve social capital can target people having poor stress coping ability.

Short and Dangerous: Ambiguous Abbreviations in Cardiology Discharge Summaries.

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Background: Ambiguous medical abbreviation endangers patients' lives because of potential misinterpretations between healthcare providers.

Aim: To the best of our knowledge, this paper may be the first to classify and determine factors associated with dangerous ambiguous abbreviations in Cardiology. We evaluated the use of abbreviations in the Cardiology and General Medicine electronic discharge summaries written by junior and senior doctors in English, and manually elicited the abbreviation features to model automated detection.

Method: Electronic discharge summaries were annotated for abbreviations for descriptive and inferential analysis. Binary logistic regression was used to determine the predictors of dangerous ambiguous abbreviations. The morphological pattern of abbreviations was analysed to derive the abbreviation features.

Results: We looked through 1,102 discharge summaries containing 181,568 words, of which 19% (33,824) were abbreviations, and 4.2% (7,640) were ambiguous. Cardiology discharge summaries written by junior doctors used abbreviations most frequently (mean = 86.9 ± 39.2 abbreviations per document, ANOVA $p < 0.01$). The independent predictors for dangerous ambiguous abbreviations are the increasing number of senses, its relation to medication, and the SNOMED CT type. The Area Under the Curve (AUC) was 0.783 (95% CI 0.7222-0.845). We constructed eleven features from 1,116 unique abbreviations, such as character length, the symbols and numbers, and word position.

Conclusion: For the first time, we classified and predicted the danger of ambiguous abbreviations using three independent variables: abbreviations related to medication or prescription, the increasing number of senses for an abbreviation, and the SNOMED CT type of the abbreviation. Factors such as the seniority of doctors, the discipline from which the notes were from, and relation to laboratory orders did not contribute to the model. To reduce ambiguous abbreviations and clerical errors, we recommend for abbreviations to be addressed at the documentation level aided by computational methods and use structured data for medication and laboratory orders on a standardised discharge summary template. The abbreviation features can be used to further develop automated abbreviation detection applications for correct expansion. These approaches can improve the quality of documentation, patient safety, and the information derived from it.

Establishing A National Geographical Disease Surveillance System: Practical Steps for Developing Countries

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Aim: This paper describes the practical steps in establishing a national health geographic surveillance system with a community mobile application and dashboard solution from Malaysia's perspective as a developing country.

Method: The development of the Malaysian Health Data Warehouse Geographic Information System (MyHDW GIS) is detailed in chronological order, which later was used to assist the fight against COVID19. We include the development, data validation process, challenges, and solutions for creating the GIS map layers. It expanded from a system built for health system monitoring to a disease surveillance system.

Results: We outline the development and solutions in establishing the foundational layers of geographical health system monitoring: (i) geocoding all healthcare facilities in Malaysia and (ii) standardizing the boundary map layer for Malaysia. As COVID-19 emerged, new geographical layers and dashboards were quickly created, including the global COVID-19 country statistics; Malaysia's ports of entries with flight data, passenger volumes, and inventories for resource planning; Spatio-temporal pattern analysis at state, district and subdistrict level; and integration with a mobile application for public participation.

Conclusion: The cost-efficient and rapid development and deployment of the COVID-19 dashboard are attributed to the availability of granular patient data, rooted in the principles "build once, use many", with a stringent method for data security and patient confidentiality. These principles and practical step shared in this paper could be the basis for other developing nations who wishes to implement a national health GIS.

A regional analysis of the progress of current rabies control and prevention

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Background: The international community now calls for the worldwide elimination of dog-mediated rabies by 2030. To meet the goal, it is considered necessary to achieve at least 70% of a dog vaccination coverage with appropriate resource allocations in each country.

Aim: We conducted a correlational study to explore the latest, available data to assess the current progress of rabies control by regions and provided further recommendations towards elimination.

Method: Data were obtained from the websites of the international organizations and NGOs. We obtained the information of human rabies deaths, dog vaccination rate, cost of rabies control, and miscellaneous country profiles about rabies-related regulations among 87 countries in Asia, Middle East, Eastern Europe and Africa. Bivariate and multivariate analyses were performed to depict the current conditions of rabies control and prevention by regions.

Results: In comparison with African countries, a majority of Asian countries identified rabies as a top 5 priority diseases (80.0% vs. 34.4%) and provided or were developing a national rabies control strategy (86.7% vs. 38.3%). Asian countries were more likely to score a smaller human rabies death rate (1.37 vs. 2.21 per 100,000 populations) and a higher average dog vaccination rate (14.98% vs. 4.19%), but only the latter was statistically significant. Average costs of annual rabies control per person were USD 1.38 in Asia and 1.51 in Africa. Among 15 Asian countries, there were still huge burdens of rabies in India, Myanmar and Nepal, but there were also minimal human rabies death rate per 100,000 in Thailand (0.09) and Indonesia (0.07). Middle East and Eastern Europe seemed to be controlled of rabies compared to other regions; however, many of the countries provided limited surveillance data and poor statistics including annual dog vaccination coverages.

Conclusion: Asian countries seem to be more progressed on rabies control than African counterparts. In order to achieve the target of dog-mediated zero rabies by 2030, however, rabies control activities such as dog vaccination as well as rabies surveillance should be more strengthened and promoted in all rabies-endemic regions of the world.

The Predictive Index Of Dengue Fever Incidence Number Based On Behavior, Program, And Environment In Villages In Jember Regency

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Background: The province of East Java ranked on the first position with the biggest number of mortality caused by Dengue fever in Indonesia and Jember was one of the regencies which had high prevalence of the disease.

Aim: The objective of this research was to organize the predictive index of Dengue fever incidence number based on the behavior, program, and environment in Villages located in Jember regency in the year of 2016.

Method: this research was the observational method with population correlational study approach with villages situated in Jember regency treated as the analysis units. This research was administered in July to October 2017. The number of the samples in this research was reckoned by using the single sampling correlation coefficient formula so that it obtained 52 villages and acquired by exercising Stratified Random Sampling method that was based on the altitude level of the village which subsequently they were derived by using Simple Random Sampling method.

Results: Dengue fever incidence number in Jember regency varied in every village. The correlational test showed that the high educational variable (senior high school and above) (p-value = 0,007; r = -0,373), the abatement implementation (p-value = 0,029; r = 0,304), ABJ (p-value = 0,001; r = -0,434) and the people density (p-value = 0,048; r = 0,275) were correlated with the Dengue fever incidence number. Furthermore, the result of the double linear regression test revealed that the variable with senior high and above educational background, people density, and ABJ were the variables that could be used to predict the Dengue fever incidence number in Jember regency.

Conclusion: the variable with high educational background (senior high and above), people density, and ABJ are the indicators to predict the dengue fever incidence number in Jember regency.

Keywords: Incidence Number, Dengue Hemorrhagic Fever, Predictive Index

HIV/AIDS and Impact on Work Productivity in Companies, Indonesia

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Background: HIV and AIDS have a disease that is becoming a major problem in the world, including in Indonesia. Over the past few years, rates of HIV and AIDS infections have continued to increase significantly. Unlike in most diseases, HIV and AIDS are mostly productive age sufferers between 15 to 49 years. The highest percentage of HIV infections was reported in the 25-49 year age group and the highest percentage of AIDS in the 30-39 year age group. Therefore, HIV and AIDS can be a major threat to the Indonesian workforce and have a devastating impact on the economy and problems at work.

Result: Various negative impacts that arise as a result of being infected with HIV and AIDS include economic losses both directly and indirectly suffered by individuals, companies, and countries. HIV and AIDS sufferers will experience economic losses due to lack of work productivity and even loss of work. The company will spend a significant amount in handling people with HIV and AIDS. Declining worker productivity will have an impact on the lack of company production, and significantly impact the national economy because it is related to tax revenue. Lack of understanding and awareness of workers about HIV and AIDS at the workplace is the cause of the emergence of stigma and discrimination for PLWHA (People Living With HIV/AIDS). Stigma and discrimination for PLWHA will also lead to mental, and social health disorders. In addition, the impact of pain and even death will be felt by people with HIV and AIDS. People who have been infected with HIV will experience a decrease in immunity so that they are easily attacked by other diseases. The number of additional diseases for people with HIV will further accelerate to death.

Association Between Health Status of Family, Alcohol Consumption And Smoking Habits With Characteristic of Metabolic Syndrome

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Background: Metabolic Syndrome (MetS) is the accumulation of risk factors for metabolic disorders characterized by visceral obesity, increased triglycerides and glucose, low high lipoprotein density, hypertension which is increasing morbidity and deatortality cause of vascular disease.

Aim: To identify association between family history health status, alcohol consumption and smoking habits with metabolic syndrome the prevalence and factors associated with characteristic of metabolic syndrome.

Method: The research method was used observational analytic using a cross sectional study design. The study was conducted in the working area of Telaga Biru Health Center. The number of samples 319 people. Purposive sampling technique was used to collect the sample based on inclusion critea. Data analysis using chi square test with value $\alpha = 0.05$.

Results: The prevalence of metabolic syndrome was 6.0% and the characteristic of metabolic syndrome was showed the prevalence of hypertension 62.1%, central obesity 53.9% and hyperglycemia 15.4%. Bivariate analysis showed no association between smoking habits, history of alcohol consumption, sex and family history of obesity with hypertension, while there was significant association between family history of hypertension and diabetes mellitus with hypertension. There was no association between history of alcohol consumption and family history of obesity with central obesity, but there was significant association between smoking habits, sex, family history of hypertension, obesity and diabetes mellitus with central obesity. There was no association between smoking habits, history of alcohol consumption, sex, family history of hypertension and diabetes mellitus with hyperglycemia, but there was significant association between family history of obesity with hyperglycemia.

Conclusion: There was significant association between family history of hypertension, diabetes mellitus with hypertension, there was significant association smoking habits, sex, family history of hypertension, obesity and diabetes mellitus with central obesity and there was significant association between family history of obesity with hyperglycemia.

Keywords: hypertension; central obesity; hyperglycemia; risk factors; metabolic syndrome

Factors Related Case of Down Syndrome at Student Special School in Banjarmasin City

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Backgroud: Down syndrome is a mental disorder which hampers the growth and development of children. Base on WHO in 2018 the estimated incidence of Down syndrome is between 1 in 1,000 to 1 in 1,100 births live worldwide. The purpose of this study is to explain the factors related with the incidence of Down syndrome.

Aim: The purpose of this study is to explain the factors related with the incidence of Down syndrome.

Method: This research designed as an analytic observational research with case control method. the population in this research were all childs with Down syndrome in SLB Banjarmasin City with a total of 16 students conducted in June-September 2019. Samples were determined by total sampling of 16 children with down syndrome with a ratio of 1: 4 were completed with matching techniques.

Results: The results illustrate there is a significant between relationship maternal age at delivery (p-value 0.001) and history of down syndrome (p-value 0.001) to incidence of down syndrome. While variables without relationship to the incidence of Down syndrome are consanguineous marriage (p- value 0.485), birth order (p-value 0.398) and twin pregnancies (p-value 1.000).

Conclusion: This study concludes a between relationship maternal age at birth and family history with the incidence of Down syndrome. Be required for dissemination of information and education about down syndrome so that couples of childbearing age who want to have children to avoid the risk of down syndrome.

Keywords: Down syndrome, maternal age, birth order, family history, multiple pregnancies.

The Effect of Time to Antiretroviral Treatment on CD4 repair failure in TB-HIV co-infection patients

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Background: The importance of early initiation of Antiretroviral Therapy (ART) for tuberculosis (TB) and HIV co-infected patients is debated. Using ART earlier is correlated to pharmacologic interactions, side effects, treatment interruption, high pill burden and Immune Reconstitution Inflammatory Syndrome (IRIS). On the contrary, a delay in having ART could lead to a harm event, a progression of AIDS and the expansion of new opportunistic infections.

Aim: This study was aimed to assess the effect of time to start ART on CD4 repair failure among TB-HIV co-infection patients in Infectious Disease Hospital of Sulianti Saroso, Indonesia.

Method: This study used cohort retrospective design with eighteen months to follow up with naive ART patients in medical records patients in January 2010-November 2014 as the study population. A total of 164 TB-HIV co-infection patients \geq 15 years old and had a minimum of 2 CD4 cell count laboratory test results. Participants started ART within 2-8 weeks After ATT noted as early ART group. All the data were analyzed with a survival analysis model using Stata 12 software. Before multivariate analysis using a time-independent cox regression test was conducted, the proportional hazard assumption test was required to ensure that the Hazard Ratio (HR) each independent variable is constant over time.

Results: The cumulative probability of CD4 response failure among 164 TB-HIV co-infected

patients after eighteen months follow up was 14,43%. The Bivariate analysis showed the hazard rate of CD4 repair failure was 767 per 10.000 person-year in the early ART group versus 474 per 10.000 person-year in late ART arms (HR=0,590; 95% CI=0,233-1,495; P=0,266). The same finding in the multivariate analysis, after controlled by types of ARV regimens and classification of TB cure, the rate of CD4 repair failure was lower in delayed ART participants compare with early ART arms (aHR=0,502; 95% CI=0,196-1,287; P=0,151). Conclusion: The Hazard rate of CD4 repair failure in the early ART group of study participants showed a greater response compare with late ART arms. However, the effect was not significant.

Keywords: TB-HIV Co-infection, time to start Antiretroviral treatment, CD4 repair

The Relationship Between Housewife Preparedness in Facing Floods Disasters with Coping Mechanism in Tamping Village

Steven Wijono

Background: Indonesia is the largest archipelagic country in the world, located across the equator between two continents, two oceans, and three plates of the earth. This condition as a risk factor for natural disasters such as floods. Tamping is a village in Gresik Regency which is frequently affected by floods due to overflowing of the Sungai Lamong tributary. This has an impact on the disruption of various sectors in the village, especially the economic sector as a stressor for the Tamping community.

Aim: Based on this background, the researcher wants to understand whether there is a correlation between community preparedness and coping mechanisms in dealing with floods.

Method: This is an observational analytic study with a crosssectional study design. The sample was 59 housewives in the Tamping village. The research data was taken through a questionnaire and data analysis using the Spearman test.

Result: The result of analysis between preparedness of housewives with coping mechanisms obtained $r=0.502$ and $p=0.001$.

Conclusion: There is a relationship between preparedness of housewives in dealing with floods and coping mechanisms in Tamping Village.

International Prevention of Disease Outbreaks in Indonesia: Legal and Preventive Medicine Countermeasures

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Background: Since 1969 until 2005, the International Health Regulations (IHR) had been the legal basis of health regulations on an international perspective. As stated in the IHR, disease outbreaks have become one of the critical public health problems. In the boundary of IHR, disease outbreak management should be established by all member states of the World Health Organization (WHO). Indonesia, as the member state needs to form countermeasures to minimize the possibility of infectivity of disease. Nevertheless, the regulation regarding disease outbreaks in Indonesia has not covered the vital aspects of disease outbreak countermeasures. IHR as the international legal basis of public health was not effectively implemented in the regulation of disease outbreaks. The effects of ineffective regulation regarding disease outbreak can potentially manifest ignorance and also chaotic states of the infectious disease issues. Ignorance and chaotic potential signify the importance of law, especially in the regulation of disease outbreak management. Creating a set of disease outbreak regulations with the adoption of the IHR may potentially realize effective preventive countermeasures with the help of the practice of legal medicine and prevention to the community.

Aim: This article focused on legal and preventive medicine countermeasures in Indonesia to prevent disease outbreaks and clarify the importance of health law enforcement when the outbreaks with pandemic risks emerge from other countries.

Method: This article uses the legal doctrinal research method by constructing the ideas to create the effective countermeasure of disease outbreak with regulations related to preventive medicine

Results: This research found that regulations regarding disease outbreaks in Indonesia lacked the preventive ability seen in Government Regulations and Laws in accordance with disease outbreaks. Countermeasures against international epidemics need to be implemented.

Conclusion: In conclusion, the countermeasures of international disease outbreaks through legal and preventive medicine on national regulation was required to minimize the risk of infection of the country. The legal enforcement should lead the public into action and help the government, especially health and medical professionals in its duty of controlling the spread of disease from the outside of Indonesia.

Keyword: International Health Regulation (IHR), Disease Outbreak, Law, Preventive Medicine, Indonesia.

Factors Affecting Youth Mental Health Depression: Analyses of IFLS 4 And IFLS 5

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Background: Adolescence is a challenging time in achieving developmental milestones, and marks the transitions from childhood to adulthood. Therefore, adolescents are vulnerable to experiencing mental health disorders, including depression. It is necessary to know the factors that influence depression in adolescents.

Aim: To assess the factors that influence youth mental health in Indonesia.

Method: Indonesian Family Life Survey (IFLS) is a longitudinal survey with the fourth wave (IFLS 4) was conducted in 2007 and IFLS 5 in 2014. This study used data of adolescents aged 15-19 years in 2007, then observed the development of mental health in 2014. The instrument used for mental health is the Patient Health Questionnaire (PHQ- 9), with with mental health restrictions above a score of 10.

Results: The analyses were conducted on 2,315 youth, who were matched between IFLS 4 and IFLS 5 are Approximately 40% were 15-19 years, 60% were 20-26 years. There were more women (54%), and 80% were of Javanese, Sumatran and Balinese ethnicity. Most (56%) were high school or university/college graduates 56%. There were increased in mental health status between IFLS 4 (12%) and 5 (29%). The average mental health score was 5 points (IFLS 4) and 7 points (IFLS 5). The logistical analysis results found that gender affected the occurrence of mental health disorders (OR 1.4, $p < 0.05$). Ethnic and school factors also influence the occurrence of adolescent mental health disorders (OR. 7, $p < 0.05$). In the DID analysis, women gave 0.9 points difference between IFLS 4 and 5 ($p < .001$), rates reduced by 1.2 points ($p < 0.001$) and schools reduced 0.6 points ($p < .05$).

Conclusion: Factors that are significantly correlated with depression in adolescents are gender, ethnicity and school level. There are significant differences in depression in adolescents. It is necessary to prioritize handling depression in adolescent girls, from ethnic groups outside Java, Bali and Sumatra and those who attend high school and above.

Factors of hypertension captured from IFLS 2014

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Background: Hypertension is still a serious global problem. It is the silent killer that contribute the 45% death of cardiovascular disease and 51% death of stroke. Various risk factors attributed to hypertension, which include modifiable and non-modifiable risk factors. Several factors have also been linked to hypertension, i.e. Age, gender, body mass index and education.

Aim: This study aimed to describe the prevalence of hypertension in Indonesia from the Indonesian Family Life Survey (IFLS) wave 5 in 2014

Method: This cross sectional study analyzed data from IFLS 5 which were conducted in 2014-2015. The sample consisted of 31.162 individuals at age more than 15 years old in the household obtained from questionnaire-based interview. The diagnose of hypertension was reported by respondents in the interview.

Results: The result showed that the prevalence of hypertension based on report was 3.662 respondents (11,75%). The respondents reported that hypertension which diagnosed by doctors was 7,40%, by midwives was 2,73% and by paramedics/nurses was 1,63% of total respondent. The age distribution of hypertension population was 29,55% respondents at age less than or equal to 40 and 70,45 % respondents at age greater than 40. The reported hypertension on women was 64,53% and men was 35,47%. Furthermore, the hypertension on Body mass index (BMI) 23-30 was 49,73%, on BMI 18,5-23 was 28,10% , on BMI > 30 was 15,80% and on BMI <18,5 was 6,37%. Hypertension on high level of education was 39,49% and on lower level of education was 60,51%.

Conclusion: The study found that elderly, women, pre obesity and lower level of education can be the factors that increasing the prevalence of hypertension. Future intervention should emphasize to improve the promotion of healthy life style, education and inspire the population to maintain the ideal body weight.

Factors Associated With Cervical and Breast Cancer Screening in Indonesia, 2018

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Background: Cervical and breast cancer screening program has been running in Indonesia since 2007. The method of cervical cancer screening is Visual Inspection with Acetic Acid (VIA) or Pap Smear and early treatment with cryotherapy for positive VIA. Meanwhile, screening for breast cancer using method of Clinical Breast Examination (CBE). Till 2018, there are 3,664,625 women aged 30-50 years has been screened. There is limited analysis of factors associated with the screening at national level in Indonesia.

Aim: The study aimed to know factors associated with number of cervical and breast cancer screening in Indonesia, 2018

Method: This was a cross sectional study with descriptive and analytic analysis. Secondary data was collected from Directorate of NCD Prevention and Control, Ministry of Health and Central Statistic Bureau (BPS). Cumulative data of the screening data in 2018 was used in the analysis from 34 provinces in Indonesia. Descriptive analysis was performed to know distribution of cervical and breast cancer screening, PHC giving screening services, providers consisting general practitioners (GP) and midwives, NCD Post (Posbindu), and income (gross domestic product). Correlation analysis was performed to know association between selected factors to cervical and breast cancer screening. Based on normality test using Kolmogorov-Smirnov, p value of the screening data was 0.020 which meant that the data distribution was normal. Thus, we used Person Product Moment as test of correlation.

Results: Mean of cervical and breast cancer screening was 107,783 per province, PHC providing the screening was 150 per province, providers per PHC for GP, midwives, and total was 111, 288, and 399 respectively. Meanwhile, mean of NCD post was 1,807 per province and village with NCD post was 1,238 per province. Additionally, income was 404,445 billion IDR at average per province. Factors that significantly associated/correlated with cervical and breast cancer screening were PHC with screening services (p 0.000; r 0.828), GP (p 0.000; r 0.669), total provider (p 0.024; r 0.387), NCD post (p 0.000; r 0.861), Village with NCD Post (p 0.000; r 0.780), and income of the province (p 0.000; r 0.832). Meanwhile, number of midwives was not associated with the screening.

Conclusion: PHC providing screening, GP, total providers, total NCD Post, village with NCD post, and income of the province were associated with cervical and breast cancer screening.

Analysis of The Relationship Between Human's Factor and Motorcycle Accidents at Sriwijaya University College Student In Indralaya

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Background: Traffic accidents are one of the main public health problems at the global, regional and national levels. Motorcycle riders accounted for 23% of the causes of traffic accidents. The cause of traffic accidents is 90% caused by human factors that interact with other components.

Aim: The purpose of this study was to analyze the relationship between human factors and motorcycle accidents in Sriwijaya University college students in Indralaya.

Methods : This study used a cross-sectional design. This research was conducted with 130 samples in Sriwijaya University. The sampling technique uses cluster sampling technique then analyzed using the Chi Square test with a significance level of 5%.

Results: Driver's knowledge in good category (92.3%), poor driver's skills (83.1%), driver's good behaviour (58.5%), physical condition of good driver(66.2%), completeness of incomplete PPE (93.8%) and completeness of complete motorcycle (63.8%). Based on the Chi Square test knowledge (P-value = 0.249), rider's skills (P-value = 0,000), rider's behavior (P-value = 0,000), physical condition of the rider (P-value = 0.661), PPE completeness (P- value = 1,000) and completeness of the motorcycle (P-value = 0.762).

Conclusion : Motorcycle accidents in college students can be minimized through the "Police goes to campus" program, which is a socialization activity and safety riding training that cooperate with the police and also do supervision to the college students behaviors while riding inside or outside the campus environment and college student are expected to complete needs before riding

Nicotine Exposure and Lung Function Disorders Due to Tobacco Smoke in Bar and Restaurant Workers in Denpasar City

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Background: There are 126 bars in Denpasar City and 72 restaurants. Tobacco smoke contained in the bar and restaurant environment can be inhaled by visitors and workers who do not smoke as well as one of the risks of danger or hazard to bar and restaurant workers.

Aim: Aims of this study are to find out the description of nicotine exposure and lung function disorders due to exposure of tobacco smoke in bar and restaurant workers in Denpasar City.

Methods: This study is an observational study with a cross-sectional design. The sampling technique used two stages cluster sampling. 15 bars and 10 restaurants were taken by random sampling, then from each bar and restaurant 4 workers were selected by random sampling. Measurement of lung function disorders in workers was measured using a SmartOne portable spirometer. The presence of exposure to cigarette smoke in workers was tested using the RightSign one-step cotinine test device.

Results: The results showed that most of the respondents were still actively smoking (59%), where 68% of them smoked at work, and 15.3% smoked indoors. A total of 56% of workers showed a positive urine cotinine test which is objective evidence of nicotine exposure. In addition, 76.2% of positive cotinine results are active smokers and 26.8% are passive smokers. The results of the lung function examination of the respondents showed that 22% of the respondents' lung function had moderate disturbances and 4% had severe disturbances.

Conclusion: Nicotine exposure in bar and restaurant workers is quite high and is closely related to smoking behavior and smoking habits in the workplace. This can trigger lung function disorders in workers. Managers are required to apply regulations such as smoke free law to protect the health of workers, especially for passive smokers.

Keywords: nicotine exposure, lung function, tobacco smoke

Hypertension Amongst Heavy Equipment Operators in Coal Mining and Related Factors

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Background: Hypertension is a major risk factor for cardiovascular disease and has become a major health problem for both the general public and the working community. Various research results prove other risk factors in various types of work are different. Coal mining workers are a vulnerable group for hypertension.

Aim: This study aims to determine the prevalence of hypertension in heavy equipment operators in coal mining workers and analyze the related factors.

Method: A cross-sectional study with simple random sampling was conducted on 56 heavy equipment operators. The independent variables consist of age, years of service, smoking habits, coffee drinking habits, and exposure to noise at work, while the dependent variable is hypertension. The measuring instruments used consist of a digital tension meter, sound level meter, and questionnaire. Statistical test using Phi test was applied to identify the correlation between hypertension prevalence and other parameters.

Results: An hypertension prevalence of 82.1% was found among heavy equipment operators. The hypertension prevalence was significantly correlated with age of respondent ($p=0.004$, $r=0.265$) and noise exposure ($p=0.010$, $r=0.341$).

Conclusion: The prevalence of hypertension in heavy equipment operators in coal mining is quite high. Further medical examination and improvement of the work environment (reducing noise intensity in the workplace) need to be carried out immediately so that hypertension experienced does not develop worse.

Keywords: Hypertension, coal mining workers, age, noise exposure

HIV/AIDS Risky Behavior Model in LGBT Youth in Gorontalo Province

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Background: In Plan Behavior theory it is said that human being grows within the different social environment may gain different information on various issues. This information can be the basis of beliefs on behavioral beliefs, the social demand of important others (normative beliefs) and on the obstacles that can prevent them to show certain behavior (control beliefs). These factors can influence behavior beliefs, normative beliefs, and control beliefs, and therefore, influence intention and behavior.

Aim: The objective of this study is to develop risky HIV/AIDS behavior model of LGBT youth based on the concept of Plan Behavior Theory (PBT).

Method: This is an observational study with a cross-sectional approach. The modeling uses Structural Equation Model (SEM) pathway through AMOS 8.50 software application. The variables in this study are internal factors such as religious obedience, knowledge, beliefs, intention, and risky behavior. This study takes place in Gorontalo province with 200 youths who have LBGT risky behaviors.

Result: The modeling result on the risky behaviors of LGBT youth in Gorontalo is in contrast with the PBT; the religious obedience plays a direct role in shaping the behavior of the LGBT youth. This study takes place in Gorontalo province with 200 youths who have LBGT risky behaviors.

Conclusion: Thus, it is recommended that HIV/AIDS prevention programs on LGBT youth can be focused on religious activities.

Keywords: LGBT, Risky Behavior, HIV/AIDS

Outcome of Tuberculosis Treatment among TB-DM Patients in Jakarta Indonesia

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Background: Implementation of Direct Observed Treatment Short Course (DOTS) were improved successfully in terms of number. Nevertheless DM is proven affecting in longer healing of TB patients. National guidelines on TB DM exists since 2015, however there is little information on how TB-DM activities are carried out at the operational level.

Aim: This study aim to identify prevalence of DM among TB patients, the cure and the healing rates on TB among the confirmed TB-DM cases and other factors that influence outcomes of identified TB patients with DM (TB-DM).

Method: TB National Integrated TB Information System (SITT) 2017-2019 is the main source of data to obtain prevalence of DM among TB patients. The subjects were classified according to the following treatment outcome: cured and complete treatment, default, death, and relapse. Subjects with TB treatment outcome (transferred and missing data) and HIV positive were excluded for the analysis. Variable associated with the outcomes of interest were included in a polytomous logistic regression model.

Result: The study found 21% DM among all TB patients DM screening. TB cases compare TB-DM cases successfully treatment were 86.3%; death: 2.7 %, default: 8.1% and failure: 2.8%. On the other hand, results among the TB-nonDM cases were: successfully treatment were: 89.8%; death: 2.0%; default: 7.2% and failure: 1.1% (p value< 0.05). Result of regression, some main factors that associated with TB-DM patients with odds of default was higher for cases registered in government hospital (OR = 2.06, 95% CI 1.15–2.80); the odds of death was protected for cases registered in private hospital (OR = 0.23, 95%CI 0.6–0.95); and was higher for cases over 45 year (OR = 2.55, 95% CI 1.16–5.64); the odds of failure was greater for cases over 45 years (OR = 1.12, 95%CI 0.63–1.98), was protected for cases in private hospital (OR = 0.09, 95%CI 0.01–0.62) and government hospital (OR=0.19, 95%CI 0.09–0.42).

Conclusion: This study highlights the need for increased attention to management of tuberculosis among with TB and diabetes cases.

Keyword: Tuberculosis, Diabetes Mellitus, Treatment

Relationship Between Eating Behavior and Early Childhood Caries (ECC) in Children

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Background: Eating process of children is not only to fulfill their satiation but also to sufficient nutrition needs. Eating problems could interrupt their health, including oral and dental health. Poor Oral and dental health could affect their confidence, chewing ability, and nutrition supply. Early Childhood Caries (ECC) is the most common dental disease of children. ECC is dental disease that affects hard tissue of primary dentitions.

Aim: the aim of this study is to understand the association between eating behaviour and ECC of children.

Method: this study is observational with cross-sectional design. Sampling was conducted with purposive sampling and total sample is 165 children between 3-5 years old with their mother. Children Eating Behaviour Questionnaire (CEBQ) is used to measure eating behaviour of children. ECC was measured by def-t index. Data analysis using chi-square test.

Result: ECC prevalence is 47,9%. This study found that Food Responsiveness (p-value 0,001; OR = 3.235 ; 95% CI 1,648-6,341) , Food Fussiness (p-value 0,010; OR = 2,380; 95% CI 1,273-4,450) and Enjoyment of Food (p-value 0,005; OR = 0,377; 95% CI 0,198-0,72) were significantly associated with ECC.

Conclusion: Eating behaviour contribute on development of ECC.

Keywords: eating behaviour, Early Childhood Caries (ECC), CEBQ

Evaluation of Preparedness Program in Disaster Resilient Village Activities in The Regional Disaster Management Agency

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Background: Disaster is a phenomenon resulting from changes in ecosystems that occur suddenly in a relatively short time in the relationship between humans and their environment that occur in such a way, such as earthquakes, floods, volcanoes that require immediate countermeasures. Disasters that often occur are volcanic eruptions, earthquakes, tsunamis, floods, droughts, hurricanes and forest fires in Indonesia. Based on data collected by the National Disaster Management Agency (BNPB) that the disasters that occurred in Indonesia during 2016 reached 2,384 events which were dominated by disasters such as floods, landslides and tornadoes.

Method: Article searches are carried out using a search engine using Google Scholar with the keywords used are human resource input, funding input, infrastructure input, quantity output, quality output, timeliness and target output.

Result: Based on the results of the literature review, it was found 12 articles that discussed human resource input, funding input, infrastructure input, quantity output, quality output, timeliness output and targets on preparedness programs in disaster resilient village activities at the Regional Disaster Management Agency (BPBD).

THE EFFECT BETWEEN CHARACTERISTICS AND TYPE OF CIGARETTE ON THE EVIDENCE OF STROKE AMONG SMOKER

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Background: Stroke is a clinical symptom caused by clinical signs that develop rapidly from focal disorders that last more than 24 hours or cause death without apparent cause. Smoking is one of risk factor the evidence of stroke.

Aim: The aims this study to analysis the type of cigarette affects the evidence of stroke.

Method: The design of this study was observational analytic with case control design. Case samples were stroke sufferers, while control samples were non-strokes, each with 53 respondents. Location study is Surabaya City Haji Hospital in 2019. The sampling technique uses systematic random sampling. Retrieval of data through secondary data and primary data. The statistical test used was the chi square test.

Results: The results showed that there was something related to the incidence of stroke was age ($p = 0,000$; OR = 37,692; 95% CI = 11,399-124,637), gender ($p = 0.032$; OR = 2,522; 95% CI = 1,152-5,519), and type of smoking ($p = 0,028$; OR = 4,267 ; 95% CI = 1,134- 16,050). While the variables that have no influence with the incidence of stroke are working status ($p = 0.151$; OR = 0.506; 95% CI = 0.223-1.148).

Conclusion: The conclusion from this study there is a influence between age, sex, and the type of cigarette with the evidence of strokes among smoker in Surabaya Haji Hospital in 2019.

Keywords: Stroke, characteristic, type of cigarette, smoker



SCOPE :
BIOSTATISTIC AND
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*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0
AND THE COVID-19 PANDEMIC*



Application Of Geographical And Demographic Standards To Investigate The Readiness Of Primary Care Facilities In Emergency Situations Using GIS Networks Application (Case Study; Sleman City)

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Background: Enhancing the primary care facilities through examining the current readiness of facilities and services related to disaster risk reduction, identifying deficiencies and weaknesses.

Aim: This study applied geographical standard (Coverage Distance) and demographic standard to investigate capabilities of primary health care facilities to cover the largest area of the study area and the service area that you can access. In addition to analyzing the population's suitability with the number of facilities available in the study area, is it sufficient to provide services to all?

Method: This study used mixed methods, applying GIS techniques to analyze primary care facilities by applying the demographic and geographic standard for primary care facilities to determine the extent of the shortage, assess the needs, and find possible solutions and recommendations.

Results: a significant deficiency in the number of primary care centers present in the study area compared to the large population at the level of geographical and demographic standard.

Conclusions: Primary care centers are covering 79% of the study area according to the geographical standard; the areas that the health centers cannot provide service are concentrated in North (Cangkringan - Pakem- Turi-Tempel) and South (Prambanan -Berbah - Gamping). Study area needs 41 additional centers to cover the shortfall in service provision as per the demographic standard. The largest number of people who suffer from a lack of services in health centers, according to statistics, is located in the (Depok) region, where the percentage of disability has reached 130,526 people, needing 7 new centers.

Keywords: Primary care facilities, readiness, weaknesses, services

Why Are Adolescents Family Planning in East Java Not Ideal?

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Background: Knowledge of population, adolescent reproductive health, and family development have an important role in family planning for teenagers in East Java. However, based on SKAP 2018-2019 data, the knowledge of adolescents in East Java about population has actually decreased and the ASFR rate is still high.

Aim: This study aims to analyze the determinants that influence family planning for adolescents in East Java.

Method: This research performed a cross-sectional study method. Via the "Survei Kinerja dan Akuntabilitas (SKAP) 2019", the data arrives through 5.921 adolescents aged 10-24 years old (after weighted). Built upon PIK-R and ISM for adolescents, active BKR for parents, and a precise amount of parents' issues, it inferred onto parents' educational characteristics for adolescents; henceforth, those were grouped into independent variables, and family planning for adolescents is subsumed into the dependent variable. Data were evidently analyzed using univariate and bivariate methods, then.

Results: Chi-square test results indicate that the level of parental and adolescent education positively influences family planning for adolescents. Parent and adolescent knowledge about adolescent population and reproductive health issues also significantly influences adolescents to plan families. However, this study found that parental participation in the Bina Keluarga Remaja program was not significantly related to family planning for adolescents. Most parents who have adolescents whose family planning is not ideal turned out to be low-educated (75.1%) and at the middle level of welfare (81.4%).

Conclusion: Departing from this analysis, family planning programs for adolescents should be directed at family-based economic empowerment and improving the quality of family education.

Keywords: population, adolescent reproductive health, family development, family planning, youth

‘Do I Have To Choose?’ Two Children Vs. Four Children In Bali

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Background: The Indonesian family planning program has been running for over five decades. Until the present, the implementation of this program still generates debate over important policy issues. On June 14th, 2019, the Balinese provincial government released a new pro-natalist family planning policy No.1545 (*Keluarga Berencana Krama Bali*) as a response to concerns arising because of the national family planning program's two-child policy success.

Aim: What are the implications for Balinese women's position in response to the political and cultural policies that impact upon their reproductive rights? This study analyses the tensions between the national family planning program's two-child policy and the recent local Balinese *Keluarga Berencana Krama* model by focusing on Balinese women's perspectives.

Method: Ethnographic research (fieldwork and interviews) was conducted between January and February (2020) in two hamlets (Biaung-Denpasar and Tumbakasa-Gianyar) and one family planning office in Bali province, with a total of 18 Balinese women participants.

Results: This mixed method study indicates that the participants were constrained in their fertility decisions by patrilineal structures, economic stresses, and government population policies. The changing impacts of the *Krama Bali* compound those pre-existing constraints and potentially limit the participants' opportunities to exercise agency. It encourages a four-child model according to the Balinese naming system and complicates the triple burden impacts on women's agency. The new pro-natalist provincial policy explicitly prioritises cultural values and indirectly exacerbates the pressure to produce inheriting sons. The participants had to make choices between cultural preservation and economic considerations, intensifying pressures from their productive, reproductive, and customary (*adat*) obligations.

Conclusion: Internal and external pressures imposed upon the Balinese women participants force them to navigate conflicting economic, political, and cultural demands with varying degrees of agency.

Keywords: Balinese culture, family planning, fertility, gender, population policy

The Social Value Of Implementing The Ten Steps To Successful Breastfeeding In An Indonesian Hospital: A Case Study

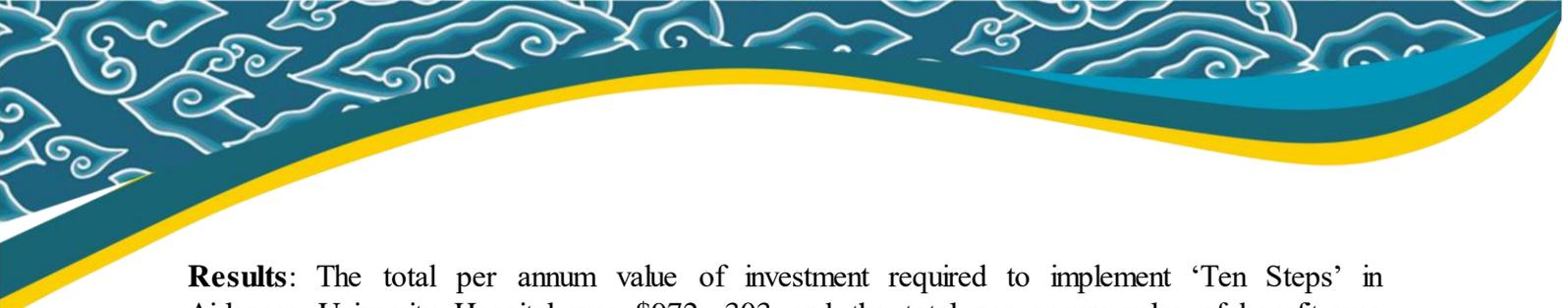
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Background : Breastfeeding is important for maternal and child health, as well as community and country. Increasing breastfeeding rates internationally could save USD 341.3 billion or 0.70% of global gross national income from preventable morbidity and mortality. Breastfed children have lower risk of otitis media, diarrhea, respiratory infection, type 2 diabetes and obesity, while mothers have lower risk of breast and ovarian cancer and type 2 diabetes. Despite the benefits, exclusive breastfeeding prevalence among infants less than 6 months of age are estimated globally at only 41%. In 2018, Indonesia had a lower exclusive breastfeeding rate of 37% at 6 months postpartum; ranging from 20% to 56% throughout the country, showing unequal breastfeeding support. WHO launched the Ten Steps to Successful Breastfeeding ('Ten Steps') in 1989, later embedded in UNICEF's Baby-Friendly Hospital Initiative (BFHI) program in 1991. The BFHI aims to encourage maternity facilities worldwide to ensure adequate education and support for breastfeeding mothers by adhering to the Ten Steps and complying with the International Code of Marketing of Breastmilk Substitutes. While no Indonesian hospitals are currently BFHI- accredited, elements of the WHO/UNICEF Ten Steps (updated in 2018) are adopted in Indonesia's national regulation of maternity facilities. Even so, an Indonesian survey in 2011 found that less than one in ten government hospitals implemented the Indonesian 'Ten Steps' program as required. Implementation of the WHO Ten Steps to Successful Breastfeeding individually and as a package has been associated with maternal and infant health benefits. However, to date, few studies have examined the impact in economic terms.

Aim: This study aims to measure the social value of 'Ten Steps' implementation in an Indonesian hospital

Method: A 'Social Return on Investment (SROI)' framework was used to measure the impact of the 'Ten Steps' implementation in an Indonesian maternity facility. SROI consists of mapping the stakeholders, identifying and valuing outcomes, establishing impact, calculating the ratio between investment and impact, and conducting sensitivity analysis. The analysis was supplemented with micro-costing studies from the literature to measure the benefits of the Ten Steps. The study was conducted in January 2020 in Airlangga University Hospital, Surabaya, Indonesia. This facility has implemented the 'Ten Steps' since it was established in 2012. We interviewed the financial and nursing managers, a senior pediatrician and senior midwife due to their detailed understanding of the implementation of the Ten Steps in the hospital. The interview was guided by a questionnaire which we developed based on the 2018 WHO/UNICEF Ten Steps to Successful Breastfeeding.



Results: The total per annum value of investment required to implement ‘Ten Steps’ in Airlangga University Hospital was \$972, 303 and the total per annum value of benefit was US\$ 22,642,661. The social return on the investment in implementing ‘Ten Steps’ in this facility was calculated to be US\$ 49 (sensitivity analysis: US\$ 18-65), which meant that every US\$ 1 invested in Ten Steps implementation by Airlangga Hospital could be expected to generate approximately US\$ 49 of benefit.

Conclusions Investment in the Indonesian ‘Ten Steps’ regulation in this Surabaya maternity hospital produced a social value 49 times greater than the cost of investment. This provides novel evidence of breastfeeding as a public health tool that is worth the investment, bringing important social impact for mothers, babies, families, communities and countries, as well as having potential to help address inequity in access to quality maternity services in Indonesia.



A Qualitative Study Of The Stages Of Physical And Verbal Abuse Experienced By Mothers During Labor And Childbirth In The Delivery Room In Dili.

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Background: Timor-Leste has made great progress in increasing reproductive health coverage especially reducing maternal mortality in the last decade, but major challenges remain where according to TLDH (2016) there are 51 percent of mothers still give birth at home compared to 49 percent in health facilities. Some of the challenges/obstacles that can affect access to health facilities, one of which is the behavior of staff in the delivery room by treating mothers with disrespect and harassment such as physical and verbal abuse. These are the practice of treating a mother badly or harshly where she is subjected to violence which includes being pinched, beaten, yelled at in labor, childbirth or after childbirth.

Aim: The research objective was to explore the stages of physical and verbal abuse treatment when the mother was in the delivery room.

Method: This study used qualitative methods (in-depth interviews (IDIs) and was conducted with women who were in the post-natal room. The study took place in two sites health facilities at community Health center and Dili National Hospitals. We used a thematic analysis approach and coded transcripts manually.

Results: 15 IDIs are included in this analysis. Women reported that Physical and verbal abuse mostly occurred at the perineal suturing stage, the in-partum stage, the placenta expulsion stage and the labor process stage.

Conclusions: The Findings have implication for how to provide respectful maternity care to mother during labor and childbirth to reduce physical and verbal abuse treatment by health care provider in delivery room.

Keywords: Physical, Verbal, Abuse, Childbirth mother, Delivery room

Quality Of Life Among Women In Palm Oil Plantation Area: A Mix Method Study

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Background: The concept of health has been considered more comprehensively, and more attention has been paid to quality of life. Considering the role of women in family daily life, health and the specific characteristics of working in palm plantation, their quality of life would affect family's quality of life also.

Aim: This study aimed to provide detail information about quality of life women lived in palm oil plantation area.

Method: It was a mixed method study with sequential approach. Data collected in Mei 2019 consisted of 128 women who lived in area of Tri Tunggal Sentra Buana palm oil plantation company. The respondent selected purposively, limited by criteria, women 15-49 years who are workers in palm oil plantations or live in palm oil worker households. Health-related quality of life assessed using the WHO QoL. Wilcoxon signed rank test was used to compare the quality of life of housewives and working women. The qualitative study done in the second stage, data gathered from 7 women using in-depth interview and 1 FGD with focus on exploring social support. Qualitative data were analyzed using thematic analysis.

Results: The survey showed 45.3% women working as a palm oil plantation worker. Among the 4 domains of quality of life, the domain of social relations has the highest average value (73.8). The average quality of life in working women is higher than housewives specially on psychological health domains (0.006). Qualitative study showed the community has a high level of kinship, it was the source of the better quality of life for women in palm oil plantation. Double burden were found for female worker, although division of labor has occurred, but the wife domestic workload still greater. Furthermore female workers must dealing with work without personal protective equipment and some have accidents due to work.

Conclusion: The findings indicated that working women reported had better quality of life especially on the role psychosocial and mental health. It is suggested that quality of life among women who lived in palm plantation area still needs to be improved, through women empowerment and advocating for work safety.

Keywords: palm oil plantation, quality of life, health, women

Risk Factors Of Under-Five Children Diarrhea Analysis Of Demographic And Health Surveys In Indonesia 2017

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Background: Under-five children's diarrhea in Indonesia are health problems that have a serious impact. Diarrhoeal diseases remain among the most common causes of mortality and morbidity in children, particularly in low and middle-income countries.

Aim: The main objective of this study was to determine the most significant factors that influence under-five children's diarrhea in Indonesia 2017.

Method: This study used data from the Indonesia Demographic and Health Survey of 2017, with a cross-sectional design. We modeled the under-five of age children diarrhea as a categorical dependent variable (diarrhea vs no diarrhea of the under-five of age children) while 14 covariates are used as an independent variable using χ^2 statistic and multiple logistic regression (MLR).

Results: The χ^2 -test shows the type of place, gender of the child, mother's age, mother's and father's education, wealth index, type of toilet facility, TV, and province are significant factors for under-five diarrhea. Using the MLR, for, under-five children diarrhea, sex of household head female showed the highest positive coefficient ($\beta = 2,82$; $P=0,005$) leading to the most significant covariate for 2017. The corresponding odds ratio was 1,387. The second most significant covariate in 2017 was Birth order 2-6 years ($\beta = 2,60$; $P=0,009$). The corresponding odds ratios were 1,215. Reading newspaper and magazine < 1 a week showed positive coefficients ($\beta = 2,07$; $P=0,038$). The corresponding odds ratio was 1,167. The unprotected main source of water showed positive coefficients ($\beta = 2,09$; $P=0,037$). The corresponding odds ratio was 1,148. While age of the mother > 40 years was negative correlation ($\beta = -2,79$; $P=0,005$).

Conclusions. The finding has important policy implications for under five of age diarrhea intervention programs. Thus, activities focusing on the proper hygienic toilet. Improving health information from newspapers, magazines, and TV.

Satisfaction of Vaginal Delivery in Maternal in Health Services: Meta-Analysis

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Backgrounds: Maternal satisfaction is an indicator of the success of delivery care in health services. The quality of normal delivery care is a clean and safe delivery care service at every stage of labor and can meet consumer expectations for the services that have been provided.

Aim: This study aims to analyze the effect of vaginal delivery on maternal satisfaction in health services using a meta-analysis study.

Method: This research is a systematic review and meta-analysis. Article searches through journal databases include: PubMed, Science Direct, and Google Scholar with articles published in 2009-2021. The keywords used are (*Vaginal OR Normal OR Natural*) AND "*Maternal Satisfaction*". Inclusion criteria were full text articles with cross-sectional study design, articles in English, multivariate analysis with adjusted odds ratio. Eligible articles were analyzed using the Revman 5.3 application.

Results: Meta-analysis of 7 cross-sectional studies showed that vaginal delivery (spontaneous) was 1.66 times more satisfied with delivery compared to mothers who delivered non-vaginally (aOR 1.66; 95% CI 1.28 to 2.17; p=0.0002).

Conclusion: Vaginal delivery (spontaneous) affects maternal satisfaction in health services.

Keywords: Spontaneous delivery, vaginal delivery, satisfaction, meta-analysis

Risk factors of 1 to 5 years children mortality analysis of Demographic and Health Surveys in Indonesia 2017

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Background: Indonesia is in the top 10 world category of under-five children mortality cases based on WHO Database. The under-five mortality rate in recent years has been high and has become a major problem in Indonesia. Many factors influence this. In 2017 an estimated 5.2 million children under 5 years died mostly from preventable and treatable causes. children aged 1 to 4 years accounted for 1.3 million deaths.

Aim: The main objective of this study was to determinants the most significant factors that influences on under five children mortality in Indonesia 2017.

Method: This study used data from the Indonesia Demographic and Health Survey of 2017, with a cross-sectional design. We modeled the under-five years children mortality as categorical dependent variable (mortality vs no mortality of the under-five years children) while 14 covariates are used as an independent variable using χ^2 statistic and multiple logistic regression (MLR).

Results: The χ^2 -test shows type of place, gender of child, mother's age, mother's and father's education, wealth index, economics, INC, environment and province are significant factors for under five mortality. Using the MLR, for under five children mortality, sex of household head female showed the highest positive coefficient ($\beta = 2,82$; $P=0,005$) leading to most significant covariate for 2017. The corresponding odds ratio was 1,387. The second most significant covariate in 2017 was Birth order 2-6 years ($\beta = 2,60$; $P=0,009$). The corresponding odds ratios was 1,215. Reading newspaper and magazine < 1 a week showed positive coefficients ($\beta = 2,07$; $P=0,038$). The corresponding odds ratio was 1,167. Unprotected main source of water showed positive coefficients ($\beta = 2,09$; $P=0,037$). The corresponding odds ratio was 1,148. While age of the mother > 40 years was negative correlation ($\beta = -2,79$; $P=0,005$).

Conclusions. The finding have important policy implication for under five children mortality intervention programs. Thus, activities focusing on Improving health information and access to health facilities.

A Qualitative Comparative Study On Breastfeeding Continuation Up To Two Years Of Age In Rural And Urban Areas In Central Java, Indonesia

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Background: Global and Indonesian guidelines suggest that breastfeeding should continue for at least the first two years of a child's life. While many studies are focused on exclusive breastfeeding practices, little is known about why mothers stop breastfeeding beyond this period.

Aim: This study aimed to explore factors associated with breastfeeding up to the first two years of life, regardless of any additional food consumed, focusing on Indonesia's rural and urban areas.

Method: We conducted a qualitative comparative study in rural and urban areas of Central Java Province. In-depth interviews were done with a total of 46 caregivers of children aged 6-23 months. We used data source triangulation to health care practitioners and village *kader*. We performed a thematic analysis for analysing the data.

Results: Rural mothers practised breastfeeding and intended to breastfeed for a longer duration than urban mothers. Favourable maternal attitude, breastfeeding knowledge, high self-efficacy, and useful experiences of breastfeeding mothers positively influenced breastfeeding sustainability. In the urban, mothers encountered several breastfeeding barriers, such as wrong perceptions, maternal employment, and child biting and refusal, causing them to provide formula milk as a breast milk substitute or supplement.

Conclusion: Providing breastfeeding education covering practical breastfeeding guidance will encourage mothers to breastfeed for a longer period. Such interventions should involve families, health workers, and the community as a breastfeeding support system.

Keywords: breastfeeding, continued breastfeeding, formula, rural, urban

Burden of Diseases among Geriatric Population in Special Region of Yogyakarta: Does Higher Socioeconomic Status Make You Healthier?

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Background: Indonesia implements universal health coverage named BPJS Kesehatan which is divided into subsidized (JKN non-PBI) and unsubsidized (JKN PBI) based on their socioeconomic status. Growth of geriatric population in less developed countries is three times higher than in more developed countries. The estimated number of geriatric population in Indonesia is 27.08 million in 2020 and is increasing to 48.19 million by 2035. Global burden of disease in geriatric population is increasing as geriatric population increase, hence, it is crucial to determine burden of disease among geriatric based on their socioeconomic status in Special Region of Yogyakarta (DIY) where geriatric population takes place 13% among total population.

Aim: To identify the burden of disease in the geriatric population in DIY with different segment of BPJS membership.

Method: This is a quantitative descriptive research located in DIY. The data used are secondary data from BPJS Kesehatan 2019 of primary health care visit in the form of age, type of diseases and economic status based on BPJS Kesehatan membership in the geriatric (>60 years old) population in DIY. The results are obtained in form of distribution of diseases in geriatric population in Special Region of Yogyakarta.

Results: Burden of disease in geriatric population in DIY are primary hypertension (2091 visits, 20.85%), type 2 diabetes mellitus (T2DM) (796 visits, 7.94%), other soft tissue disorders (570 visits, 5.69%), common cold (456 visits, 4.56%), and heart failure (420 visits, 4.19%). Leading causes of burden of disease in JKN PBI are primary hypertension (842 visits, 21.64%), other soft tissue (373 visits, 9.60%), common cold (240 visits, 6.17%), functional dyspepsia (193 visits, 4.97%), and heart failure (188 visits, 4.84%). Meanwhile, in JKN Non-PBI are primary hypertension (1248 visits, 20.36%), T2DM (724 visits, 11.81%), heart failure (232 visits, 3.78%), common cold (216 visits, 3.53%), and acute upper respiratory infections (197 visits, 3.21%).

Conclusion: Leading causes of burden of disease in the geriatric population in DIY both JKN PBI and JKN Non-PBI are dominated by non-communicable diseases. Actions are needed in form of risk factors screening in adults to prevent the occurrence of non-communicable diseases later in their life.

The Effect Of Onset Lactation, Early Initiation Of Breastfeeding And Frequency Of Antenatal Care On Exclusive Breastfeeding

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Background: Since 2016 the Surabaya City Government has implemented a mentoring program for the First 1000 Days of Life. The first 1000 days of live assistance were carried out by providing education and support from pre-conception and pregnancy until the baby is 2 years old. Mentoring aims to produce a platinum generation by reducing stunting rates and increasing the coverage of exclusive breastfeeding. However, the coverage of exclusive breastfeeding has not been achieved.

Aim: To determine the effect of the onset of lactation, early initiation of breastfeeding, frequency of Antenatal Care on exclusive breastfeeding.

Method: the research design was cross-sectional. The cluster random sampling was used to obtain data from 131 lactation mothers and analyzed using Chi- Square at $\alpha=0.05$ and linear regression at $\alpha=0.05$. The data obtained were based on exclusive breastfeeding using the onset of lactation, early initiation of breastfeeding, frequency of antenatal care.

Results: The bivariate analysis found a significant relationship between early initiation of breastfeeding and onset of lactation with exclusive breastfeeding ($p=0.022$ and $p=0.014$ $\alpha=0.05$). There was no significant relationship between the frequency of Antenatal care and the implementation of early initiation of breastfeeding with exclusive breastfeeding ($p=0.251$ and $p=0.352$; $\alpha=0.05$). Multivariate analysis showed that onset lactation and early initiation of breastfeeding together significantly affected exclusive breastfeeding ($p=0.015$ and $p=0.042$; $\alpha=0.05$). early initiation of breastfeeding delivery was 2.52 times more likely to be successful exclusive breastfeeding and timely onset lactation was 3.08 times more likely to be successful with exclusive breastfeeding.

Conclusion: In conclusion, early initiation of breastfeeding and timely onset lactation tends to benefit successful exclusive breastfeeding. Therefore, initiating early breastfeeding and timely onset lactation need to be improved for successful exclusive breastfeeding.

Keywords: onset of lactation, early initiation of breastfeeding, frequency of antenatal care, exclusive breastfeeding.

Risk Factors for Anaemia in Pregnant Women: Systematic Review of Research in Developing Countries

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Background: Twenty percent (20%) of maternal mortality in developing countries is caused by iron deficiency anaemia. Meanwhile, the prevalence of anaemia in pregnancy in Asia is estimated at 48.2%, Africa 57.1%, America 24.1%, and Europe 25.1%. The trend of anaemia in pregnancy has increased in the last 5 years.

Aim: To find out the risk factors that cause anaemia in pregnant women based on the research results in the health sector from 2014 to 2018.

Method: A systematic review, by analyzing various studies regarding risk factors for anaemia in pregnant women. There are 17 studies from Indonesian and international researchers.

Results: From the results obtained, the educational factor is the most widely studied with a significant result (OR=2.467). Maternal factors that have significant influence are gestational age (OR=1.29) and nutritional status (OR=2.921), while nutrient intake factors that have a significant effect on anaemia in pregnant women are food intake (OR=2.54) and fluid intake (OR=2.91).

Conclusion: Education level, nutritional status, food and beverage consumed are risk factors that have an effect on anaemia in pregnant women. Therefore, prevention measures for anaemia in pregnant women can be done by increasing maternal education and improving nutritional status with adequate nutrient intake.

Keyword: Risk factors, anaemia, pregnant women, systematic review

Air Pollution Exposure and Risk of Low Birth Weight: A Systematic Review

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Background: Several studies have attempted to explain the mechanisms thought to underlie low birth weight in mothers exposed to air pollutants, namely due to inflammation, oxygen-hemoglobin dissociation, DNA adduct formation, and direct toxic effects on the fetus and placenta.

Aim: This study aims to systematically examine the relationship between air pollutants and low birth weight (LBW).

Method: The electronic database of identified studies was searched for English language studies reporting the effects of air pollution on low birth weight. The included studies were assessed for assessment of exposure during pregnancy, risk of bias in selection, adjustment of confounders, analysis, and assessment of outcomes. Methodological differences between studies were also evaluated. A total of 31 studies, most with moderate risk of bias due to the indirect assessment methods used, met the eligibility criteria.

Results: Exposure to SO₂, NO₂, CO, fine particles (PM) $\leq 2.5 \mu\text{m}$ was associated with LBW. The evidence for PM $\leq 10 \mu\text{m}$, NO and O₃ is inconclusive. The relationship between individual air pollutants and low birth weight differs across published studies. This heterogeneity and / or lack of association may be due to difficulties in measuring exposure, method of determination, measurement time and co-linearity between pollutants.

Conclusion: Future research is expected to develop methods for detecting duration and intensity of exposure, including the entire population, as well as conducting well-designed nested studies, avoiding confounders, and incorporating housing variables.

The Role of Parental Mindset About Early Age Children's Sexual Education on Control Skill in Parenting to Prevent Children's Sexual Abuse

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Background: Issues in children's sexual abuse cannot be underestimated since they have the same risk. Children's sexual abuse caused by ineffective parental care and control. Besides, parents assume that sexual education to pre-school children can lead to risky sexual behavior later because they know too much about sexuality. Parental mindset on education about the prevention of sexual abuse has an impact on their ability to prevent children's sexual abuse.

Aim: This study aims to analyze parental mindset about early age children's sexual education contributes to the implementation of their control skills in parenting to prevent children's sexual abuse.

Method: This research is an explanatory study with 170 couples of parents of pre-school children as the subject of study in the district of Jember in 2018.

Results: The results showed that most parents had a positive mindset about the role of sexual education as part of primary prevention efforts on children's sexual abuse. In line with this, the mindset has a significant influence on parental control skills of children in parenting. Parents can be consistent with the rules that have been mutually agreed upon to prevent their children from the risk of sexual abuse.

Conclusion: Overall, prevention of sexual abuse at home through parental control skill in parenting will be effective if they have a positive mindset about prevention efforts, one of which is early sexual education.

The Background Factors of Contraceptive Utilization Among Women in Indonesia 2017

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Background: Rapid population growth has become a major concern and attention of national governments in developing countries. Contraceptive are one of the most important health interventions which crucial in reducing rapid population and improving woman and family health. The level of current use of modern family planning is the most widely used indicator for evaluating the success of national family planning programmes. Recently the prevalence of traditional methods may lead to undesired pregnancy.

Aim: The aim of this study, therefore, was to assess background factors of contraceptive utilization among women in Indonesia 2017.

Methods: This was a cross-sectional study using secondary data derived from the Indonesia Demographic and Health Survey of 2017. The analysis was restricted to 11967 women who were using contraceptive. We modeled the women as categorical dependent variable (contraseptive utilization) while 9 covariates are used as an independent variable. Multiple Logistic Regression (MLR) and χ^2 statistic analyses were performed to predict background factors of contraceptive utilization among women.

Results: The χ^2 -test shows that mother's education, age, type of place of residence, father's education, history of terminated pregnancy, currently amenorrheic are significant factors for modern contraceptive utilization among women in Indonesia 2017. Using the MLR, for women, currently amenorrheic showed the highest positive coefficient ($\beta = 0,72$; $P=0,000$) leading to most significant covariate for modern contraseptive utilization. The corresponding odds ratio was 0,94. The second most significant covariate in 2017 was type of place of residence ($\beta = 0,32$; $P=0,000$). The corresponding odds ratio was 0,46. While age of the mother was negative correlation ($\beta = -0,19$; $P=0,000$), history of terminated pregnancy ($\beta = -0,26$; $P=0,001$), mother's education ($\beta = -0,32$; $P=0,000$) and father's education ($\beta = -0,39$; $P=0,000$).

Conclusions: The finding have important policy implication to intervention programs aimed at increasing modern contraceptive information targeting women and family, residence in urban area, and encouraging relationship between provider-clients' family planning interpersonal communication.

Evaluation of Measles Rubella Campaign on Vaccination Coverage in Children (9-59 months of age) at East Java Province, Indonesia 2017

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Background: Measles and rubella are communicable diseases caused by viruses. The incidence of measles in the East Java Province is still relatively high. The program strengthening strategy covers a measles immunization coverage of ? 95%. The Measles Rubella (MR) vaccine campaigns in children aged 9 months to 15 years.

Aim: The aims of the research is to evaluate of Measles Rubella Campaign on vaccination coverage in children (9 months to 15 years old) at East Java Province.

Method: This study using cross sectional study design. Target population is 9-59 months of age living at East Java Province. Sample for the survey will be selected using urban/rural stratification and then a three stage sampling design. Sample size in this study was 1152 children. The respondents are mothers/care giver. Variables in this assessment are status of MR immunization, characteristic respondents and children. Instruments for the survey has been developed by researchers and consultant by adopting the questionnaires from WHO. All data analysis will use STATA version 9 in order to describe all variable. The data analysis is an analysis with weights in each sample area (village).

Results: The results showed that both in urban (85.5%) and rural (87.1%) areas, most respondents were aged 25-50 years. The level of education of respondents both in urban (50%) and rural (32.7%) is graduate from Senior High School. The fathers' occupations in both urban (62.8%) and rural (63.3%) were mostly employees, both government and private. The results showed that both in urban (64.3%) and rural (50.7%), most children were aged >36 months. Most children obtained MR during the campaign, with 1074 (95.9%) children. Based on the number of doses, most children in urban and rural areas had taken 3 doses of MR vaccine with 544 (40.6%). Nevertheless, there were still children who were not vaccinated with 7.3% children. The results showed that most children received complete crude immunization, with 485 (87.5%) children in urban and 508 (81.3%) children in rural areas.



Conclusions: MR immunization coverage in East Java province was 95.9%, it was higher compare to the reported coverage in the province.

Keywords: MR campaign, children, vaccination coverage



Systematic Review of Comprehensive Sexuality Education Focusing on Teacher's Conflict: A Qualitative Study

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Background: NESCO advocated for Comprehensive Sexuality Education (CSE) in 2009 to help young people make responsible choices for appropriate sexual behavior by acquiring the right scientific knowledge and skills based on age and culture. School health education may lead to better outcomes with intervention methods based on cultural background. In implementing CSE, teachers are struggling to teach in their local settings. Some teachers are afraid that CSE will promote students' sexual curiosity and behavior. Therefore, this study systematically reviews relevant literatures on teacher's conflict in implementing CSE.

Aim: The aim of this article is to review the relevance of teacher's conflict in implementing CSE.

Method: Online bibliographic databases and hand search were used. This article focused on teacher's conflict in implementing CSE from 2011 to 2021. The search was limited to the period of 2011 to 2021 because CSE was promoted in 2009.

Results: The search terms used were *Comprehensive Sexuality Education*, *Teacher* and *Conflict*. Four articles were selected during the screening process. These studies identified that CSE is related to religious and cultural backgrounds. The causes of teacher's conflicts were: 1) conflict between the cultural background and sexual contents, 2) sexual context is a taboo due to religious beliefs, 3) sexuality education encourages student's sexual activity and 4) afraid to teach contraceptive methods. Teachers have the perception that sexual education prevents students from dropping out of school due to early marriage or pregnancy.

Conclusion: However, some teachers are afraid that teaching CSE will lead to promoting student's sexual behavior. Implementing CSE is related to cultural and religious background. In addition, teachers are afraid of promoting student's sexual activity by teaching sexuality. Some teachers mentioned that moral education has an effect on the student's sexual behavior and knowledge. Teachers expect to collaborate with the community, society and stakeholders such as religious leaders for comprehensive approach. Thus, strengthening cooperation with partners would be recommended as one of the factors of promoting CSE.

A Review Of Iron Supplementation's Effect In Adolescent: Risk And Benefit

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Background: The administration of iron supplements is a public health intervention to address the problem of anemia in at-risk groups including adolescents. Many studies discuss the impact of iron supplementation on pregnant women and children, but there is still limited discussion about its impact on adolescents.

Aim: The purpose of this literature review is to seek the advantages or disadvantages of iron supplementation in adolescents.

Method: The method used in this study is the literature review. The literature used comes from many different sources, including scientific and professional journal articles, books and web-based resources. Search engines is used to search web resources and bibliographic databases.

Results: Iron supplementation in adolescent could improve cognitive ability, verbal learning and memory, increase hemoglobin status, although these result is uncertain in low and middle income countries. There were also uncertain about the compliance among adolescent due to side effect of this supplementation. Intermittent delivery of this supplementation could reduce the risk of annoying side effect.

Conclusion: While there are gaps in existing knowledge about the risks and benefits of iron ore in adolescents, various research communities and related stakeholders including policy makers must work together to reach consensus in the best way possible.

The Impact of Antenatal Care Visits and Injection of Tetanus Toxoid Immunization on Delivery Convulsions

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Background: The World Health Organization (WHO) has a vision that every pregnant woman and newborn baby should receive good quality care during pregnancy to childbirth. The convulsions of the postpartum period raised the possibility of eclampsia. Maternal health care are realized through the provision of antenatal care at least four times during pregnancy. Antenatal care plays an important role in providing opportunities for pregnant women to communicate and provide support to mothers. Tetanus toxoid immunization is an injection of the tetanus vaccine to increase immunity against tetanus infection which is gives during antenatal care.

Aim: The main objective of this study was to identify the impact of antenatal care visits and injection of tetanus toxoid immunization on delivery convulsions.

Method: This study used data from the Indonesia Demographic and Health Survey of 2017, with a cross-sectional design. The analysis was restricted to 17846 giving birth women. We modeled the delivery convulsions as categorical dependent variable with the frequency of antenatal care visit and injection of TT as categorical independent variables. Statistical analysis used for the variable using χ^2 statistic and multiple logistic regressions.

Results: The result shows that frequency of antenatal care and tetanus toxoid immunization are significant factors for delivery convulsions. Using the multiple logistic regression, for frequency of antenatal care visits showed the highest positive coefficient ($\beta=0.75$; $P=0.000$) leading to most significant covariate for delivery convulsions at 2017. The corresponding odds ratio was 1.014. The second most significant covariate for delivery convulsions at 2017 was injection of tetanus toxoid immunization ($\beta=0.40$; $P=0.000$). The corresponding odds ratio was 0.590.

Conclusion: These findings have important policy implications for preventing delivery convulsions. Frequency of antenatal care visits according to WHO recommendation and tetanus toxoid immunization can help to improve the health of pregnant women during the delivery process.

Analysis Of Factors Influencing Postpartum Care Culture: Literature Review

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Background: In Indonesia, the traditions regarding postpartum care have also been identified by researchers and there are a number of behaviors that have generally become the habits of postpartum mothers during treatment.

Aim: To deal with habits that do not support the achievement of healthy conditions for both mother and baby, an analysis of these habits is needed to distinguish between habits that support health or vice versa.

Method: PRISMA Checklist is utilized for Protocol and registration of title, abstract, full-text and methodology. A Literature Review used keyword as Postpartum Care AND Culture, was searched six electronic databases; Scopus, PubMed, Science Direct, CINAHL, Google Scholar and ProQuest, studies using a quantitative and qualitative in journals published in last five years between 2015 and 2020. The data analysis method that has been used is a descriptive method based on a predetermined theme.

Results: Twenty-five scientific research articles matched the inclusion criteria from the literature review. The study is divided into four (4) major sections as eight (8) articles related to postpartum care, three (3) on culture of postpartum, nine (9) related to postpartum mothers (5) associated with learning (education and training). Most of the factors that influence are mothers postpartum, and others. Majority studies were conducted in Europe, Australia and Asia. The average number of the studied participants was 367 peoples as a subject involve in research on 25 articles that have been selected. The factors of age, family, tribe, habit, residence, daily practice, and others.

Conclusion: The influencing factors in postpartum care culture is age, family, tribe, habit, residence, daily practice, and others.

Keywords: Postpartum care, Culture

Balinese Adolescents' Reproductive Behaviour: Personal Value And Environmental System Analysis

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Background: Adolescents' reproductive health and increasing age of marriage become critical role to optimize the demographic bonus. Indonesian Adolescents' sexual and reproductive health knowledge have been increased in 2016-2018. Adolescent Reproductive Health Knowledge Index in Bali was above the national index. However the trends changed in 2019. Based on the Government Performance and Accountability Survey (GPAS), the index decline from 66.2% (2018) to 54.4% (2019). The data also followed by the increase of adolescents' premarital sexual behavior from 251 (2018) to 668 (2019).

Aim: This study aims to determine adolescent sexual behavior, especially pre-marital sex in terms of personal value (independence and self-efficacy in fertility and reproductive health knowledge) and environmental system (roles of family, peers, partner, and professional health workers).

Method: A cross-sectional online survey was design (stratified sampling) to collect informations from 418 adolescent in Bali. The participants were 20-24 years from 9 districts in Bali. The survey was conducted from March to April 2021. Chi-square and logistic regression were used to capture the impact of personal and environment factors on Balinese adolescents' sexual behaviour.

Results: The results indicated that age, gender, dating history, the role of partner, and independence (working status) significance to Balinese adolescent premarital sexual behavior (P-Value <0.05). The interesting thing is that respondents who have been dating tend to have pre-marital sexual intercourse ten (9.927) times greater than those who have never been dating (CI 1.300-75.820). Partner also played a significant role (OR: 3.182) in their sexual behavior (CI 1.761-5.749). Furthermore, working respondents have double (1.977) risk (CI 1.139-3.431) on premarital sex.

Conclusion: Many factors influence adolescent sexual behavior. Balinese adolescents aged 20-24 years tend not to involve their parents, family, or professionals in determining their reproductive health. Furhermore, high expectation on the relation of self-efficacy on youth's pre-marital sexual behaviour is not confirmed here. Further research is needed to see the full picture and answer the profound reasons for this sexual behavior.

Keywords: Adolescent, Balinese, fertility, reproductive health, sex before marriage

Factors related to proportion of pregnant women with complications who not referred in Indonesia : An ecological study

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Background: Maternal Mortality Rate is one of the indicators of the success of health development in general which requires attention. In 2018, MMR in Indonesia stands at 305/100.000 live births. This condition may be caused by the quality of health service, maternal health status, access to health services, the referral system and the implementation of national health insurance. WHO states that one of the main aspects in primary care, including maternal and child health, is the close relationship with the level above, this can be seen from how the referral system works effectively. The government's effort to reduce MMR and IMR is to provide quality basic maternal and neonatal health services, namely Basic Emergency Obstetrics and Neonatal Services in health primary services and Comprehensive Emergency Obstetrics and Neonatal Services at Hospitals with competency-based referrals.

Aim: This study was conducted to analyze the ecological factors associated with the proportion pregnant women with complications who not referred

Method: The ecological analysis was conducted using secondary data from The Ministry of Health of the Republic of Indonesia report in 2018 and Indonesian's health Profile 2018. All provinces has taken samples. Data were analyzed using cross-tabulation. Apart from pregnant women with complications who not referred, 4 others variables analyzed as an independent variables were the number of hospitals in a province, the number of obstetricians in a province, proportion of national health insurance coverage and proportion of poor people

Results: The result show that 4 variables tend to have a positif relationship with the percentage of pregnant women with complications who not referred. The four variables are the number of hospitals in a province, the number of obstetricians in a province, percentage of national health insurance coverage and percentage of poor people. It was

Conclusion: The study concluded that the four independent variables analyzed tend to have a relationship with the percentage of pregnant women with complication who not referred.

Keywords: maternal mortality rate, ecological study, pregnancy health services

Perinatal Mortality In Indonesia: Do Birth Spacing Really Matter?

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Background: Perinatal mortality still became a public health concern and associated with the failure of health system. Neonatal mortality remained at 15 per 1,000 live births, and the rate of stillbirth was underreported. In Indonesia, appropriate birth spacing and its relation to the risk of perinatal mortality had yet to be defined.

Aim: To identify the impact of birth interval on perinatal mortality in Indonesia.

Method: A retrospective population based cross-sectional survey was conducted as a part of women's questionnaire in the Indonesia Demographic and Health Survey 2017. This study was based on reproductive calendar and birth history data of women aged 15-49 years. The outcome was perinatal mortality which defined as death in pregnancies lasting seven months or more until age 0-6 days among live birth infants. The length of preceding birth interval was the main explanatory variable. Logistic regression adjusting for potential confounders was performed for data analyses.

Results: A total of 17,171 women were included in the study which about 365 (2.1%) perinatal deaths occurred. Nearly 32.5% were first pregnancy. Among the rest, about 10.5% women had short birth intervals less than 12 months. After adjusting for potential confounders, birth spacing less than 12 months was associated with a four-fold (aOR: 4.1, 95% CI: 1.71-9.92) increasing the risk of perinatal mortality and birth spacing more than 36 months was associated with nearly a three-fold (aOR: 2.5; 95% CI: 1.12-5.68) increasing the risk of perinatal mortality, compared with those with birth spacing of 24-36 months.

Conclusion: Birth spacing really matters on child survival. Shorter and longer birth intervals were associated with an increase in perinatal mortality risk. Focused intervention should be given to mothers with pregnancy interval less than 12 months, in order to monitor their pregnancy and arrange for safe delivery. Promoting spacing methods of family planning is an important option for reducing perinatal death. Therefore, the promotion of family planning program and maternal health services including improving access and quality of care for maternal and child health should be strengthened to reduce the preventable perinatal mortality in Indonesia.

Keywords: Birth spacing; Birth interval, Indonesia; Perinatal mortality; Stillbirths.

Acceptability Child Marriage Index (ACMI) in Central and South Sulawesi, Indonesia

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Background : The child marriage burden remains high in Indonesia. Indonesia is seventh in the world in incidence of child marriage. South and Central Sulawesi is two of provinces that the highest burdens of child marriage in Indonesia. Based on Susenas 2018, the prevalence of child marriage in South Sulawesi (14.1%) and Central Sulawesi (15.8%). These two provinces have an prevalence of child marriage child marriage higher than national prevalence (11.2%).

Aim: This study aims to assess child marriage acceptability in the community by gender inequality, financial security, education rates, legal frameworks, dowry, sexual and gender based violence (SGBV).

Methods : This study used a quantitative approach with a cross sectional study design. A total of 1,000 respondents from households consisting of 500 in Bone, South Sulawesi and 500 Palu, Sigi, Donggala, Central Sulawesi participated in the study. Data analyses were conducted based on the Acceptability Child Marriage Index (ACMI) by using the bivariate correlation, ANOVA (analysis of variance) and logistic regression.

Results : This study found several significant factors contributed to child marriage acceptance in Central and South Sulawesi: household financial security ($p=0.016$), dowry ($p=0.000$) and legal frameworks ($p=0.017$) based on ANOVA analysis. After conducting bivariate correlation, dowry ($p=0.000$) and sexual and sexual and gender based violence ($p=0.000$) remains significant factors. For regression, dowry ($p=0.000$, with expected $B=0.122$), and sexual and gender based violence ($p=0.001$, with expected $B=0.064$) remains significant.

Conclusion : Dowry practice and sexual and gender based violence were the most significant factors contributing to the child marriage acceptance in Central and South Sulawesi. There is a need to conduct interventions to prevent child marriage including providing sexual and reproductive health education.

Keywords : ACMI, child marriage, acceptability child marriage Index

The Impact of Family Support and Health Services on the Life Quality of People Living with HIV/AIDS in Ternate City

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Background: People living with HIV/AIDS (PLWHA) quality of life is critical to consider because this disease is chronic and progressive, causing a wide range of physical, psychological, social, and spiritual issues. In their daily lives, PLWHA must be able to deal with quite complex problems. Indeed, the complexity of the problems that PLWHA must face can impact their quality of life. Family support and health services are two factors that significantly impact the quality of life of PLWHA.

Aim: This study aims to identify and discuss the impact of demographic factors (age, gender, education, and income), family support, and health services on the life quality of PLWHA in Ternate City.

Method: This study applied a quantitative approach with a cross-sectional study model on a total sample of 43 people living with HIV/AIDS. The accidental sampling technique was used to collect samples. All data were collected then statistically analyzed using binary logistic regression.

Results: The study results showed that the majority of PLWHA life quality was good (55.8%). The factors: education ($p = 0.024$), family support ($p = 0.044$), and health services (tangible $p = 0.028$) had an impact on the life quality of PLWHA. Furthermore, the binary logistic test results revealed that education ($p = 0.11$) (95% CI 0.005-0.504) and health services, specifically assurance ($p = 0.032$) (95% CI 1.365-1.023), had a significant impact on the quality of life of PLWHA.

Conclusion: One aspect of PLWHA's good quality of life is assurance, including free health services, patient confidentiality, social assistance availability, and peer support. Therefore, the higher the education level, the higher the quality of life of those with PLHIV. Family empowerment needs to provide support to PLWHA in order to improve their quality of life.

Keywords: Quality of Life, Health Services, Family Support, PLWHA

Reproductive Health of Childbearing Age Women with Physical Disabilities in Denpasar 2020

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Background: People with disabilities are around 15% of the total world population. People with disabilities have various obstacles in accessing reproductive health services, including information, behavior, environment and economy. Women with disabilities are at high risk for reproductive health problems.

Aim: The purpose of this research is to determine the level of knowledge, attitudes and behavior about reproductive health of childbearing age women with physical disabilities in Denpasar City.

Method: This research was observational study with cross-sectional design. This research was conducted on April - June 2020. The population in this study was women of childbearing age with physical disabilities who already had marriage. The sampling technique was purposive sampling with 66 women. This study used an online questionnaire to reduce direct contact because this research conducted during COVID-19 pandemic. This study analyzed by statistical package software.

Results: The result showed that level of reproductive health knowledge of respondents in this study who had good knowledge (39.39%), had positive attitudes (69.70%) and had bad behavior (68.18%). There was a significance relation between knowledge ($p = 0.0003$) and attitude ($p = 0.002$) towards reproductive health behavior.

Conclusion: That can be conclude, that most respondents have good knowledge and positive attitudes, but have poor reproductive health behaviors. To have good reproductive health behavior need to have good knowledge and positive attitude in reproductive health. Therefore, it is suggested regular socialization of reproductive health among women with disability using proper media that accessible for them.

Keywords: Reproductive health, Disability, Women

The Impacts on The Change of Financing Policy for Family Planning in Meeting Contraceptive Needs for Poor Households in Indonesia

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Background: Indonesia has experienced an increasing in contraceptive use. However, it is not in line with a decreased unmet need for family planning. The change of financing policy for family planning may lead to lower unmet need among poor women.

Aim: To analyze impacts on the change of financing policy for family planning in meeting contraceptive needs for poor households.

Method: This study was a survey panel using the IDHS of 1997, 2002-2003, 2007, 2012 and 2017. The subjects were all married women aged 15-49 years old. Data analysis used a multilevel modeling technique to assess the effect of individual and community factors on the unmet need for family planning.

Results: The unmet need in Indonesia was 9.2%, 8.6%, 9.1%, 11.4% and 10.6% for the year of 1997, 2002-2003, 2007, 2012 and 2017 respectively. The poorest women had higher odds of unmet need than richest (odds ratio, 2.1, 1.7, 1.5 for the year 1997, 2002-2003 and 2007, respectively). The odds were also higher among women who never attending school, lack of contraceptive knowledge, unexposed with family planning information, problems in the access and living in urban area. In community level, the odds of unmet need was smaller when a woman lived in a community with higher mean of family planning knowledge. Prior to the implementation of the policy on social safety net and health insurance for the poor, the odds was greater (odds ratio, 1.6).

Conclusion: The implementation of policy on family planning financing for poor households was reduced the odds of unmet need in which the policy is then followed by the improvement of family planning knowledge for individual and community.

Keywords: financing policy, family planning, contraceptive need, poor households

The Role of Health Officers, Community Leaders and Religious Leaders in Providing Immunization to Infants in Lhoknga Aceh Besar

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Background: Immunization is an effort to increase immunity against infectious diseases which is very important for infants. A baby's success in obtaining basic immunization can be measured through complete basic immunization indicators. In the last three years, there has been a decrease in Universal Child Immunization (UCI) achievement in the Health Center (Puskesmas) Lhoknga Aceh Besar, in 2016 the achievement of 72% decreased to 44% in 2018, resulting in 37 cases of Pneumonia, Measles (4 Cases) and TB (1 case).

Aim: To determine the role of Health Officers, Community Leaders and Religious Leaders in Providing Immunization to Infants in the Lhoknga Health Center area, ??Aceh Besar.

Method: This research is descriptive analytics with a cross-sectional design. The sample in this study was 53 mothers who had babies aged 9-15 months. The research was conducted from 5-10 August 2020. The data is tested using The Chi-Square Test using the STATA application.

Results: The results showed that health workers (p value=0.499), community leaders (p value=0.033), and religious leaders (p value= 0.537) did not play a role in the success of immunization to infants.

Conclusion: To the relevant agencies is expected to be able to increase community participation in improving understanding of the importance of immunization to infants.

Keywords: Role of Health Workers, Community Leaders, Religious Leaders, Immunizations

Dating Status and the Influence of Peer Group With Adolescent Sexual Behavior in Banjarmasin City.

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Background: The characteristics of the adolescents who tend to have high curiosity and want to try new things cause the adolescent to be vulnerable to risky sexual behavior. CDC (2012) said that adolescents have reproductive problems because most of them have been sexually active. The DP2KBP3A Survey (2017) shows that 99% of junior high and high school adolescents in Bandung district have seen pornographic films. Adolescents who have lovers, activities are 65% holding hands, 40% kissing, 20% 20% having touch-sensitive parts, and 2% having sexual intercourse. Meanwhile, according to KPAI (2012), as many as 92% of the adolescent are holding hands, 82% kissing, and 63% touching while dating. the dating adolescent has a risk to do sexual behavior can have an impact on the occurrences of early age sex, pregnancy, sexually transmitted infections, abortion, HIV and AIDS transmission.

Aim: This study aims to identify the factors associated with adolescent sexual behavior.

Method: The research method used a *cross-sectional* approach, with a sample size of 91 adolescents in Banjarmasin city. Data analysis using the *Chi-Square* Test.

Results: The results of the univariate data analysis found that most of the sexual behavior of adolescents had mild risky behavior of 57,1%, most of the adolescents stated that their dating status was 51,6% and most of the adolescents had negative influence from friends of the peer group by 58,2%. The bivariate analysis states that there is a significant relationship between dating status ($p\text{-value}=0,000$) and influence of peer group ($p\text{-value}=0,009$) with adolescent sexual behavior in Banjarmasin city.

Conclusion: Parents, school officials, and related agencies provide intensive attention and information to adolescents about reproductive health to increase adolescent understanding, so that they will think carefully about the dangers and impacts of engaging in sexual behavior at an early age.

Keywords: Sexual Behavior, Dating status, Influence of peer group, Adolescent.

The Relationship Between Human Milk Donor, Bottle Feeding, and Breastfeeding Status of Mother of Infants Aged 0-6 Months in Daerah Istimewa Yogyakarta (DIY)

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Background: Based on WHO recommendation, each baby should be breastfed exclusively in their first six months of life. If the mother is unreachd or the mother-own-milk (MOM) is insufficient, infants still could meet the exclusive breastfeeding status through receiving a human milk donor from other women. However, bottle feeding is a media commonly used by caregivers to give an expressed donor milk to the baby, although the utilization of this media might lead to nipple confusion and disturb the breastfeeding process. On the other hand, a human milk donor process is temporary support before the mother could breastfeed independently and meet the exclusive breastfeeding status on their own. The research explored the relationship between human milk donors, bottle feeding, and breastfeeding status is still limited.

Aim: This study aimed to explore the relationship between human milk donor status, the utilization of bottle feeding, and the breastfeeding status of the mother of an infant aged 0-6 months that live in Daerah Istimewa Yogyakarta (DIY).

Method: This is a cross-sectional study using online questionnaires with the link available in social media for four months (December 2020-March 2021), with a total participant number of 123. Data were analyzed using descriptive analysis and chi-square.

Results: The results showed no significant correlation between human milk donor-recipient status and exclusive breastfeeding ($p=0.080$). In contrast, it has a significant relationship with prolonged breastfeeding insufficiency ($p=0.000$, $RR=3.214$, $CI= 1.020-4.082$). The bottle-feeding utilization was high in both groups by 68% in the donor-recipient group and 54% in the non-recipient group, and further signified as a risk factor for both non-exclusive breastfeeding ($p=0.020$, $RR=2.524$, $CI= 1.090-5.844$) and prolonged breastfeeding insufficiency ($p=0.021$, $RR=2.103$, $CI= 1.073-4.123$).

Conclusion: Lactation support and education are needed in the infant feeding process, particularly in human milk donor practices. These efforts aimed to avoid bottle-feeding use and ensuring mother's breastfeeding self-sufficiency and also its exclusivity.

Keywords: Human milk donor, exclusive breastfeeding, breastfeeding self-sufficiency, bottle feeding

Roles Of mHealth Interventions For Maternal, Newborn And Child Health In Psychosocial And Behavior Change: A Systematic Review

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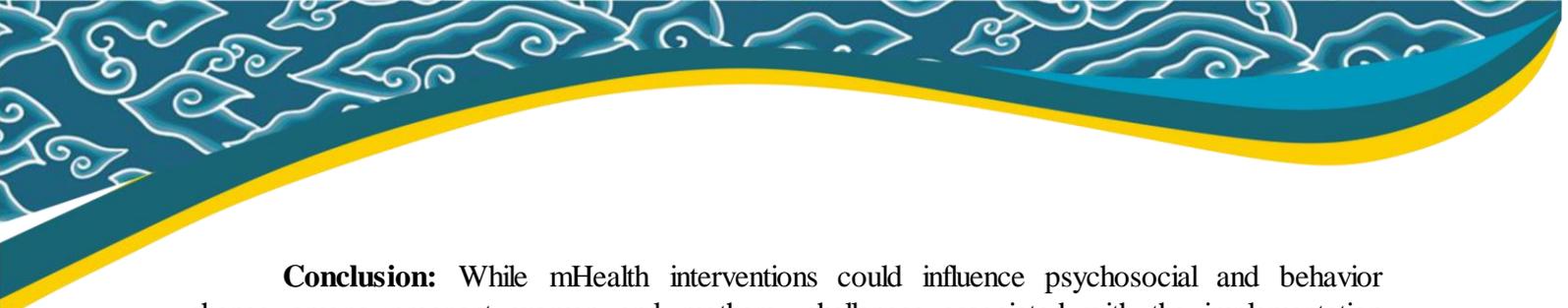
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Background: Mobile health (mHealth) interventions for maternal, newborn and child health (MNCH) are increasing worldwide. While there is evidence that these interventions improved MNCH outcomes, research has been restricted to pilot and small studies with limited generalizability. Moreover, little is known about the psychosocial and behavioral impact of mHealth interventions on different targeted groups.

Aim: This systematic review aims to collate and summarize evidence on the roles of mHealth interventions for MNCH in psychosocial and behavior change among pregnant women, mothers, fathers, and health workers.

Method: We conducted a systematic search in MEDLINE, Web of Science, CINAHL, PsycINFO, PsycARTICLES, Academic Search Complete, SocINDEX, Cochrane Library, DARE, NHS EED, HTA, and Grey Literature. We included original research articles in English of all study designs up till February 2020. We excluded pilot and feasibility studies. We extracted and analyzed data for outcomes including the psychosocial and behavioral impact of mHealth interventions on different targeted groups. We used the Cochrane Risk of Bias tool and CASP checklist (whichever is appropriate) to assess the study quality and GRADE approach to assess the certainty of evidence.

Results: We included 55 studies out of 7,218 articles. Of 55 studies, 22 of them used mHealth apps, 30 were text-based, and 3 used e-learning via tablet or smartphone. Majority of the mHealth interventions targeted pregnant women or mothers. Little evidence exists on the impact of mHealth on fathers and health workers. We identified the following roles of mHealth in psychosocial and behavior change: (1) increased confidence in feeding decisions; (2) increased physical activity among inactive mothers; (3) improved communication with husband and health worker; (4) enhanced parental self-efficacy; (5) lowered alcohol consumption postpartum (OR=0.21; 95% CI=0.05-0.97); and (6) improved compliance with recommended maternal and infant health care visits. However, mixed results were found in immunization, infant HIV testing, family planning use, and physical activity.



Conclusion: While mHealth interventions could influence psychosocial and behavior change among pregnant women and mothers, challenges associated with the implementation and sustainability were raised in a socially disadvantaged community. The expansion of mHealth interventions for fathers and health workers is also recommended to improve the continuity of care among newborns and children. Keywords: mHealth interventions; maternal, newborn and child health; psychosocial; behavior change; systematic review

Development Of Knowledge Documentation Module (E-Knowledge) In Hospital Management Information System Using Sprint Method In Rumkital Dr. Ramelan Surabaya

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Background: organization, to identify problems that arise so that it can help management find the right solution in stages through certain phases with the Problem Solving Cycle (PSC) approach. Priority problems are determined in the education and training unit, namely external training in 2019 as many as 90 pieces of training, 15% documented training material with 100% standards.

Aim: The purpose of residency activities is to analyze the factors that cause documentation of training materials not reaching standards, determine solutions to improve documentation of training materials to reach standards and compile an activity plan in overcoming the problem of documentation of training materials that have not reached standards.

Method: The PSC method consists of 5 stages. These stages include (1) Problem Analysis, (2) Strategic Design, (3) Strategy Development, (4) Implementation, Monitoring, Evaluation, and (5) Follow Up and Feedback. Data collection on problems through document search and interviews.

Results: At the Strategy Design stage, the priority for alternative solutions is the development of a training material documentation module at SIM RS. At the Strategy Development stage, this module was developed using the Sprint method with five stages: map, sketch, video, prototype, and test. The module, which was originally intended for training material, has developed into a module containing four content, namely regulations, training materials, references, and the latest journals. This is the basis for changing the name of the training material documentation module to the knowledge documentation module (E-Knowledge). In the management of this module, 14 PIC personnel from various professions were formed.

Conclusion: The E-Knowledge module should be developed into a discussion forum so that knowledge sharing can be carried out without having to meet face to face and conduct periodic evaluations of the application of the E- Knowledge module so that this module can be useful according to long-term goals.

Keywords: population, adolescent reproductive health, family development, family planning, youth

OSA (Obstructive Sleep Apnea) Risk Factor based Predictive model for New-onset Preeclampsia during Pregnancy in Indonesia women.

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Background: The prevalence of preeclampsia is around 5-8% of all diseases that occur during pregnancy (Gathiram & Moodley, 2016).). Obstructive sleep apnea causes inflammation and oxidative stress responses, endothelial damage and metabolic disorders (Facco et al, 2017).

Aim: the study to produce a risk factor model for OSA (Obstruction Sleep Apnea) predictors of preeclampsia in pregnancy.

Method: This type of observational analytic study was retrospective Case Control design. carried out at Wahidin sudiro husoda Mojokerto Hospital, Sakinah Mojokerto Hospital, Sooko Health Center and Gayaman District Health Center. Mojokerto in October 2020- February 2021., sampling with cluster random sampling of 272 people, inclusion criteria for preeclamptic pregnant women and normal pregnant women > 32 mg. samples in the case group were 136 people and the control group was 136 people. Data analysis: Inference analysis used is binary logistic regression analysis, which is a differentiating category scale. Logistic regression analysis used the Backward Stepwise (Wald) method.

Results: The result of data classification in the individual OSA risk factor model has a very good suitability value of 95.2%. (more than 75%). family OSA risk factor model has a very good suitability value of 80.5%. (more than 75%). The results of classifying the data in the OSA incidence model have a good suitability value of 62.5% (more than 50%). The predictive probability data is used to predict the incidence of preeclampsia. The results of classifying the data in the Preeclampsia incidence model have a good suitability value of 74.3% (more than 50%).

Conclusion: OSA model is an appropriate, cheap and easy screening in predicting the incidence of preeclampsia. Suggestion: the OSA model can be applied to all pregnant women starting in the 2nd trimester.

Keywords: OSA model, predictor, preeclampsia

A Systematic Literature Review of Gut Microbiota Composition in Stunted Children: What Have We Learned in the Last Decade?

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Background: Childhood stunting is one of the world's major health issues. In addition to suffering from short-term effects related to morbidity and mortality, stunted children are also potentially prone to long-term metabolic and cognitive impairments which eventually lead to bigger burden for individuals and nations. Several important studies have revealed the role of gut microbiota in the linier growth during childhood. Since gut microbiota is dynamic in nature, the information related to the certain pattern of gut microbiota composition found in stunted children will be valuable in understanding the microbiota-host complex interaction and may be useful for the development of microbiota-based therapy for stunting.

Aim: The aim of this paper is to systematically explore the relevant literature on microbiota composition in stunted children

Method: We conducted a systematic literature review through bibliographic databases namely Pubmed, Crossref, Scopus and Google Scholar. The systematic review was constructed using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach. We collected publications that analyzed the gut microbiota composition in stunted children by using high-throughput sequencing method from 2011 to 2021.

Results: Fifteen articles met the inclusion criteria. Stunted children exhibited the different pattern of microbiota composition compared to the healthy children. Dysbiosis was the major condition found in stunted children. This condition included the changes in microbial diversity, imbalanced ratio of certain types of microbiota and the presence of enteropathogens and microbiota inducing inflammation.

Conclusion: Despite of the dynamic features, gut microbiota in stunted children demonstrated several alterations. These alterations can reveal the certain type of microbiota that contributed to linier growth retardation.

Trend of Adolescent Marriage 2016-2020 in Malang District

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Background: The adolescent population in Indonesia reaches 26.4% of the total population. Adolescents experience many changes, both physically, psychologically, mentally and socially. The increasing number of adolescent marriages can have various impacts on society. Especially if the marriage is carried out without the readiness and ability to marry but because of a premarital pregnancy. Pregnancy that occurs can cause complex problems not only related to health problems.

Aim: This study aims to analyze the level of adolescent marriage in 2016-2020 in Malang District, East Java Province.

Method: This research is descriptive research. The population of the study was adolescents aged <19 years in Malang District, East Java Province. Malang District consists of 33 Subdistricts. The data collected was secondary data regarding marriage from the Ministry of Religion and the Religious Court data.

Results: The results showed that the marriage rate of adolescent girls aged <19 years in 2016-2020 experienced an increase where every year it always increased even in 2020 it increased by >3 times from the previous year. The percentage of women and men aged <19 years who were married in the last 5 years has always been increasing. In 2016 women aged <19 years were 1.38% of the total number of marriages, 1.27% (2017), increased to 1.45% (2018), 1.54% (2019) and 5.85% years 2020. Meanwhile, men aged <19 years who are married are 0.16% (2016), 1.04% (2017), 1.15% (2018), 1.11% (2019) and 1.35% 2020. Applications for dispensation for marriage in 2016-2020 also experienced an increase. The majority of applications for dispensation because of age that didn't meet the minimum legal age for marriage, already has a boyfriend/fiancé, or due to premarital pregnancy.

Conclusion: The trend of adolescent marriage in 2016-2020 has increased. Adolescent marriage has various risks that can cause problems such as the occurrence of an unprepared pregnancy, immature emotionality, household vulnerability that can result in divorce and violence. As a result, it will also affect the condition of the baby being born. Efforts to realize quality marriages still need to be carried out on married couples, especially in adolescent couples.

Keywords: adolescent marriage, early marriage, maternal health, public health, adolescent pregnancy

The Role of Interpersonal Factors and The Community to Prevent Adolescent Pregnancy in Malang Districts

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Background: Adolescent pregnancy is still a problem in Indonesia. According to Indonesia Demography and Health Survey (2017), unwanted pregnancy among female adolescents is the highest in the 15-19 years age group (16.4%). Pregnancy that occurs in adolescents is a problem that needs special attention considering that adolescents are still in the process of reaching maturity physically, psychologically, mentally and socially. So that if a adolescent experiences pregnancy, there will be big potential for various problems, not only health problems.

Aim: This study aims to determine the role of interpersonal factors (lived with a nuclear family, closeness with parents, history of young married mothers, teenage friends who like to get along freely, where adolescents spend more time) and the youth community with adolescent pregnancy.

Method: The design of this study was case-control with 114 female adolescents aged 20-25 years regardless of marital status consisting of case groups (never pregnant at age 19 years) and control groups (not pregnant at age 19 years) in 50 villages in 15 subdistricts of Malang Districts in 2019. Respondents were interviewed with a questionnaire.

Results: The results showed differences in interpersonal factors in adolescents who had been pregnant at the age of ?19 years and had never been pregnant at the age of ?19 years ($p = 0.008$). There was a difference in the history of young married mothers ($p = 0.002$) and where adolescents spend more time ($p = 0.007$). And there were no differences in adolescents who were raised in the nuclear family ($p = 1.00$), closeness with parents ($p = 0.118$), and teen friends who liked to get along freely ($p = 0.724$). There were community differences in adolescents who had been pregnant at ?19 years and had never been pregnant at ?19 years ($p = 0.035$).

Conclusion: Interaction of adolescents with their environment influences adolescent thinking and behavior patterns in relationships. Adolescent's closest environment does not necessarily play a positive role in adolescent social and behavior.

Keywords: adolescent pregnancy, adolescent relationships, maternal health, interpersonal factors, social determinants of health

Factors Associated with Attitude toward Premarital Sexual Activities among Never Married Woman Aged 15-25 Years in Indonesia

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Background: The problem of premarital sex is increasing among youth, particularly in Indonesia, causing new problems such as unwanted pregnancy and abortion.

Aim: This study aimed to describe the attitude towards premarital sex and its determinants, especially in women who have never been married, aged 15-24 years in Indonesia.

Methods: This study was a cross-sectional study design using secondary data from Indonesia Demographic and Health Survey (DHS) 2017. The data were collected from 3680 unmarried women aged 15-24 years in Indonesia using multistage cluster sampling and analyzed using multiple logistic regression.

Results: The results showed that there were 15.2% of respondents had bad premarital sex attitudes. Women aged 20-24 years were 1.43 times more likely to have a bad attitude toward premarital sex than women aged 15-19 years (AOR = 1.43, 95% CI = 1.12-1.82, $p < 0.01$). Women with medium educational status had 1.60 times higher odds of having a bad attitude towards premarital sex compared to those with higher educational status (AOR = 1.60, 95% CI = 1.22 – 2.10, $p < 0.001$). Women living in the central and east Indonesian time zone were 1.64 times and 3.10 times, respectively, more likely to have a worse attitude toward premarital sex compared to women living in the west (AOR_{central} = 1.64, 95% CI = 1.29 – 2.80, $p < 0.001$ and AOR_{east} = 3.10, 95% CI = 2.22- - 4.37, $p < 0.001$). Women who answered yes to statements ever advising of influencing a friend or someone to have sexual intercourse were 2.51 times more likely to have a bad attitude toward premarital sex than women who answered no (AOR = 2.51, 95% CI – 1.08 – 5.84, $p = 0.03$).

Conclusion: Factors associated with bad attitudes towards premarital sex were age 20-24 years, moderate educational status, living in the time zones of Central and East Indonesia, and had advised or influenced sexual intercourse. Sex education programs and the prevention of sexually transmitted diseases must be provided from an early age. The intervention program able to start by increasing their knowledge and understanding of sex before marriage.

Keywords: woman, premarital, sex

Warm Water Compresses To Reduce Dysmenorrhea In Adolescents

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Background: During menstruation, women sometimes experience pain in the abdomen, back and groin with varying degrees of pain ranging from mild, moderate to severe. The purpose of this review literature is to see the effect of warm water compresses on adolescents who experience dysmenorrhea.

Aim: The purpose of this review literature is to see the effect of warm water compresses on adolescents who experience dysmenorrhea, and after the review there is the effect of giving warm water compresses to adolescents who experience dysmenorrhea.

Method: The literature review used was obtained from the National Library and Google Scholar databases, which were published from 2015 to 2020 and the design methods used were pre-experiment, quasi experiment and cross-sectional.

Results: From eleven articles, it was found that there was an effect of giving warm compresses to adolescents who experienced dysmenorrhea from mild, moderate to severe pain levels. The intervention carried out is by using a warm water compress that is placed on the part that feels painful / uncomfortable, because it will be able to relax the muscles that are experiencing tension so that blood flow will become vasodilated.

Conclusion: The results of the literature review show that there is an effect of warm compresses on reducing dysmenorrhea on adolescents.

Keywords: dysmenorrhea, warm compresses, teenager

Pregnancy And Labor In History Of Baby Blues Syndrome In Post Partum Mother In A.Yani Surabaya Hospital

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Background: Emotional disturbances during pregnancy and childbirth experienced by a mother can cause Baby Blues Syndrome, especially in childbirth and unwanted pregnancies.

Aim: For this reason, the purpose of this study was to determine the relationship between pregnancy history and childbirth with the incidence of baby blues syndrome in post partum mothers at RSI A. Yani Surabaya.

Method: This research is analytic with cross sectional time approach, with a population of all post partum mothers in RSI A. Yani Surabaya as many as 150 people and using sampling techniques using accidental sampling with the sample in this study were 40 respondents. Data analysis was used by chi square test statistical analysis with significance level $r < 0.05$, which means H_0 was rejected, which means there is a relationship between pregnancy history and childbirth to the incidence of baby blues syndrome in post partum mothers at RSI A. Yani Surabaya.

Results: The results showed from the results of the chi square test with a significant level of 0.001 ($\alpha = 0.05$) means that H_0 is rejected, which means there is chi square.

Conclusion: Therefore, it is necessary to improve the quality of health services in providing counseling about the relationship of pregnancy history and childbirth to the occurrence of baby blues syndrome in Post Partum mothers so that it is also expected to reduce the incidence of baby blues syndrome for birth mothers

Keywords: Midwife counseling, pregnancy danger signs, level of knowledge, interest, pregnancy check up

Frequency Of Midwife Helping Delivery With Compliance According To Normal Care Standards In Public Health Center

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Background: Because the maternal and infant mortality rates are still too high, it is necessary to evaluate the competence of midwives.

Aim: The purpose of this study was to determine the frequency of midwives assisting childbirth in compliance with APN standards, at the Kabuh Health Center, Jombang Regency.

Method: This research method uses quantitative analytical research with total sampling technique. The research design used was approach cross sectional. The research sample was 36 respondents who were taken by total sampling technique. The independent variable is the Frequency of Midwives Assisting Childbirth and the dependent variable is Compliance with APN standards. Data retrieval using a standard 60-step APN checklist, with indicators Need improvement (score 1) meaning that not all steps have been carried out, Able (score 2) means steps are carried out sequentially but time is still the average limit and still needs help from others, Proficient (score 2), (score 3) means that all steps are done individually sequentially.

Results: The results of this study based on data analysis conducted showed midwives whose frequency was more assisting childbirth, the results were more in compliance with the APN standards as many as 22 midwives (61.11%), while 14 midwives (38.88%) who helped childbirth less frequency, the results were not comply with APN standards. The selection of statistical tests is determined based on the purpose of the analysis and the scale of the variable data. The frequency of midwives assisting in delivery of compliance with APN standards was analyzed by Chi-square test, with a significance level () of 0.05. The reason for choosing this test technique is because in this study the aim was to determine the frequency of midwives assisting in delivery of compliance according to standards and there was one paired sample with scores on an ordinal scale, namely frequency and compliance with standards. p value < 0.05 , then rejected, and accepted, meaning that there is an influence on the frequency of midwives assisting childbirth with compliance with APN standards at the Kabuh Health Center, Jombang Regency. Exact Sig.(2-tailed) p value > 0.05 then accepted.

Conclusion: The conclusion from the observations that have been made, at the Kabuh Health Center, is that the frequency of midwives assisting childbirth (midwives who work in the Poned room) is proven to be more able to carry out delivery assistance and more obedient to APN standards. From the results of the research that has been carried out, it can be a reference for the Puskesmas to assess the competence of midwives in the working area of the Kabuh Health Center.

Keywords: Frequency of assisting in childbirth, compliance, standards of normal delivery care

Use of Nesting Method for Improvement Low Birth Weight (LBW)

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Background: Babies born with low body weight will experience a heavier adaptation process than babies born with normal weight because the baby's physiological condition is still not optimal. The use of nesting as one of the developmental care interventions is a method to provide stabilization to low birth weight so as not to be stressed by environmental changes that occur so that their physiological conditions can increase faster with marked increase in body weight.

Aim: Determine the effect of using the Nesting method on increasing body weight in low birth weight babies (LBW).

Method: The study used a literature review method sourced from the Google Scholar and PubMed databases published from 2016 to 2020, and manually selected articles relevant to the research question.

Results: The application of the nesting method is a method of modifying the baby's environment in an incubator that is fast and precise in increasing body weight at LBW. Nesting method is able to increase the comfort of the baby so that it minimizes movement that consumes energy, this is shown by the calmer baby condition and increased sleep duration. Through nesting, nutritional intake can focus on efforts to strengthen the baby's physiological condition and ultimately accelerate weight gain.

Conclusion: The comfortable condition achieved by nesting is very beneficial in reducing stress, increasing comfort and preventing excessive movement. Overall these benefits trigger physiological parameters in a stable condition and accelerate physical growth as indicated by an increase in body weight.

Keyword: Nesting, BBLR, Weight gain

The Influence Of The Role Of Parents On Psychosocial Development Of Pre-School Age Children

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Background: Lack of parents attitude in teaching children makes children not independent, especially in social environments. Parents are very influential in the psychosocial development of children. Psychosocial development is the development related to emotions, motivation and personal development of humans and changes in how individuals relate to others.

Aim: Determine the effect of a close relationship between children and parents will shape the character and personality of the child as a whole, so that the child will be ready to be in a social environment. The role of parents in psychosocial development in children will help children in forming characters to face social challenges in the future.

Method: The study used a literature review method sourced from the Google Scholar and Scopus with the keyword "psychosocial development in pre-school age children", and manually selected articles relevant to the research question.

Results: The role of parents has an influence on children's psychosocial development

Conclusion: The social development of children is strongly influenced by the role of parents, in this case parents can build multicultural children's behavior, improve the civilization of children who are competitive in social interactions, parents influence the moral development of children, so that the role of parents who are both can determine independence in children.

Keywords: The role of parents, Psychosocial Children, Preschooler

The Differences Of Emotional Development And Achievement Level In Children Ages 6-12 Years With Parents Status Single Parent And Non Single Parent In Temenggungan Ii Elementary School Sub District Udanawu Blitar

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Background: Child development was often hammered when parents were experiencing problems one divorce. The problems that occur during the school-age children will disrupt children learning process, for example, children are usually cared for alternate between the father and the mother only brought up by one parent.

Aim: The research was to determine the differences of emotional development and achievement level in children ages 6-12 years with parents status single parent and non single parent in Temenggungan II Elementary School Sub District Udanawu Blitar.

Method: This study design is analitic comparative cross sectional approach. The population studied were all children aged 6-12 years in Temenggungan II District Udanawu Blitar, with simple random sampling technique obtained single parent 30 respondents and non single parent 58 respondents. The independent variables was parenting, with dependent variable emotional development (Y1) and achievement level (Y2). Data was collected by questionnaire and observation sheet. Statistical test using Mann Whitney U test.

Results: Results showed most respondents single parent has a moderate level of emotional development categories, amount 20 respondents (66.7%), the majority of respondents single parent has a good learning achievement categories, amount 19 respondents (63.3%), while the majority of respondents non single parent has a high level of emotional development categories, amount 37 respondents (63.8%), and most of the non-single parent respondents have a very good learning achievement category, amount 39 respondents (67.32). Results of analysis Mann Whitney u prove that there are significant differences between the emotional development (p-value = 0.000) and the achievement level (p-value = 0.012) in children aged 6-12 years old with parental status single parent and non single parent in SD Temenggungan II District Udanawu Blitar.

Conclusion: This of course takes the role of the family, especially the mother to detect stages of child development by working with local health workers, so that the process can be given optimal stimulation in accordance with the stages of child development

Keywords: Emotional Development, Achievement level, Children Aged 6-12 Years.

Literature Review: Incidence of Pruritus Vulva Based on Vaginal Hygiene Behavior in Adolescent Girls

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Background: The problem that is often faced by young women is that the occurrence of pruritus vulvae is caused by the lack of adolescent behavior in cleaning the genitals after defecating and urinating, causing itching on the genitals of adolescents and bad odor.

Aim: The purpose of writing this literature review is to determine the relationship between the incidence of vulvar pruritus based on vaginal hygiene behavior in adolescent girls.

Method: The literature was sourced from the google scholar and pubmed central (PMC) databases published from 2015 to 2021, and manually selected articles that were relevant to the research question. The keywords used are (occurrence of pruritus vulva) AND (behavior of vaginal hygiene in adolescent girls). The journals that have been found are then screened based on the appropriate topic and the year of publication of the journal, so that 10 journals are reviewed.

Results: The results showed that most of the young women experienced pruritus vulva during menstruation. Vaginal hygiene behavior in adolescent girls is mostly in the good category. The results of data analysis from 10 reviewed journals showed that there was a relationship between the incidence of vulvar pruritus based on vaginal hygiene behavior in adolescent girls.

Conclusion: Based on the results of the study, it was concluded that there was a relationship between the incidence of vulvar pruritus based on vaginal hygiene behavior in adolescent girls. It is recommended that adolescents always maintain genital hygiene in order to avoid the occurrence of vulvar pruritus.

Keywords: Adolescent Girls, Pruritus Vulva, Vaginal Hygiene

Impact Of Amphetamine And Cannabis On Free Sexual Behavior : A. Literature Review

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Background: Drug abuse is a global problem that causes adverse impacts in various sectors of people's lives, which include aspects of health, education, work, social life, and security. Increased use of drugs, especially amphetamine, during the Corona Virus pandemic.

Aim: Identifying the impact of amphetamine and cannabis abuse on casual sex.

Method: This study is a literature review which was analyzed using PICO (patient, intervention, comparison and outcome). The data bases used in this literature review include Pubmed, Science Direct and Google Scholar Journal published in the period January 2016 - December 2020. Keywords used in the search for this article were amphetamine OR cannabis OR marijuana AND impact AND free sexual behavior. Based on the keywords used, 122 related articles were obtained.

Results: A total of 10 research articles that met the inclusion criteria were included in this review. Forms of free sex behavior include, Kissing is a touch that occurs between the lips followed by sexual desire. Necking is sexual activity around the body but there is no genital contact. Petting is attaching the genitals but there is no genital contact. Oral sex or sex using the help of oral organs and Sexual intercourse or sex (using a condom or without a condom).

Conclusion: It is hoped that it can be used as basic data and can provide input on the problem of the impact of shabu and marijuana abuse on free sex behavior and hallucinatory disorders in all circles of society. Can improve scientific competence and add scientific information as well as to gain experience with the problem of the impact of shabu and marijuana abuse on free sex behavior and hallucinatory disorders in all circles of society.

Results Of Management Development Program For Employees Of Nadhlatul 'Ulama Hospital Jombang

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Background: Anemia in pregnancy is a risk factor for bleeding which is the main cause of maternal death in Indonesia. Anemia in pregnancy mostly caused by iron deficiency. Anemia in pregnancy is related to negative effect for maternal and neonatal outcome, anemia prevalence not showing any decrease despite government programs to prevent anemia in pregnancy.

Aim: The objective of this research is to analyze effects of Active Role, Obedience in Consuming fe Tablets and Eating Patterns on The Incidence of Anemia in 2nd and 3rd Trimester Pregnant Women in Dungkek District, Sumenep Regency.

Method: This is an observational analytic research using cross sectional study on 62 pregnant women in 2nd and 3rd trimester in Dungkek District, Sumenep Regency. Research sample is chosen by using simple random sampling method. Data collecting is using data collecting form, Morisky Medication 8 – item Adherence Scale (MMAS – 8) questionnaire and Food Frequency Questionnaire (FFQ). Data analysis is using logistic regression linear test.

Results: This research showing there is no significant effect between pregnant women's active role and anemia in pregnancy ($\phi = 0,075$). There is significant effect of obedience in consuming fe tablets on the incidence of anemia in pregnancy with $\exp(b)$ value 2,6. There is significant effect of eating patterns on the incidence of anemia in pregnancy with $\exp(b)$ value 6,4. The 3 variabels together give effect 42,3% to anemia in pregnancy.

Conclusion: Pregnant women with low obedience in consuming fe tablets are having risk 2,6 times higher to have anemia in pregnancy and pregnant women with less eating pattern are having risk 6,4 times higher to have anemia in pregnancy. Pregnant women are suggested to consuming fe tablet dan have good eating pattern that fulfill iron needs during pregnancy to prevent anemia in pregnancy.

Study Of The Influence Of Hiv/Aids Behavior And Coping Mechanism In Pregnant Women To Prevent Transmission Of Mother To Child In Kediri City

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Background: HIV/AIDS continues to be a major health problem for the global community. Pregnant women with HIV can pass the virus on to their babies during pregnancy, childbirth or while breastfeeding.

Aim: This study was conducted to determine how the effect of HIV/AIDS counseling on the behavior and coping mechanisms of pregnant women with HIV.

Method: Conducted through interviews, namely about the types of behavior and coping mechanisms to reduce the pressure caused by the status of PLWHA (People Living With HIV/AIDS). Study used a qualitative approach with a case study method of two HIV pregnant women. The research subjects were obtained personally where the relationship between the researcher and the subject was close, the subject's identity such as name, place of residence, and character would be disguised to maintain the confidentiality of the subject. The research data collection was conducted using two sources of evidence, namely documents and interviews.

Results: The results of this study indicate that the subject as PLWHA with closed behavior (Covert Behavior), namely the subject still keeps their status secret from their family and has a tendency to do Emotion focus coping, including; participating in activities in NGOs to build self-confidence. As well as getting closer to God, it is a form of trying to surrender to his condition. The second strategy, namely problem focus coping carried out by the subject, can be seen through the subject's efforts to seek advice and information about HIV / AIDS through brochures or books. The subject knows more about HIV / AIDS.

Conclusion: person infected with HIV / AIDS tries to behave or the impact caused by the status of the subject as PLWHA with closed behavior (Covert Behavior), namely someone who behaves towards a stimulus that is still limited to attention, perception, knowledge / awareness and attitude, not commonly observed by others, namely the subject still keeps his status secret from his family and uses coping strategies Problem Focused Coping and Emotional Focused Coping

Relationship Of Husband Support With Mom's Willing To Do Iva Examination At Pustu Klampokan, Panji District, Situbondo Regency

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Background: Cervical cancer is the second leading cause of death in Indonesia (WHO 2010). More than 227.27% of cases of cervical cancer and approximately 533.33% of cases end in death. Many factors that encourage Women Aged Fertile (WUS) to check IVA include support from the husband.

Aim: The purpose of this study was to analyze the relationship of husband support with IVA examination in Situbondo Regency.

Method: The design of correlational analytic research with cross sectional approach. The population in this study were all fertile couples of 682 in Situbondo Regency and conducted in November 2017. Total sample of 100 respondents with simple random sampling technique. The data used in the form of questionnaire and analyzed by Chi Square test.

Results: The results showed most husbands are less supportive in the IVA examination of 74 people (74%). Most women are less willing to do an IVA examination of 66 people (66%). There is a significant relationship between husband support with IVA examination in woman of fertile age couple in Pustu Klampokan, Panji Sub-district, Situbondo Regency (p-value 0,000 <0,05).

Conclusion: Husband's suggestion is expected to provide more support to the wife, especially instrumental and encourage to do early detection of cervical cancer so that the wife is more motivated and feel more confident and not afraid of the IVA examination that will be done

Keywords: husbands support, IVA examination

Digital Tool to Screen Antenatal Depression as The Prevention of Maternal Mental Health Issue for Positive Pregnancy Experience

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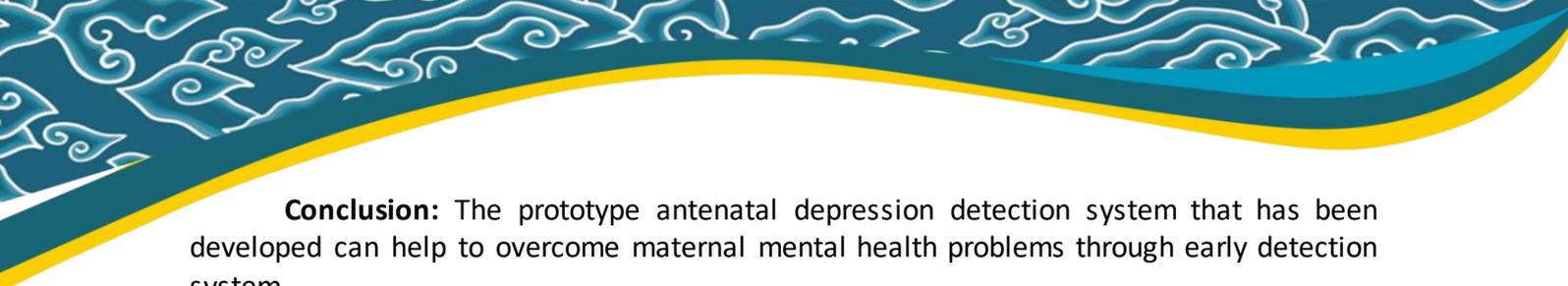
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Background: The Current Covid-19 pandemic is affecting the mental health of pregnant women and increases anxiety during pregnancy. To date, antenatal care in health facilities only focused on the health and physical well-being of mother and foetus. As the result, mental health of pregnant women is often neglected so as increases the risk of maternal and neonatal complications. Undetected and untreated of antenatal depression can leads to the increase of preeclampsia, premature rupture of membrane, bleeding, premature birth, intrauterine growth restriction, and mental and psychomotor development delays in infants, and postpartum depression. Today, the use of internet-based technology in early detection of health problems can improve the ability of health workers to prevent and diagnose early.

Aim: This study aims to develop a prototype of an antenatal depression screening application to assist midwives in performing short assessments of mental health problems suffering by pregnant women.

Method: The software development method in this study uses a Software Development Life Cycle (SDLC) model with a prototype approach. Collecting data for the needs of the system using interviews, observations, review of documents, and literature study.

Results: The prototype of an Android-based antenatal depression detection system that has been designed not only to detect the risk of depression during pregnancy but also finds the risk factors that cause depression. This tool allows midwives to assess the risk factors of depression in pregnancy based on women's profile and history, screening for depression, easily identify the cause of anxiety/depression suffering by pregnant women, and make decision related to the screening score of pregnant women. Edinburgh Postnatal Depression Scale (EPDS) questionnaire is used to screen depression in this application. The result of the EPDS test will automatically appear in the test results view after pregnant women finished the test. The results of the black-box testing indicate that the application is functioning properly.



Conclusion: The prototype antenatal depression detection system that has been developed can help to overcome maternal mental health problems through early detection system.

Keywords: Prototype, Antenatal, Depression, Screening, EPDS



The Environmental Determinants of Sexually Transmitted Diseases (STD) among female in North Sumatra, Indonesia

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Background : In 2019, the number of people with sexually transmitted diseases (STDs) in Indonesia reached more than 600 thousand people. North Sumatra is one of the province with a high STD incidence. STD is a group of diseases which is strictly related to personal hygiene and environmental sanitation conditions.

Aim : This study aims to identify the relationship between the incidence of STD and environmental factors.

Method : This cross-sectional study was using secondary data from Indonesia Demographic and Healthy Survey 2017. Chi-square analysis was used to estimated odd ratios of environmental factors with STD.

Results : The total of respondent from female in North Sumatra was 2459 people. Association was found between respondent who's using water from unimproved source OR 0.6 (95% CI 0.48-0.73) with female had genital discharge in last 12 months and there is no association found with type of type of toilet with STD cases, genital sore/ulcer, and genital discharge.

Conclusion : Futrher research, should explore impact of environmental factors in spesific STD cases, such as syphilis and gonorrhea.

Spatial Analysis for Hypertension in DKI Jakarta 2019

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Background: Hypertension is one type of Noncommunicable Disease (NCD) that is a burden on the government in disease control every year. The spatial approach to the analysis of non-communicable diseases is to obtain an overview of the distribution, similarities and differences of infectious disease cases based on the administrative unit of analysis.

Aim: This study aims to determine the pattern of distribution of hypertension cases based on risk factors, social factors, health care facilities, and lifestyle factors. The spatial approach was used to determine the spatial relationship between hypertension risk factors and hypertension cases in the DKI Jakarta area.

Method: The spatial approach was used to determine the spatial relationship between hypertension risk factors and hypertension cases in the DKI Jakarta area. Statistical spatial analysis using Moran Index analysis (LISA univariate and bivariate). The dependent variable is the incidence of hypertension, while the independent variables are lifestyle factors and health care factors

Results: The results showed that the screening program variable had a spreading pattern with a negative spatial relationship and there was While the variables of the number of public health centre (PUSKESMAS), the number of midwives, the number of nutritionists, low education, alcohol consumption, smoking, obesity, lack of physical activity, lack of fiber, and vulnerable age have clustered distribution patterns and positive spatial relationships, so it can be concluded that there is no spatial interaction between these variables on cases of hypertension.

Conclusion: The spatial distribution of hypertension cases in DKI Jakarta is a spreading pattern with a negative spatial relationship. Improving the quality and quantity of Noncommunicable Disease Integrated Assistance Post (POSBINDU PTM) a successful control of hypertension cases in the DKI Jakarta area.

Keywords: Hypertension, Noncommunicable Disease, Spatial, Autocorrelation

Determinants of Family Planning Service Utilization on Unmet Need Incidents with Generalized Structural Equation Modeling (GSEM) (Further Analysis of Indonesia's Demographic and Health Survey Data 2017)

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Background: One of the reasons for the lack of optimal achievement in terms of contraceptive use in Indonesia is the unmet need for family planning that has not been fully addressed.

Aim: This study aims to determine the direct, indirect, and the total effect of the determinants of family planning services utilization on the incidence of unmet need spacing and limiting in Indonesia as the basis for appropriate and effective program recommendations.

Method: This study using secondary data from 2017 Indonesian Demographic and Health Survey using a cross-sectional design with 33, 635 respondents who are married women aged 14-59 years.

Results: The results of the generalized structural equation modeling show that the incidence of unmet need in Indonesia is 11.68%, consisting of unmet need spacing (4.86%) and unmet need limiting (6.82%). The quality of family planning services has a positive indirect effect on the incidence of unmet need spacing. The quality of family planning services also has a positive direct, indirect, and total effect on the incidence of unmet need limiting. Socioeconomic and demographic status variables have a negative direct effect on the incidence of unmet need spacing, while the indirect effect and the total effect are positive. The direct and total effect of socio-economic and demographic status variables on the incidence of unmet need limiting is positive. The female autonomy variable has a positive direct, indirect, and total effect on the incidence of unmet need spacing. Women's autonomy has positive indirect and total effect on the incidence of unmet needs limiting. The variable of access problems does not have a significant effect on the incidence of unmet need spacing and unmet need limiting. The number of ideal children has a negative direct and total effect on the incidence of unmet need spacing and the incidence of unmet need limiting in Indonesia.

Conclusion: The variables that have been shown to have a significant effect on the incidence of unmet needs are the quality of family planning services, socio-economic and demographic status, women's autonomy, and the number of ideal children.

Keywords: unmet need, contraceptive, service quality, woman, Indonesia

Knowledge and Attitude towards Kangaroo Mother Care Among Postnatal Mothers in a District Hospital in Jakarta, Indonesia

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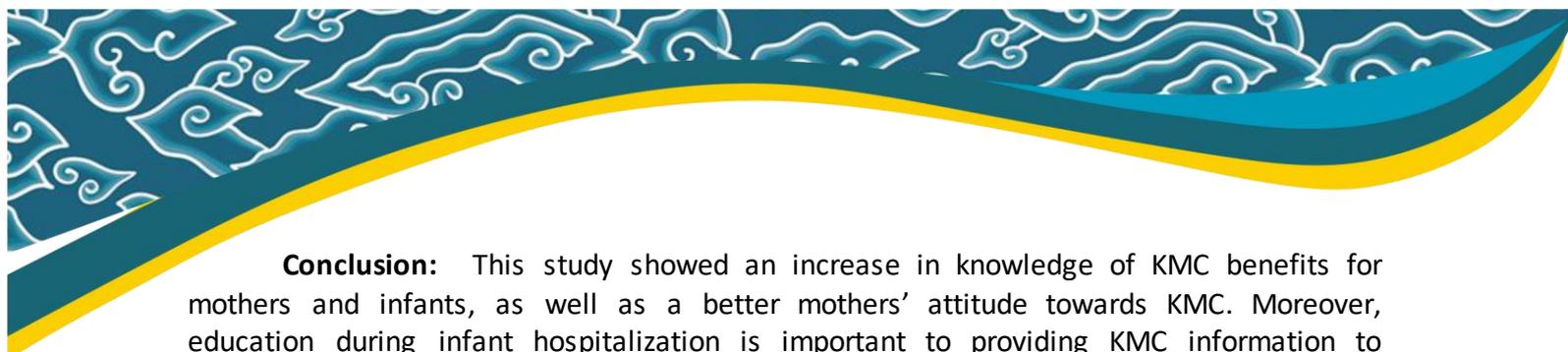
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Background: Kangaroo Mother Care (KMC) is a skin-to-skin contact method between mother and infant, to maintain the stability of an infant's temperature or to prevent hypothermia. It is also associated with the reduction of neonatal/infant mortality and risk of infection, also increasing intensity of breastfeeding and infant weight. KMC implementation is correlated with knowledge of mothers on KMC.

Aim: this study aims to compare knowledge and attitude of mothers with LBW infants regarding KMC shortly after giving birth to their infant in the hospital and when the infant will be discharged from the hospital.

Method: The subjects of this cross-sectional study were mothers of infants with birth weight < 2,200g, born at Koja Hospital between May 2017 and January 2018. Respondent selection was done consecutively, including 143 mothers. Interviews with the infant's mother were conducted twice (1st: after her infant was born; and 2nd: when the infant was discharged from the hospital). Mothers were educated by health workers on KMC after giving birth to an LBW infant at the hospital. Data collection included maternal characteristics, knowledge and benefit of KMC, and attitude towards KMC. Information regarding knowledge and attitude towards KMC was measured using scores. The average score of the first and the second interviews will be compared. Mean difference of the scores, and its 95% CI and p-values, will be calculated.

Results: For knowledge score on the benefits of KMC for infants, the score after delivery compared to the score before the infant was discharged increased by 3.46 (95%CI: 2.93-3.98, p-value=0.0001). This means that the mother knew more than 3 to 4 benefits of KMC when her infant was about to be sent home. Meanwhile, the knowledge score on benefits of KMC for mothers increased by 1.91 (95%CI: 1.61-2.22, pvalue=0.0001), with mothers who knew more than 1 to 2 benefits when they were discharged. There was a slight increase in the amount of the attitude score 0.44 (95%CI: 0.13-0.76, p-value=0.007).



Conclusion: This study showed an increase in knowledge of KMC benefits for mothers and infants, as well as a better mothers' attitude towards KMC. Moreover, education during infant hospitalization is important to providing KMC information to mothers.

The Overview of Sitting Posture and Musculoskeletal Disorders Among Mothers Who Perform Kangaroo Mother Care in 3 Hospitals in Indonesia

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Background: The non-ergonomic postures when performing Kangaroo Mother Care can increase the symptom of musculoskeletal disorders. Discomfort when performing KMC is exacerbated by a static position for a long time.

Aims: The objective of this study was to determine the description of sitting posture and musculoskeletal disorders among mothers who perform Kangaroo Mother Care.

Methods: The method used in this study was observational descriptive. Observations were conducted on 69 postpartum patients in 3 hospitals in Indonesia in 2020. The instrument used for musculoskeletal symptoms measurements was Nordic Body Map while instrument used for sitting posture measurement was Rapid Upper Limb Assessment worksheet. The data is presented in the form of a frequency distribution which is analyzed using the application of the Statistical Package for the Social Sciences.

Results: Based on the sitting posture measurement using Rapid Upper Limb Assessment worksheet, it is known that most of the respondents, namely 53 respondents have score of 3 and 14 respondents have score of 4. Scores of 3 and 4 indicated that it need further improvement. The musculoskeletal symptoms measurements using Nordic Body Map are known in general, mothers experience complaints in various body parts as follows: right and left shoulders (37.7%), hips (42%), back (37.7%), waist (36.2%), buttock (55.1%), and nape (10.1%).

Conclusions: Policies and procedures are needed in the form of ergonomic interventions that can improve posture and comfort in carrying out Kangaroo Mother Care activities.

Keywords: Sitting posture, musculoskeletal disorders, kangaroo method care

The Association of Child Feeding Practices, Hygiene Sanitation, and Other Factors with the Incidence of Diarrhea in Children Aged 6-23 Months in Indonesia (Secondary Data Analysis of IDHS 2017)

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Background: Diarrhea is the passage of loose or watery stools, usually at least three times in 24-hour period. Diarrhea still becomes the leading cause of death in children under five worldwide. Data from Indonesia Demographic and Health Survey (IDHS) 2017 shows that the highest prevalence of diarrhea is found in children aged 6-23 months, where the energy and nutrient needs increase during this period.

Aim: This research aims to analyze the association between child feeding practice factors, sanitation and hygiene factors, healthcare utilization factors, and sociodemographic factors with the occurrence of diarrhea in children aged 6-23 months.

Method: This cross-sectional study included secondary data from 4,030 children aged 6-23 months in IDHS 2017. Chi-square test and multiple logistic regression with 95% confidence interval were applied to analyze factors significantly associated with diarrhea.

Results: The prevalence of diarrhea in children aged 6-23 months in Indonesia year 2017 was 19.8%. Bivariate analysis shows that continued breastfeeding (p-value=0,013), bottle feeding (p-value=0,011), toilet facility (p-value<0,001), source of drinking water (p-value=0,004), maternal age (p-value<0,001), economic status (p-value<0,001), and place of residence (p-value=0,036) were significantly associated with diarrhea. In multivariate analysis, variables found to have significant association with diarrhea were bottle feeding (p-value=0,001), toilet facility (p-value<0,001), maternal age (p-value<0,001), and maternal education (p-value=0,044). Toilet facility was the dominant factor associated with diarrhea (OR=1,500, 95% CI 1,262-1,784), where the children with unimproved toilet facilities were 1.5 times more likely to have diarrhea compared to children with improved toilet facilities.

Conclusion: Using healthy latrines, washing children's eating utensils especially the baby bottle properly, and applying WHO recommendations in child feeding practices, are necessary to prevent diarrhea and maintain children's health at the age of 6-23 months.

Keywords: Diarrhea, children aged 6-23 months, child feeding practices, sanitation and hygiene

Implementation of the Law Number 8 of 2016 to Improve Social Welfare for Persons with Disabilities in Indonesia

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Background: The National Labour Force Survey (SAKERNAS) in 2016 estimated that the 12.15% PWD in Indonesia, most of them are of productive age. PwD are more likely to receive less opportunities of acquiring a decent job. Individuals with mild disabilities have only a 64.9% opportunity of being employed when compared to non-disabled workers. People with severe disabilities had an even worse chance - more than 10% lower.

Aim: This study aims to overview the potential of Law Number 8 of 2016 in removing the barriers to decent work for PwD in Indonesia so that improving the social welfare of PwD.

Method: This study utilises mixed-methods in a qualitatively driven way. First, conducting a semistructured interview with two government officials in Jakarta and two founders of social enterprises in Yogyakarta, as its primary data. Second, conducting a literature study of statistical data from Intercensal Population Survey (SUPAS) 2015, National Labor Force Survey (SAKERNAS) 2016, National Team for the Acceleration of Poverty Reduction (TNP2K), and ILO Indonesia, as its secondary data. This research particularly utilized deductive thematic analysis, guided by pre-existing concepts related to the research question, to code the data.

Results: There were two main themes identified from the finding: (1) Remaining barriers for PwD in accessing paid work such as level of education, inaccessible job information, and exclusive labor market; and (2) The potentials of Law No. 8 of 2016 to diminish the barriers. The government need to provide an incentive for institutions who employ disabled workers. This study suggests the incentive as tax rebates for large enterprise and wider access to capital or soft loan for small businesses. To maximize the impact of the disability policy, this study recommends the government to create the disabled-friendly environment, renewing the vocational curriculum, and formulating standardized practical guidelines for companies.

Conclusion: The increasing quota in disability law potentially triggers more institutions to employ PwD. Moreover, the National Commission on Disability is on demand to monitor the fair hiring PwD. Increasing job opportunities with decent wage will have an effect on improving the social welfare of persons with disabilities.

Keywords: disability, law, employment, social welfare, Indonesia

Clustering of Substance Use Behaviors and Premarital Sex Among Indonesian Students, The Role of Family, Peers, and Neighborhood Characteristics

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Background: Studies showed that the common cause of adolescents' morbidity includes substance use (smoking, alcohol consumption, illicit drug use) and risky sexual behavior. When adolescents engaged in one risk behavior, they are more likely to engage in other health risk behaviors.

Aim: To investigate the pattern of multiple health risk behaviors and its association with family, peers, and neighborhood characteristics.

Method: Data came from the 2016 National Narcotics Survey of Indonesian students (10-24 year-old), which used a multi-stage cluster random sampling method (n=31,439 students). We assessed four health risk behaviors, including smoking, alcohol consumption, illicit drug use, and premarital sex. A multinomial logistic regression model that simultaneously explored the neighborhood, peers and family influences on multiple health risk behaviors was performed.

Results: Our sample consists of 45.4% of boys and 54.6% of girls. The more health-risk behavior carried out, the fewer number students involved it. About 31,6% of boys reported one risk, 15,1% reported two risks, and 6,1% reported three and more risks. While among girls, about 6,6% reported one risk, 1,47% reported two risks, and 0,43% reported three and more risks. In the multivariate analysis, the factors associated with multiple health risk behaviors were age 10-14 yearsold (boys OR = 4.61; 95% CI = 4.01-5.30; girls OR = 2.63; 95% CI = 1,78-3.87); age 15–17 years-old (boys OR = 2.91; 95% CI = 2.53 – 3.34; girls OR = OR = 2.12; 95% CI = 1.43-3.14); father have risky health behaviors (boys OR = 1.58; 95% CI = 1.44-1.73; girls OR 1.47; 95% CI = 1.15-1.88); mother have risky health behaviors (boys OR = 1.99; 95% CI = 1.55 – 2.56; girls OR = OR = 4.84; 95% CI = 3,39-6.93); sibling have risky health behaviors (boys OR = 2.29; 95% CI = 2.05-2.56; girls OR = OR = 1.51; 95% CI = 1.51-2.44); and peers have risky health risk behaviors (boys OR = 1.36; 95% CI = 1.22- 1.52; girl OR = 1.54; 95% CI = 1.14-2.08).

Conclusion: Intervention on one health risk behavior should be simultaneous with other health risk behaviors and encourage adolescents to have healthy peer groups.

Keywords: multiple health risk behaviors, substance use, premarital sex, adolescents, Indonesia

Gender Different in the Physical Performance and Its Associated Factors

A cross sectional study in Community dwelling Older Adult

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Background: Ageing process induce the decline in both physical and mental health status of older people. Hence influence the functional capacity that significantly decrease as people aged. Low physical and mental performance in older people have a strong predictive value for a wide range of health consequences, including disability in activities of daily living as well as decreasing functional capacity.

Method: This study using cross sectional design to identify the gender different of physical performance in older people and identify its associated factor. Sociodemographic background, Intrinsic factor (chronic illness, fear of falling visual and hearing impairment, ADL Barthel index) are selected as predictor variables, and physical performance as an outcome variable were measured by Short Physical Performance Battery (SPPB).

Result: a total of 611 older people participated this study with 70 percent of them at the range of 60-69 years old, and 73% of them are female. The prediction models for the physical performance of the elderly differed by gender. Physical performance of the male elderly is predicted by geriatric depression as the strongest predictor ($\beta = -0.229$), followed by the number of chronic illness ($\beta = -0.188$) and activity daily living ($\beta = -0.74$). Male prediction model able to explain 26,1% of the physical performance. The female prediction model showed that physical performance is explained by activity daily living as the strongest predictor ($\beta = -0.240$) followed by the number of chronic illness ($\beta = -0.177$) geriatric depression ($\beta = -0.118$) and physical exercise ($\beta = 0.098$) . The female model expected to explained 16.4% of the entire physical performance model

Conclusion: This finding implicate the importance of implementing difference approach based on gender model to promote the improvement in physical performance in older adult

Study Analysis of Infectious Diseases with Food Security on The Nutritional Status of Children Under Five in Communities

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Background: Malnutrition in toddler can cause physical, mental, social, and intellectual growth and development disorders that are persistent and continue to be carried on until the child becomes an adult in Indonesia 4 out of 10 toddler experience physical growth disorders and intelligence levels due to malnutrition in the form of Protein Energy Deficiency. More specifically, malnutrition can cause a delay in body growth, more importantly, a delay in brain development, and there can also be a decrease or a low body resistance to infectious diseases. Malnutrition problems in toddlers are caused by various factors, one of which is low household food security and infectious diseases. Providing an irregular diet, not in accordance with good nutritional needs for toddlers, inadequate family food security and rarely carrying out growth and development checks at Posyandu as a detection of nutritional status in toddler, So that the behavior has a bad impact on the nutritional status of toddler.

Results: The Results of the calculation of χ^2 -chi-square in this research showed that the significance values were higher than the cut-off value of 0.05; thus, the model is considered as having the relevant predictive value. The estimated t-value in red illustrated that the resulting t-values were lower than t_{table} (1.96) at the significance level of 5%, o the variable was not significant. Tests of direct effects of infectious diseases on nutritional status showed an inner weight coefficient of β 0.35 with a t-value of β 6.24. Since the t-value was $>$ 1.96, then there was a significant direct effect of infectious diseases on nutritional status.

Conclusion: A negative value of the inner weight indicated a negative relationship between the two. It means that the lower the infectious disease, the better the nutritional status would be.

Keywords: nutrition, toddler, infectious desiasse

Exploration of Mothers Experience (Perspectives and Needs) with Stunting Children in Gempolan Village, Gurah, Kediri: A Qualitative Study

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Background: Stunting is one of the children's health problems that are of concern to the government and the key indicator of the Sustainable Development Goal of Zero Hunger. When a child is diagnosed with stunting, various biopsychosocial responses will be felt by the mother. The mother will need support and assistance from others too.

Aim: This study aims to explore the perspectives and needs of mothers with stunting children.

Method: A qualitative design is chosen with a semi-structured interview. An in-depth interview is using for data collection. The participants of this study were 5 mothers with children diagnosed with stunting in Gempolan Village, Gurah, Kediri in November 2020. Data analysis using Braun & Clarke.

Results: The result shows that there are five (5) themes on exploration perspectives after stunting diagnosed as follows: feeling guilty towards their child, feeling distrustful of their child experiencing stunting, trying to strengthen herself, feeling the threat to the health of her child, and fear of being stigmatized by society.

Conclusion: There are two (2) themes on their need as follows: need information on improving child nutrition and need psychosocial support.

Keywords: stunting, mother, experience, perspective, need

Interventions to Reduce Stress in Pregnant Women with Preeclampsia: A Systematic Review

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Background: A new report on maternal mortality released by WHO, UNICEF, UNFPA, the World Bank Group, and the United Nations Population Division estimates the number of maternal deaths worldwide at 295,000 in 2017. This is a 38% decline since 2000. The decline has been on average the average is under 3% per year. The main complication that causes almost 75% of mothers to die is high blood pressure during pregnancy (preeclampsia and eclampsia).

Aim: The main objective of the study was to understand and explain the importance of stress management in pregnant women with preeclampsia considering the side effects caused by stress during pregnancy on the condition of the mother and fetus.

Method: The research design used is a literature review from several sources. Articles collected using search engines such as PubMed, google scholar, Elsevier, and Springer. The articles used in the research are published in 2017-2020. Analysis of research articles obtained using a systematic review.

Results: Based on the articles collected, it is found that the incidence of preeclampsia is often associated with stressful conditions experienced by pregnant women. Therefore, stress management must be owned by pregnant women so as not to have a major influence on their pregnancy, especially on the fetus they are carrying.

Conclusion: Various interventions can be recommended to reduce stress in pregnant women with preeclampsia.

Keywords: intervention, stress, pregnancy, preeclampsia

Premarital sexual behavior in adolescents in terms of parenting : Meta-Ethnography

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Background: Adolescence is a crucial period in which adolescents will be faced with various problems, one of which is premarital sex which can cause problems in adolescent life such as unwanted pregnancies, sexually transmitted infections, and unsafe abortions. Parents have an important role in shaping adolescent behavior and values in preventing premarital sex

Aim: This study aims to synthesize or describe premarital behavior in adolescents in terms of parenting patterns

Method: This study used Meta-ethnography analysis on 6 qualitative articles between 2011 to 2021, heading "Parenting" AND "Premarital sex" OR "Unwanted Pregnancy". Critical appraisal is carried out using standard criteria and synthesized using the meta-ethnography method

Results: Overall from six articles shows teenagers choose to have premarital sex due to poor parenting, parenting that is too restrictive, lack of affection in the home, and lack of communication between parents and children

Conclusion: This study evaluates the need for developing parenting patterns for adolescent parents, especially in the prevention of premarital sex

Keywords: Parenting, premarital sex, unwanted pregnancy, qualitative study

Cognitive Development in Adolescents to Improve Personality and Mentality

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Background: Early adolescence is a time when a child grows to the stage of becoming an adult that cannot be determined with certainty. Early adolescence is between the ages of 12-15 years. In adolescents, deviations are often found which unwittingly have a bad impact on the youth themselves and the environment around them.

Aim: Therefore, we, students of the S1 Nursing Study Program at the Surya Mitra Husada Kediri Institute of Health, carried out community service activities to provide counseling about Cognitive Development in Adolescents to Improve Personality and Mentality.

Method: we use online data collection and data analysis methods (questionnaires) with the help of Google-forms because the circumstances do not allow us to go directly to our targets. There are two stages of filling out the questionnaire, namely pretest and posttest.

Results: Prior to education and health promotion for participants, the data we obtained from 22 pretest respondents were 63.6% of people who already understood cognitive development in adolescents, 36.4% of people already understood personality and mentality, and 72, 7% of people already understood about self-potential development. After conducting Health Education and Promotion to the participants, the data we obtained from 22 posttest respondents were 100% of people who already understood cognitive development in adolescents, there were 40.9% of people who already understood personality and mentality, and 72.7% people already understood the development of self-potential.

Keywords: adolescent cognitive development, personality, mentality

The Impact Of Early Marriage on Adolescents Literature Review

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Background: Early marriage is a marriage in adolescents under the age of 20 who should not be ready to carry out marriage. Early marriage can result in adolescents dropping out of school so they lose the opportunity to study as a provision for the future. Literature study aims to determine the impact of early marriage on adolescents.

Aim: Literature study aims to determine the impact of early marriage on adolescents.

Method: In this literature study, four databases (PubMed, Science Direct, Springer Link and Google Scholar) were used to select studies which included, the last five years of journals in English, titles, and abstracts.

Results: From the search results obtained seven journals that match the inclusion criteria and for the average number of participants more than thirty in each study.

Conclusion: Early marriage in adolescents can causes early pregnancy, illness, complications during childbirth, death, psychological problems (somatic illness, depression and risks to mental health).

Keywords: Impact, Early Marriage, Adolescents

Literature Review: Incidence of Pruritus Vulva Based on Vaginal Hygiene Behavior in Adolescent Girls

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Background: The problem that is often faced by young women is that the occurrence of pruritus vulvae is caused by the lack of adolescent behavior in cleaning the genitals after defecating and urinating, causing itching on the genitals of adolescents and bad odor.

Aim: The purpose of writing this literature review is to determine the relationship between the incidence of vulvar pruritus based on vaginal hygiene behavior in adolescent girls.

Method: The literature was sourced from the google scholar and pubmed central (PMC) databases published from 2015 to 2021, and manually selected articles that were relevant to the research question. The keywords used are (occurrence of pruritus vulva) AND (behavior of vaginal hygiene in adolescent girls). The journals that have been found are then screened based on the appropriate topic and the year of publication of the journal, so that 10 journals are reviewed.

Results: The results showed that most of the young women experienced pruritus vulva during menstruation. Vaginal hygiene behavior in adolescent girls is mostly in the good category. The results of data analysis from 10 reviewed journals showed that there was a relationship between the incidence of vulvar pruritus based on vaginal hygiene behavior in adolescent girls.

Conclusion: Based on the results of the study, it was concluded that there was a relationship between the incidence of vulvar pruritus based on vaginal hygiene behavior in adolescent girls. It is recommended that adolescents always maintain genital hygiene in order to avoid the occurrence of vulvar pruritus.

Keywords: Adolescent Girls, Pruritus Vulva, Vaginal Hygiene

Parents' Knowledge About Immunization With Missed Opportunity Immunization In Children

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Background: The WHO's Global Advisory Group recommends an immunization strategy by offering or administering the vaccine to all eligible children at every opportunity. This strategy has the potential to experience missed opportunities, namely all contacts with health services but children do not get the required vaccinations even though the child meets the requirements to be vaccinated. Parental factors have the potential to cause missed opportunities in immunization.

Aim: Analysis of the prevalence of missed opportunity immunization and parental knowledge of immunization.

Method: Quantitative approach through Measles-Rubella immunization evaluation survey in East Java Province. Respondents are mothers who have children aged 9 months to 15 years, with a large sample of 1849 children. The research locations were 30 villages in the rural area and 30 villages in the selected urban area in the province of East Java.

Results: There is a significant relationship between mothers with low knowledge and mothers with high knowledge and children's Missed Opportunity. Mothers who have low knowledge have a risk of 6.73 times missed opportunity compared to mothers who have high knowledge.

Conclusion: Health promotion about immunization, especially the benefits and impacts if not immunized, is expected to reduce the incidence of missed opportunities. Reducing missed opportunities will increase the timeliness of vaccination, improve the efficiency of health service delivery in general, and synergize between curative and preventive care services in health facilities.

Keywords: Knowledge, Child, Immunization, Vaccines, Missed Opportunity

Do Mothers Who Meet The Minimum Standard Of Antenatal Visits Have Better Knowledge? A Study From Indonesia

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Background: Maternal knowledge is one of the indirect causes of maternal mortality in Indonesia. Maternal knowledge that mothers must possess includes knowledge about pregnancy, childbirth and childbirth. Maternal knowledge should be provided during pregnancy.

Aim: to identify maternal knowledge in postpartum women who have a history of the frequency of pregnancy visits according to the minimum standard.

Method: a descriptive quantitative design was conducted by assessing maternal knowledge to postpartum mothers using an online questionnaire. A sample of this research involved postpartum mothers who completed inclusion criteria, namely physiological postpartum mothers and had regular pregnancy at least 6 ANC visits. In contrast, the exclusion criteria were postpartum mothers who were not included in the target areas of research. It uses random sampling techniques and performs an analysis using descriptive statistics.

Results: Three research questions showed a large percentage of wrong answers, namely preparation to face complications (64%), contraceptive methods in breastfeeding mothers (50%) and the first time using contraception during childbirth (42%). Meanwhile, all the correct results (100%) are exclusive breastfeeding and supplementary feeding for babies.

Conclusion: Completing minimal standards of ANC visit cannot ensure adequate maternal knowledge, particularly crucial health information that influences maternal and neonatal health status.

Life Survival Analysis of Twin Child Under 5 Years in Indonesia

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Background: Indonesia have focused in recuding the high level of infant and child mortality. In year 2015, infant and child mortality rate was 22 per 1000 live birth and 26 per 1000 live birth (Ministry of Health Report, 2016). Twin child is one of risk factor for infant mortality rate. Twin pregnancies are higher risk of premature birth, low birth weight, cerebral palsy, and even death.

Aim: The purpose of this research was analyzing the survival risk of twin births.

Methods: This research used DHIS data in year 2013 and 2016 with number of sample 12.161 alive child under five years of last birth and under five years child mortality of last birth.

Result: The result show life survival average of child of single birth was 5 years. Life survival average of child of twin birth was 1,65 years and significant different with single birth ($p < 0,05$). Single birth male have higher life survival average 0,64 years than twin birth male. Single birth female have higher life survival average 0,52 years than twin birth female.

Conclusion: Male twin birth was more survive than female twin birth. The highest mortality was occurs at age under 1 years in twin birth, but it was occurs at second and third years in single birth. There were signifantly difference child under five years life survival between single birth and twin birth. Although there were no different life survival between male and female, but female has lower life survival rate than male.

Keywords: infant mortality; child mortality; twin birth; life survival rate

Understanding Infant Feeding Decision in Urban and Rural Area of East Java Indonesia: A Qualitative Study

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Background: The key to child growth is the nutrition of children. The World Health Organization (WHO) and United Nations Children's Fund (Unicef) explained that the best infant feeding is to exclusively breastfeed for 6 months without being followed by fluid. The National Socioeconomic Survey (Susenas) in 2012 states that there are many mothers who give food too early to their babies. As many as 32% of mothers provide supplementary feeding to 2 - 3 month old babies, and 69% to infants aged 4 - 5 months. Approximately 40% of infants less than two months have been given complementary feeding of milk.

Aim: The aim of this study was to describe and compare infant feeding decision between urban and rural areas of East Java Indonesia and to study association with possibly influencing person and household factors.

Method: The qualitative study included 20 in-depth interviews with mothers (18 interviews) and local health care staffs (2 interviews). The total of 9 mothers from each urban Sampang district and rural area Surabaya City were interviewed. Transcribe the interview, coding and then analyze using thematic analysis framework.

Results: We found that mother's knowledge and practice infant feeding decision in urban area has less affected by food taboos or food beliefs, tradition culture, information from health care professional rather than rural area. Otherwise technology, working activities, and birth method has more effect on urban area rather than rural area because health professional became more important source of information in rural areas. However, the influence of family is relatively almost same both rural and urban area. The differences between both areas is also affected by different maternal and child health policy in each area. The middle up price formula milk tend to be available and chosen in urban area rather than in rural area.

Conclusion: Mother in urban area tends to give mix feeding both breastfeeding and other breast milk due to working life and caesarean. The maternal and child health policy will be needed to be adapted according to the complexion of the mothers in each area.

Keywords: breastfeeding, infant feeding, urban, rural

Trend of Adolescent Marriage 2016-2020 in Malang District

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Background: The adolescent population in Indonesia reaches 26.4% of the total population. Adolescents experience many changes, both physically, psychologically, mentally and socially. The increasing number of adolescent marriages can have various impacts on society. Especially if the marriage is carried out without the readiness and ability to marry but because of a premarital pregnancy. Pregnancy that occurs can cause complex problems not only related to health problems.

Aim: This study aims to analyze the level of adolescent marriage in 2016-2020 in Malang District, East Java Province.

Methods: This research is descriptive research. The population of the study was adolescents aged <19 years in Malang District, East Java Province. Malang District consists of 33 Subdistricts. The data collected was secondary data regarding marriage from the Ministry of Religion and the Religious Court data.

Results: The results showed that the marriage rate of adolescent girls aged <19 years in 2016-2020 experienced an increase where every year it always increased even in 2020 it increased by >3 times from the previous year. The percentage of women and men aged <19 years who were married in the last 5 years has always been increasing. In 2016 women aged <19 years were 1.38% of the total number of marriages, 1.27% (2017), increased to 1.45% (2018), 1.54% (2019) and 5.85% years 2020. Meanwhile, men aged <19 years who are married are 0.16% (2016), 1.04% (2017), 1.15% (2018), 1.11% (2019) and 1.35% 2020. Applications for dispensation for marriage in 2016-2020 also experienced an increase. The majority of applications for dispensation because of age that didn't meet the minimum legal age for marriage, already has a boyfriend/fiancé, or due to premarital pregnancy.

Conclusion: The trend of adolescent marriage in 2016-2020 has increased. Adolescent marriage has various risks that can cause problems such as the occurrence of an unprepared pregnancy, immature emotionality, household vulnerability that can result in divorce and violence. As a result, it will also affect the condition of the baby being born. Efforts to realize quality marriages still need to be carried out on married couples, especially in adolescent couples.

Keywords: adolescent marriage, early marriage, maternal health, public health, adolescent pregnancy

The Role of Interpersonal Factors and The Community to Prevent Adolescent Pregnancy in Malang Districts

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Background: Adolescent pregnancy is still a problem in Indonesia. According to Indonesia Demography and Health Survey (2017), unwanted pregnancy among female adolescents is the highest in the 15-19 years age group (16.4%). Pregnancy that occurs in adolescents is a problem that needs special attention considering that adolescents are still in the process of reaching maturity physically, psychologically, mentally and socially. So that if a adolescent experiences pregnancy, there will be big potential for various problems, not only health problems.

Aim: This study aims to determine the role of interpersonal factors (lived with a nuclear family, closeness with parents, history of young married mothers, teenage friends who like to get along freely, where adolescents spend more time) and the youth community with adolescent pregnancy.

Method: The design of this study was case-control with 114 female adolescents aged 20-25 years regardless of marital status consisting of case groups (never pregnant at age 19 years) and control groups (not pregnant at age 19 years) in 50 villages in 15 subdistricts of Malang Districts in 2019. Respondents were interviewed with a questionnaire.

Results: The results showed differences in interpersonal factors in adolescents who had been pregnant at the age of ?19 years and had never been pregnant at the age of ?19 years ($p = 0.008$). There was a difference in the history of young married mothers ($p = 0.002$) and where adolescents spend more time ($p = 0.007$). And there were no differences in adolescents who were raised in the nuclear family ($p = 1.00$), closeness with parents ($p = 0.118$), and teen friends who liked to get along freely ($p = 0.724$). There were community differences in adolescents who had been pregnant at ?19 years and had never been pregnant at ?19 years ($p = 0.035$).

Conclusion: Interaction of adolescents with their environment influences adolescent thinking and behavior patterns in relationships. Adolescent's closest environment does not necessarily play a positive role in adolescent social and behavior.

Keywords: adolescent pregnancy, adolescent relationships, maternal health, interpersonal factors, social determinants of health.

Caesarean birth in Indonesia: understanding inequalities, inefficiencies, and intentionalities

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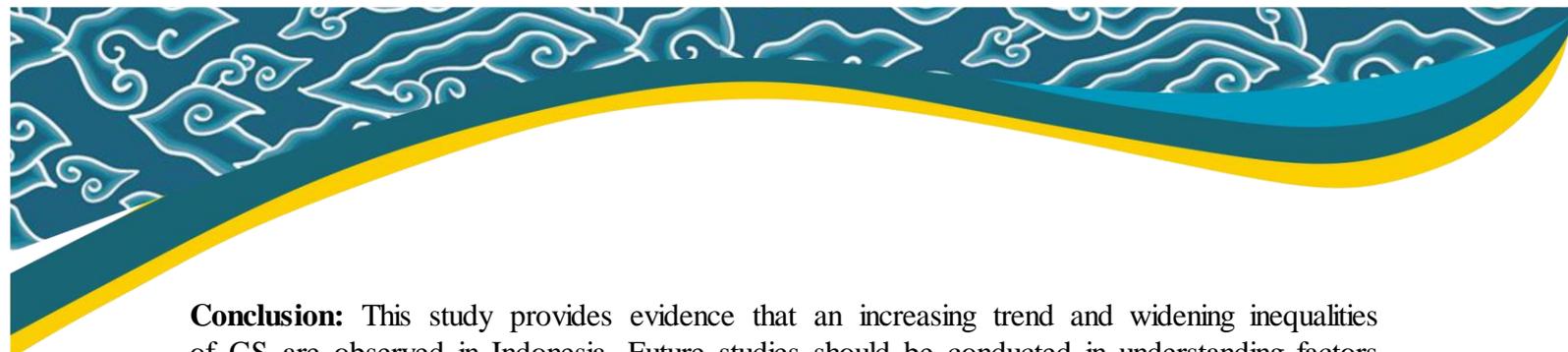
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Background: Caesarean section (CS) rates are increasing globally, with limited additional benefit for women's and newborns' health. Importantly, Asia is the region with the fastest increasing rate of CS at 6.4% per year. Understanding factors driving high rates of CS is imperative to optimise the use of this life-saving intervention.

Aim: This study aimed to investigate trends in CS in Indonesia and assess the existing inequalities in CS across different socio-economic determinants.

Method: We used the Indonesia Demographic and Health Survey (DHS) to analyse trends in CS and inequalities from 1991 to 2017. Inequality indicators were measured by different sociodemographic determinants (birth place, wealth quintiles, place of residence, major island groupings, and maternal education). Trends in inequalities were assessed through changes in rate ratio and rate difference.

Results: From 1991 to 2017, CS rates have increased in Indonesia by 91% from 1.6% (95%CI: 1.3–1.9) to 17.6% (95%CI: 16.7–18.5). Overall CS rates are persistently higher in public health facilities compared to private facilities. The highest increase of CS rate from 1994 to 2017 is observed in Java & Bali, with 86% increase from 2.6% (95%CI: 2.0–3.3) to 18.8% (95%CI: 17.4–20.2). The lowest increase is observed in Maluku & Papua, with 75% increase from 2.3% (95%CI: 1.5–3.6) to 9.5% (95%CI: 7.3–12.1). Persistent higher CS rates are also observed among women who reside in urban compared to rural areas (Rate Ratio (RR): 1.9, 95%CI: 1.7–2.9), among richest compared to poorest women (RR: 4.9, 95%CI: 4.1–5.8), and among women with higher education compared to primary education (RR: 3.5, 95%CI: 3.0–4.0). Widening inequalities in CS are observed between the most affluent regions (Java & Bali) and less affluent regions (Maluku & Papua) from RR of 1.1 (95%CI: 0.6–1.7) in 1994 to RR of 2.0 (95%CI: 1.5–2.5) in 2017 as well as between richest and poorest women in Indonesia from RR of 3.9 (95%CI: 1.3–6.5) in 1991 to RR of 4.9 (95%CI: 4.1–5.8) in 2017.



Conclusion: This study provides evidence that an increasing trend and widening inequalities of CS are observed in Indonesia. Future studies should be conducted in understanding factors contributing to this trend. This study provides critical new evidence to inform policy and practice on more equitable access to maternity care services. Policy makers and relevant stakeholders should take appropriate measures to control the CS rate in the country and execute efforts in improving equal access and use of CS to any woman in Indonesia who needs it in a timely manner.

Factors associated with teenage pregnant women's delayed notifications of their pregnancies to municipal offices in Okinawa, Japan: a cross-sectional study

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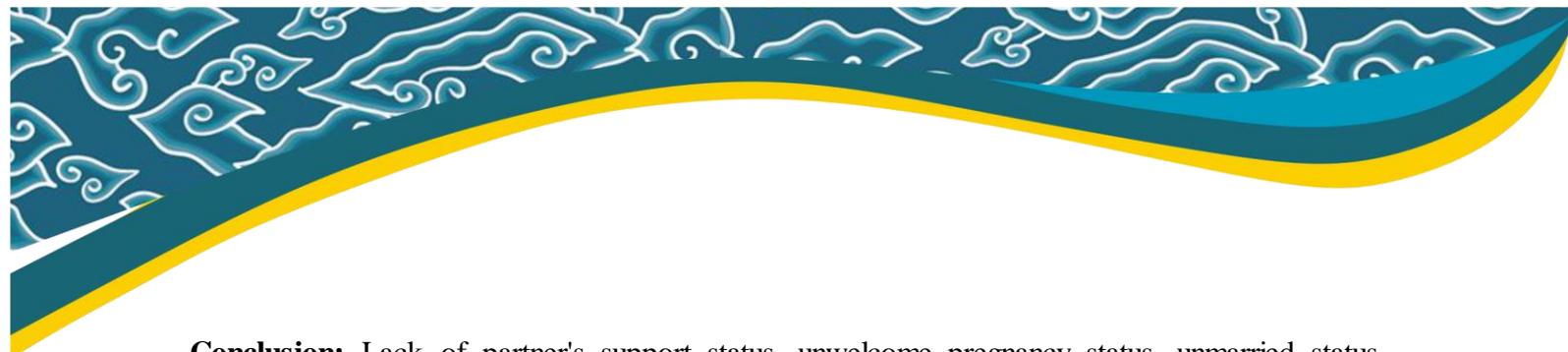
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Background: Globally, teenage pregnancy is a public health problem, as it can have negative health and social consequences for mothers and their babies. To prevent such consequences, Japanese municipal offices are supposed to start providing teenage pregnant women with intensive support, as soon as pregnant women report their pregnancies to the municipal office. However, many teenage pregnant women fail to report their pregnancies by the recommended deadline (12 weeks gestational age) in Okinawa prefecture where teenage pregnancy is most common in Japan.

Aim: To identify factors associated with delayed notifications of pregnancies by teenage pregnant women in Okinawa, Japan.

Method: In this cross-sectional study, teenage pregnant women who reported their pregnancies to one of the four municipal offices between September 2017 and August 2019 were included. Data were collected from pregnancy notification forms and questionnaires administered when pregnancy notification forms were submitted. The outcome variable was gestational age at the time of the submission, dichotomized into normal group (by 12 weeks) or delayed group (after 12 weeks). Predictor variables were socio demographic and economic characteristics, smoking and drinking behavior, social environment, maternal health status and pregnancy history (history of past pregnancy, delivery, abortion and miscarriage). Kaplan-Meier method was used to assess associations between the outcome and predictor variables.

Results: Of the 198 study participants, 59 people (30%) were delayed group. The median gestational age (interquartile range) was 10 weeks (9 to 12). In bivariate analysis, participants who had no support from their partners were significantly more likely to have delayed notification, compared to participants who had support from their partners. Participants who was not happy when she became pregnant were significantly more likely to have delayed notification, compared to participants who was happy when she became pregnant. Unmarried participants who had no plan to get married with their partners were significantly more likely to have delayed notification, compared to unmarried participants who had a plan to get married. Participants whose partners are smokers were significantly more likely to have delayed notification, compared to participants whose partners are non-smokers.



Conclusion: Lack of partner's support status, unwelcome pregnancy status, unmarried status without marriage plan and partner's smoking status, are associated with delayed pregnancy notification.

Association between Social Vulnerability and Poor Sleep Quality among Community-Dwelling Japanese Older Adults: A Cross-Sectional Study

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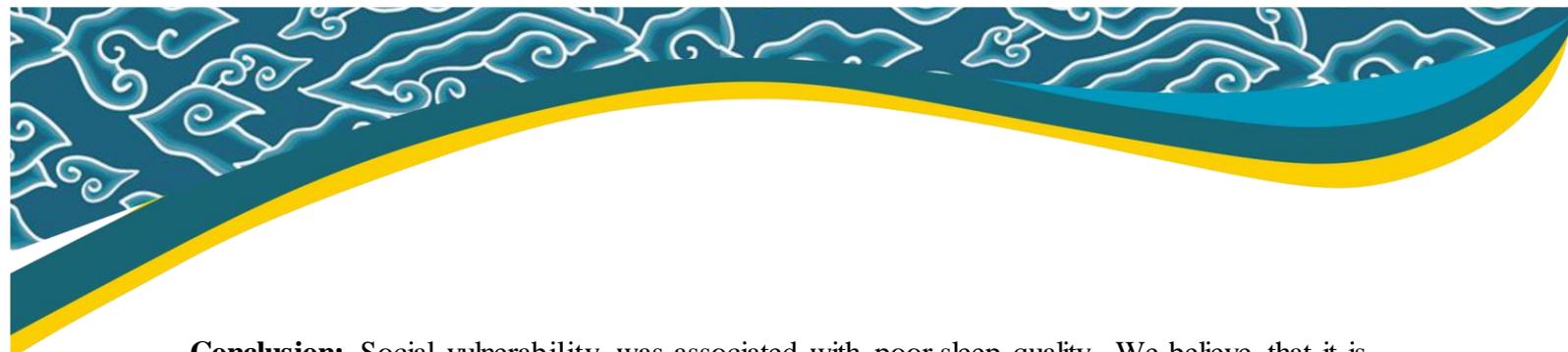
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Background: As many as 30% of older adults in Japan suffer from sleep disorders such as insomnia. Promotion of daytime physical activities and regular life rhythms have been recommended as guidelines for sleep hygiene, but the effects of social factors are unclear.

Aim: This cross-sectional study aimed to examine the association between social vulnerability and subjective sleep quality among older adults.

Methods: The present study recruited voluntary Japanese participants aged over 60 years old who had health check-ups held in a public hall in the sub-urban area in Japan between 2018 and 2019. Social vulnerability was assessed using social frailty index, which consists of five items (living alone, homebound tendency, low social networks, low social interaction, and lack of social role), and respondents were categorized into three groups: “non-frailty,” “pre-frailty,” and “frailty.” Sleep quality was assessed using Pittsburgh Sleep Quality Index (PSQI) in a self-reported questionnaire. We performed multivariable regression analysis: PSQI score was designated as the dependent variable, social frailty as the independent variable, and age, gender, education, household income, working status, present illness, instrumental activities of daily living difficulty, body mass index, drinking, and smoking as covariates.

Results: Data of 300 older adults were analyzed. The mean age (standard deviation) = 73.0 (5.8) years and 51.0% were female. Of the sample, 152 (50.7%) were non-frailty, 82 (27.3%) were pre-frailty, and 52 (17.3%) were frailty. Multivariable analysis showed that social frailty was significantly associated with high PSQI scores (compared with non-frailty, frailty: $\beta = 0.90$, 95% CI = 0.05 to 1.75, $p = 0.039$). In particular, low social interaction had a significant impact on poor sleep quality ($\beta = 1.49$, 95% CI = 0.40 to 2.57, $p = 0.008$). For the sub-items of PSQI, social frailty was associated with sleeping difficulty ($\beta = 0.22$, 95% CI = 0.02 to 0.41, $p = 0.035$).



Conclusion: Social vulnerability was associated with poor sleep quality. We believe that it is necessary to promote rich social relationships to address older adults' sleep quality.

Keywords: Japanese, social vulnerability, social frailty, sleep quality, older adults

Descriptive Analysis Of Cardiovascular Cases At One Of The University Hospitals In Malaysia According To Icd-10 Disease Classification

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Background: Cardiovascular disease (CVD) is a range of conditions including coronary artery disease, cerebrovascular disease, peripheral artery disease and heart failure. CVD cases are common at the University of Malaya Medical Centre (UMMC). One of the common methods used to describe the statistics of clinical cases is through ICD-10 classification.

Aim: This study aims to establish a descriptive analysis on the most common diagnosis for CVD cases according to ICD-10 classification at UMMC one of the university hospitals in Malaysia.

Method: A retrospective data collection was conducted from the hospital database. The database consists of 781,629 hospital admissions and outpatient visits in 2020 and was obtained from the Medical Record Unit. Subsequently, data on cardiac cases were selected for further analysis. All coded data for CVS were identified and were checked for accuracy of the data by reviewing them through the discharge summary. If there was a discrepancy, the code was re-coded into the standard ICD-10 codes for CVS cases. If any of the secondary diagnoses were uncoded, certified coders will do the coding based on ICD-10 codes too. Finally, the final data were sorted according to the top-10 ICD-10 codes.

Results: There were 72, 520 CVS coded data, the 'I' codes, available in the database. Data shows that the top 10 codes presented to the centre, were I10 (Essential (primary) Hypertension), I25.9 (Chronic Ischaemic heart Disease, unspecified), I24.9 (Acute Ischaemic Heart Disease, unspecified), I63.9 (Cerebral Infarction, unspecified), I50.0 (Congestive Heart Failure), I25.1 (Atherosclerotic Heart Disease, I20.0 (Unstable Angina), I64 (Stroke, not specified as haemorrhage), I21.4 (Acute Subendocardial Myocardial Infarction), I48 (Atrial Fibrillation and Flutter).

Conclusion: According to the result, there are more chronic cases compared to acute cases, which reflects the function of UMMC as a teaching hospital and a tertiary referral hospital. This finding indicates that the healthcare resources allocated for cardiovascular services are efficiently utilized in the tertiary centre. In conclusion, by using ICD-10, the hospital can facilitate hospital management in aligning their true function through identifying important common cases presented in their hospital and therefore, able to prepare for necessary planning.

Risk Factors for Attention Deficit Hyperactivity Disorder in primary school aged children: perspective from Sri Lanka

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Background: Attention Deficit Hyperactivity Disorder (ADHD) is the commonest neurodevelopmental disorder of childhood with significant impairment in overall functioning and associated psychiatric comorbidities. Knowledge of determinants is vital for the development of effective preventive strategies and tailor made interventions.

Aim: The study was aimed at determining risk factors for the development of ADHD among primary school children in state schools in Colombo district of Sri Lanka.

Method: An unmatched case control study was conducted consisting of 73 cases (with ADHD) and 264 controls (without ADHD) ,at a ratio of 1:4 , selected randomly among 6-10 year old primary school children from Sinhala medium state schools in Colombo district. Primary Care Givers completed the validated Sinhala version of Swanson, Nolan, Pelham – IV (SNAP-IV-S) scale for the assessment of ADHD and an interviewer administered questionnaire on risk factors. Children's diagnostic status was confirmed by a Consultant Child and Adolescent Psychiatrist based on Diagnostic Statistical Manual 5th edition (DSM-5) of mental disorders criteria following a clinical assessment.

Results: Bivariate analysis followed by multivariate logistic regression model identified potential risk factors. Multivariate analysis revealed, male sex (aOR=3.74; 95%CI=1.67-8.35), lower educational level of the mother (aOR=3.31; 95%CI=1.39-7.98), maternal psycho pathology (aOR=7.28; 95%CI=1.55-34.35), prenatal exposure to passive tobacco smoke (aOR=3.76; 95%CI=1.09-12.95), Birth weight <2500g and /or gestation period of <37 completed weeks (aOR=3.6; 95%CI= 1.48-8.74), neonatal complications (a OR=4.03; 95%CI=1.94-8.32) , minimal leisure time with family (aOR=2.39; 95%CI=1.19-4.82) and subjected to teasing/ bullying (aOR=5.03; 95%CI=2.47-10.25) as significant predictors of ADHD.

Conclusions: Primary prevention should focus on strengthening neonatal, maternal and child health services within the country. Emphasis should be placed on the need for anti-bullying policies within state schools.

Keywords: ADHD, Risk Factors, Primary School Children, Sri Lanka

The relationship between benevolent childhood experiences and depression among Chinese university students: The chain mediating role of family relations and sleep quality

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Background: University students have been recognized as one of the populations with the highest incidence of depression. Previous studies have shown the importance of benevolent childhood experiences on multiple health effects. However, few studies have focused on the relationship between benevolent childhood experiences and depression and mediating mechanisms underlying this relationship.

Aim: This study constructed a chain mediating model to examine whether family relations and sleep quality mediated the relationship between benevolent childhood experiences (BCE) and depression among Chinese university students.

Method: A total of 1830 university students from 25 universities in three provinces of China were recruited to participate in this study. Sociodemographic characteristics, benevolent childhood experiences (BCEs), family relations, sleep quality, depression (CES-D10) was measured by an electronic questionnaire. The Software Process 3.4.1 version based on SPSS 25.0 were used to analysis the mediation effect.

Results: BCEs, family relations, sleep quality scores were negatively correlated with depression ($r=-0.46, -0.32, -0.47$, respectively, all $P<0.01$). Family relations, sleep quality scores were positively correlated with BCEs scores ($r=0.31, 0.27$, respectively, both $P<0.01$). There was a positive correlation between family relations score and sleep quality score ($r=0.22, P<0.01$). Mediating analysis indicate that BCEs had a direct effect on depression; (The direct effect was 71.73%). Depression was affected by BCEs partly through 3 different pathways: the mediating role of family relations (The mediation effect was 8.5%), the mediating role of sleep quality (The mediation effect was 16.27%), and the chain mediating role of both family relations and sleep quality (The chain mediation effect was 3.5%).

Conclusion: Findings of this study demonstrated that family relations and sleep quality partially mediate the association between BCEs and depression by chain mediating effects. Thus, improving sleep quality and family intervention may be the effective measures to protect Chinese university students from depression.

Keywords: Benevolent childhood experiences; Depression; Family relations; Sleep quality; Chain mediation

Determinant Factors of Primary Dysmenorrhea on Students at SMA Negeri 1 Denpasar City, Bali Province

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Background: Dysmenorrhea is still very prevalent among young woman. In Indonesia the prevalence of dysmenorrhea varies from 45-95% among women of reproductive age. Risk factors for dysmenorrheal include age of menarche, parity, menstrual period, psychological stress, physical activity, smoking habits and body mass index (BMI).

Aim: The purpose of this study was to identify the determinant factors of primary dysmenorrhea incidence in female students at SMA Negeri 1 Denpasar in 2018.

Method: This is a cross-sectional study. The accessible population in this study are all female students at SMA Negeri 1 Denpasar. Total respondents are 140 female students who were chosen using by random start sampling method, with case group consist of 117 students and control group with 23 students.

Results: The results of this study showed that among 5 risk factors (BMI, menstrual period, physical activity, age of menarche and psychological stress) affecting primary dysmenorrhea, body mass index is found to affect primary dysmenorrhea ($P = 0.015$, $RO = 3.2$).

Conclusion: The conclusions of this study, all of the risk factors affect primary dysmenorrheal and there are several factors that can be modified such as BMI, physical activity and psychological factors (stress). This research is expected to provide benefits for students and school children, especially young women to prevent the modifying factors.

Keywords: physical activity, primary dysmenorrhea, body mass index, menstrual period, age of menarche, psychological stress

Maternal Education and its Implications on Infant Immunization: The Key to Improved Child Health

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Background: Based on reports by the World Health Organization in 2018, 86% of infants worldwide (an estimation of 116.3 million infants) have received 3 doses of the diphtheria-tetanus-pertussis (DTP3) vaccine. However, global coverage of more recently recommended vaccines are still below the global immunization coverage target of 90%. Although global immunization trends have shown annual improvements, the WHO report, state of inequality: childhood immunization, highlights the problem of the unequal distribution of immunization among different socioeconomic classes. This brings forward the importance of public health education, mainly maternal education, on the perception of the need for immunization.

Aim: To investigate the correlation between maternal education and the degree of immunization in children under the 5 years old.

Method: Nationally representative data from The National Socioeconomic Survey (SUSENAS) was used to obtain maternal education levels and immunization profiles for the BCG, DPT, Hepatitis B, Measles, Polio vaccinations of children under the age of 5 years old. Data from 2017 was used as it was the most up to date with the variables needed for this investigation. Immunization data that was used must have available documentation to provide proof. This data was analyzed descriptively to obtain the percentages of immunizations of children under the age of 5 years old against different levels of maternal education.

Results: The result shows that the largest percentage of vaccination are in mothers with junior high school education with percentage of 43.25%, 38.17%, 37.51%, 31.53%, and 31.74% in BCG, DPT, Polio, Hepatitis B, and Measles respectively. Mothers with higher education have the lowest immunization results among other education levels, whereas mothers with junior high school education have the highest immunization results, however no significant difference can be noted between all education levels.

Conclusion: The results of this study shows that maternal education was not a significant factor in immunization levels of children below 5 years old. This in part may show the importance of factors such as Integrated Village Post (Posyandu) in pushing for children to be fully vaccinated, and outlines the importance of public health education in communities, rather than formal education.

Choosing Contraceptive Methods in Indonesia: Does Tertiary Education Matter?

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Background: Indonesia's population has increased by more than 15 million in 2018 from 2013 yet with a trend of declining population growth rates. Total fertility rate in 2017 has decreased to 2.4 from 2.6 in 2013. However, the rate is still below the National Population and Family Planning Board's strategic target of 2.33 with contraceptive use target of 65.6% in 2017. The target is set to 2.31 with 65.8% contraceptive use in 2018 and 2.28 with 66.0% contraceptive use in 2019. Modern contraceptive methods show better effectiveness than traditional ones. Many socio-demographic factors are associated with contraceptive use, including education level. To improve the family planning policy, a better understanding of the correlation between women's education level and contraceptive use is needed.

Aim: To assess the correlation between women of childbearing age's education level with contraceptive use prevalence and contraceptive methods used in Indonesia.

Method: This research was a cross-sectional study using secondary data from National Socio-Economic Survey (Susenas) 2018. Data were collected from 210,643 samples which represent 51,433,439 married women aged 15 to 49 years in Indonesia. We analyzed the correlation between education level with contraceptive use prevalence and contraceptive methods used via logistic regression analysis. The level of significance was set $p < 0.05$. Results: Among the population, 56% and 12.17% were current and past users of contraceptive, respectively. Only 54.91% of women with tertiary education used contraceptive while the number reached 73.24% among women with primary education. They were 2.25 times more likely to use contraceptive than those with tertiary education (CI = 2.16-2.34). Among current users of contraceptive, only 2.76% used traditional methods. Compared to women with tertiary education, women who underwent primary education were 3.74 times more likely to use modern contraceptive methods (CI = 3.28-4.27).

Conclusion: Tertiary education is not positively associated with contraceptive use and the use of modern methods. Other factors such as age, working status, length of marriage, number of children, and husband's approval should be taken into account for further analysis to make a better approach to women with tertiary education in order to improve contraceptive use among them.

Why Are Family Planning for Adolescents in East Java Not Ideal?

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Background: Knowledge of population, adolescent reproductive health, and family development have an important role in family planning for teenagers in East Java.

Aim: This study aims to analyze the determinants that influence family planning for adolescents in East Java.

Method: The data comes from the Survei Kinerja dan Akuntabilitas (SKAP) 2019 consisting of 5,921 adolescents (after weighted) aged 10-24 years. Chi-square test results indicate that the level of parental and adolescent education positively influences family planning for adolescents.

Results: Parent and adolescent knowledge about adolescent population and reproductive health issues also significantly influences adolescents to plan families. However, this study found that parental participation in the Bina Keluarga Remaja program was not significantly related to family planning for adolescents. Most parents who have adolescents whose family planning is not ideal turned out to be low-educated (75.1%) and at the middle level of welfare (81.4%).

Conclusion: Departing from this analysis, family planning programs for adolescents should be directed at family-based economic empowerment and improving the quality of family education.

Keywords: population, adolescent reproductive health, family development, family planning, youth

Risk Factors Contributed to Cognitive Capacity using Difference in Differences Approach on Fourth and Fifth Wave of Indonesia Family Life Survey (IFLS)

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Background: The proportion of the elderly population increased double for almost 50 years (1971 to 2018). In Indonesia, the population was 9.27% of the total population. One of the challenges on the elderly issue was cognitive capacity(CC). Through the IFLS data, which followed up the respondent based on the last survey, there was a chance to look at the risk factors which contributed to a trend of CC after 7 years.

Aim: Finding the risk factors contributing to CC among IFLS respondents' waves 4 (2007) and 5 (2014).

Method: IFLS is a longitudinal survey, a collaborative effort among RAND, Universitas Gadjah Mada and Survey Meter. In surveys, they measured demography, health, and CC. There were three questions related the CC (day right, date right and 10 words memory (measured twice (shortly and after 12-15 minutes)). Three steps on analysis were descriptive analysis, logistic regression analysis (wave 4), the difference in differences (DID) to find factors contribute to CC changes between 2007 and 2014.

Results: Of 17, 797 observations from IFLS 4 and 5 matched, there were 8% aged more than 58 years old, 50% female, 63% lower education and 22% single. Related to the CC, there were 95% day right, 66% date right, 5 words remembered at the same time, and 4 words remembered after 12-25 minutes. The factors contributed to CC were age (OR 2; $p<0.01$), sex (OR1.4; $p<0.01$), education (OR1.4; $p<0.01$) and obesity (0.7; $p<0.01$). Based on DID model analysis, we found the contribution each factor to CC changes in fourth to fifth wave were age (0.04 point; $p>0.05$), sex (0.2 point; $p<0.01$), education (0.2 point; $p<0.01$) and obesity (0.13 point; $p<0.05$).

Conclusion: There were three factors contributed to CC for the last seven years. Those were sex, education, and obesity. Most of the contributions will give less than 1-point words remembered.

Maternal Mortality in Jember District; an Ecological Study in 50 Community Health Center

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Background: Maternal mortality is reflecting the achievement of health development in a region(s). Regarding to SDGs target on reducing the maternal mortality ratio by 2030, it needs strong efforts to achieve the target, including Jember district. The maternal mortality ratio in Jember from 2014 to 2017 showed an increasing trend. Identifying determinants will have important role to achieve the target.

Aim: this study aimed to identify correlation of maternal mortality ratio to understand the underlying factor related to maternal mortality.

Method: This ecological study was conducted using Jember District Health Office data bases from 2017 to 2018. Each coverage area of community health center is considered as unit of analysis. There are 50 community health center in Jember District. The dependent variable was the maternal mortality ratio, while the independent variable was intermediate factors of maternal mortality including antenatal care, contraceptive use, skilled birth attendant, age of mother and anemia status. Data was compiled in excel and analyzed using correlation between variables, then each correlation was described using scatter diagram.

Results: Maternal mortality ratio in Jember was relatively higher in urban than rural area. Unfortunately there were no significant relationship between maternal mortality ratio and each independent variables, but a significant relationship were exist within each independent variables. Due to this finding, a scatter diagram within each independent variables to maternal mortality ratio was developed. Furthermore the strong relationship was exist between antenatal care coverage (K1) and skilled births attendance

Conclusion: Maternal mortality ratio in Jember could be reduced by increasing the antenatal care coverage (K1) and improving an interesting approach during the services.

Keywords: maternal mortality ratio, correlation, intermediate factors

Behavior of Mother to Visit Posyandu in Magetan Regency, Indonesia

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Background: *Posyandu* (Integrated Service Post) integrates various activities aimed at improving maternal and child health and nutritional status of the community with community participation through health cadres.

Aim: The purpose of this study was to develop a model of precede-proceed and social capital influence the improvement of maternal behavior visit to *posyandu* (the integrated service post).

Method: This study was create model of behavior with cross sectional design. The population was mothers in Magetan and the sample size was 400, selected using simple random sampling. Exogenous variable was social capital, while endogenous variables were predisposing factors, reinforcing factors, enabling factors, and behavior. Statistical analysis was Confirmatory Factor Analysis and Structural Equation Modeling with the program of Amos 18. Phase 2 was non-equivalent control group pretest-posttest. The independent variable was behavioral models, while dependent variable was the behavior of the mother visited *posyandu*. Statistical analysis was T-Test.

Results: Intervention precede-proceed model of social capital influence the improvement of maternal behavior to visit *posyandu*(p-value = 0.000).

Conclusion: The intervention precede-proceed model and social capital influence the improvement of maternal behavior to visit *posyandu*.

Keywords: Precede-Proceed Model, Social Capital, *Posyandu* (Integrated Service Post)

Using Participatory Action Learning and Action Research (PALAR) Approach to Develop a BFHI Policy in 146 Health Facility in East Java-Indonesia

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Background: 10 LMKM is a program adopted by the Indonesian government to strengthen breastfeeding support in health facilities that provide delivery services. Preliminary study in East Java province found that, step 1 in 10 LMKM, namely that health facilities have a written policy regarding breastfeeding support, have the lowest level of compliance (<50%) because the health facility leaders does not have skills in formulating written policies regarding support in exclusive breastfeeding.

Aim: To find out effectiveness of policy-making training and workshops using the Participatory Action Learning and Action Research (PALAR) framework which was carried out mostly online because it was carried out during the COVID-19 pandemic.

Method: We held a series of activities to build health workers (health facility leaders, quality management staff/administration staff, and maternal and child health staff) capacity in writing up 10 LMKM policy documents in the form of training and workshops using the Participatory Action Learning and Action Research (PALAR) approach in in 5 districts / cities in the province of East Java, namely Jember, Trenggalek, Bondowoso, Probolinggo and Surabaya. We use the PALAR approach in all stages of the implementation of this activity from planning to the workshops.

Results: Even though it is done online, the commitment to participate in this training and workshop is very high. All health facilities as training and workshop participants from the five regions (N = 146, 100%) followed all stages from this activity flow to collecting the finalized policy documents. In addition, there was also an increase in the average scoring of policy documents from before and after the training was carried out, in each category of documents compiled and the results of different tests from the scoring of 10 LMKM policy documents before and after the training showed that there were significant differences for each policy document prepared by health facilities ($p < 0.05$).

Conclusion: PALAR approach followed by intensive mentoring sessions between researchers and participants proved to be the key to success in the implementation of this activity. Besides, providing examples of policy documents and learning modules, it also supports participants to better understand policy-making training and workshops.

Surrender to God Due Dissatisfaction of Online Worship: A Qualitative Spiritual Study of Elderly People during a Pandemic Covid-19.

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Background: Worldwide activity restrictions are imposed on the impact of the Covid-19 pandemic. The restrictions on worship are sufficiently significant for elders, considering them as susceptible group. Some elderly have the belief to take advantage of old age to be closer to God by increasing their spirituality. On the other hand, the worship is quite important for the elderly people.

Method: The study used a qualitative design with a phenomenological approach that was used to capture the spirituality of the elderly during the Covid-19 pandemic. The samples of this research are some of the elders in Malang Raya with age above 60th years old. All elderly live around Malang Raya with 7 girls and 3 boys. Research with qualitative design with respondents as instruments appears in this study. The research was conducted between August and December 2020.

Result: Moreover, this study produces two major themes that are (1) Surrender to God, which contains two sub-themes: (a) Get closer to God: and (b) Desire to pray in the worship place. Second theme is (2) Dissatisfied towards online worship, that consists of three subthemes: (a) Home worship discomfort, (b) Dissatisfied feeling of online worship, (c) Dissatisfied feeling towards the effects of the pandemic. This attitude is the response of the elderly in facing changes in patterns of worship.

Conclusion: In the end, the dissatisfaction feeling of elderly due to the implementation of online worship leads to a surrender. This behavior can describe the procedures of the elders' spiritual behaviors during the pandemic of Covid-19. Education for the elderly about the procedures for worship and structuring methods of worship need to be done better, so that it can improve the adaptation of the elderly to face the Covid-19 pandemic.

Association Between Ageing and Salt Taste Threshold Among Elderly in The Nursing Home

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Background: Aging may coincide with a decreasing taste loss that can affect food intake and consequently have negative health impact. The changes in taste sensitivities in the elderly can be caused by physiologic aging and pathological condition such as chronic disease and taking some medications. It is general trend in decline taste sensitivity or increase taste threshold with aging beginning around 60 years

Aim: The study was conducted to analyze salt taste threshold (STT) in older people and investigate the correlation between ageing and STT among elderly in the nursing home

Method: Recognition threshold of salty was measured using sodium chloride in liquid with the 3 ascending concentration series methods. Participants met the following criteria: healthy active elderly or not bed rest, not have loss of smell (acute influenza disease), not suffering dementia

Results: This study showed 18.5% of subjects had bad salt sensitivity. Overall, there is correlation between ageing and salt sensitivity ($r = -0.401$, $p = 0.003$), it means more aging, higher STT. Further analysis based on sex, the significant increases in STT only in male subjects.

Conclusion: The increasing age among elderly associated significantly with declining salt taste sensitivity. Understanding decline of salt taste sensitivity among aging population in the nursing home is useful for formulating food recipes for elderly particularly with hypertension

Keywords: ageing, elderly, salt taste threshold, hypertension, chronic disease



SCOPE :
**OCCUPATIONAL HEALTH AND
SAFETY IMPLEMENTATION
TOWARD INDUSTRY 4.0**

52nd Asia-Pacific Academic Consortium for Public Health (APACPH) Conference

*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0
AND THE COVID-19 PANDEMIC*

Correlation Between OSH Knowledge, Motivation, and Job Stress With Unsafe Action (Study on Production Section Workers at PT Mandiri Java Food Semarang)

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Background: According to one of the 8th SDG's targets on decent work and economic growth, it is necessary to achieve targets related to protecting workers' rights and supporting a safe working environment for workers. Entering the industrial revolution 4.0 era, technology is starting to develop and business founders are starting to develop that technology and their human resources, but if these developments are carried out without proper occupational safety and health management controls, hazards can arise work accidents. One of the causes of work accidents is unsafe action that can occur in the food industry which can be caused by personal factors including OSH knowledge, motivation, and job stress.

Aim: The aim of this study is to analyze the relationship between OSH knowledge, motivation, and job stress and the unsafe action in production workers in food industry companies.

Method: This research is a descriptive observational study with cross sectional design with the population of workers in the production sector with a sample of 37 workers using the total population technique. The data collected consisted of 3 independent variables consisting of OSH knowledge, motivation, jobs stress, and the dependent variable unsafe action, with data collection techniques using questionnaires and observations. The data analysis used was a spearman correlation test.

Results: The results showed that there was a weak correlation between OSH knowledge and unsafe action ($r = -0.351$). Medium category correlation between motivation ($r = -0.491$) and job stress ($r = 0.479$) with unsafe action.

Conclusion: The conclusion is that OSH knowledge, motivation, and job stress are factors that correlated and contributed to the occurrence of unsafe actions carried out by production sector workers of PT Mandiri Java Food Semarang. Suggestions that can be given are to continue to develop human resources as routine training, research related to employee history to help reduce job stress, increase routine supervision, and pay attention to giving rewards to workers.

Keywords: OSH knowledge, motivation, job stress, unsafe action, food industry, the 8th SDG's.

Overview of The Psychological Well-Being of Workers in the LRT Construction section in Jakarta and factors that affect

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Background: Psychological Well-being level is important to analyze considering performance and relationships in the work environment are influenced one of them by the level of psychological wellbeing. Good Psychological well-being is part of the achievement of the 3rd SDGs, namely "Ensure healthy lives and promote well being for all at all ages". The psychological well-being of workers is an important factor in the continuity and security of a person in carrying out tasks in his work.

Aim: The purpose of this study is to conduct an analysis on Psychological Well-being in the workforce of the Construction of station and Depo Light Rail Transit (LRT) projects and influencing factors.

Method: this research was observational, conducted cross-sectionally. Sample of 55 people, selected in simple random sampling. Independent variables are individual characteristics (age and marital status), salary, social support, career development and work stress. Dependent variable is psychological well-being. Psychological Health Assessment using instruments from Ryff's Psychological Well Being Scales (PWB), Data analysis used is ordinal logistics regression analysis.

Results: Psychological Welfare Picture of workers in LRT as follows: the most order is medium rate 67.3% , high rate 16.4%, low rate 10.9%, very high 3.6% and very low 1.8%. Statistics test results show that age has p-value 0.117, marital status has p-value 0.039, salary has p-value 0.052, career development has p-value 0.885, social support has p-value 0.602 and work stress has pvalue 0.020. Thus, the factors that affect the psychological well-being of workers are marital status and work stress. While the factors of age, salary, career development and, social support are not statistically caused because the data on these factors are generally homogeneous.

Conclusion: The level of psychological well-being of workers in LRT is mostly at a moderate level. Psychological well-being is influenced by marital status and work stress. It is therefore recommended that workers should be given enough time off or leave, especially married workers, as well as assessing factors that can trigger stress in workers.

Keywords: SDGs, Psychological Well-Being, Marital Status, Work Stress

Migrant Care Workers in Japan: Stressors, Coping Strategies, and Implications for Psychosocial Support

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Background: Japan has now accepted foreign nursing care professionals from the Philippines, Indonesia, and Vietnam exclusively, via bilateral Economic Partnership Agreement (EPA). Although this new stage of Southeast Asian immigration to Japan is still considered recent, problems connected to sustainability and labor have been observed.

Aim: We aimed to explore the phenomenological experiences of these migrant care workers working in the formal long-term care setting in Japan and identify their stressors and coping strategies on caregiving.

Method: In this qualitative study, we collected data using in-depth interviews among Filipino (n=21), Indonesian (n=6) and Vietnamese (n=4) migrant care workers. The interviews were done in either their local language or in Japanese. We used an interpreter when necessary. All meetings were audiotaped and transcribed verbatim. We conducted thematic analysis on transcriptions of audio recorded interviews.

Results: Six key themes emerged in our analysis which were related to stressors on caregiving. These include (1) language barrier, (2) health concerns, (3) work-life imbalance, (4) coworker relationship, (5) care worker-patient relationship, and (6) physical environment. As for language barrier, migrant care workers struggled with Kanji and verbal communication. All of them complained about fatigue and chronic back pain. A few, however, mentioned about anxiety and depression. The low salary and heavy workload have made caregiving jobs unattractive to them. Workplace discrimination, difficult patients, and hostile work environment were part of the challenges they are facing in daily life. With regard to coping strategies, it was grouped into four categories: appraisal-focused, problem-focused, emotion focused, and meaning focused.

Conclusion: This study is the first step in highlighting the current issues being faced by migrant care workers in Japan. Deteriorating physical health of the migrant care workers was one of the main stressors on why they quit the EPA program or stop being a care worker in Japan. Discrimination and a hostile work environment also affected their overall well-being. The Japanese government is suggested to amend their care work policy and provide psychosocial support specifically tailored for migrant care workers.

Keywords: migrant care workers; stressors; coping strategies; psychosocial support; Japan

Relationship between work improvement and work engagement in a financial industry: Examination based on the level of Sense of Coherence

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Background: In recent years, the work worth and motivation to work of workers are attracting attention. These factors would decrease, the stress and fatigue resulting from work, the health conditions would be adversely affected, and the work performance would become poor. It is important to prepare work environment where workers feel the factors. The factors can be evaluated by work engagement. It may be useful to use the item Mental Health Improvement and Reinforcement Research of Recognition (MIRROR) to consider workplace improvement that enhances work engagement. The level of the sense of coherence, which is an index of stress coping ability, is associated with work engagement.

Aim: This study aimed to clarify the workplace improvement related to work engagement based on the level of sense of coherence.

Method: An anonymous self-administered questionnaire survey was conducted on 1,845 regular employees in a financial industry (valid response rate 78.5%). The questionnaire included Japanese Sense of Coherence (SOC), Japanese Utrecht Work Engagement Scale (UWES-J), and MIRROR. Multiple linear regression analysis was performed with the total score of UWES-J as the dependent variable and the MIRROR items as the independent variables for each group with high SOC and low SOC.

Results: Two MIRROR items; "It is easy to take a substitute vacation after work on holidays," "In the workplace, the abilities and ingenuity of each person are utilized" were negative factors common to the two groups. Otherwise, in the low SOC group, the items; "The work policy is decided in a way that everyone is satisfied with," "When the work breaks, I can go home without worrying about other people," and "The superior gives proper explanations about everything to his subordinates" had negative relationship. In the high SOC group, "Work environment (air conditioning, lighting, etc.) are adjusted according to the wishes of workers," "No overtime day' is set and utilized," "I am allowed to commute to work avoiding crowded times and routes," and "The superiors is trying to make everyone's work smoothly" showed negative relationship.

Conclusion: Depending on the level of SOC, workers' desire for workplace improvement related to UWES-J scores differed.

Neck Circumference And Waist To Hip Ratio Related To Fasting Blood Glucose Levels In Security Officers

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Background: Diabetes Mellitus is a metabolic disease that occurs due to several risk factors, including obesity and occupation. Measurement of neck circumference, waist circumference, and waist to hip ratio are obesity indicator methods that are suspected to be related to diabetes mellitus.

Aim: This study aimed to determine the correlation between neck circumference and waist to hip ratio with fasting blood glucose levels in security officers.

Methods: This cross-sectional study included 92 male security officers aged 20 – 45 years chosen with purposive sampling methods. All subjects were asked to fast and take no medications for the previous 8 hours before their venous blood plasma samples were taken for testing. Blood glucose levels were tested with a hexokinase method. Neck circumference and waist to hip ratio) were measured using a non-stretchable plastic tape (to the nearest 0.1 cm) replicated twice to obtain the mean value. Data were analyzed using Spearman's test.

Results: This study found that 9.8% of subjects were categorized as obese (Body Mass Index ≥ 30 kg/m²), 4.3% of subjects had a high fasting blood glucose level (≥ 110 mg/dl), 41.3% of subjects had a neck circumference ≥ 38 cm and 29.3% of the subject had waist to hip ratio ≥ 0.9 . There was a positive correlation between waist to hip ratio and blood glucose level ($r=0.254$ and $p=0.015$). Neck circumference was found to be significantly associated with blood glucose ($r=0.454$ and $p<0.001$).

Conclusion: There was a correlation between neck circumference and waist to hip ratio with fasting blood glucose levels in security officers.

Keywords: blood glucose, neck circumference, security officer, waist to hip ratio.

ADHI MANPOWER : An Application for Occupational Safety and Health Management in Construction Company

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Background : One of the developments in the Industrial Revolution 4.0 is that the Internet of Things must also be followed by shifting in the construction sector so that it is not disrupted in the era of this 4.0 industrial revolution. However, in fact, poor resource management has become a critical problem, including difficulties in finding resources for foremen and skilled workers, skilled subcontractors, skilled equipment operators and even collecting and analyse health data. Database becomes important thing to solve this problem. The database in question consists of the track records of human resources and the results of their evaluations. So far, the foreman's evaluation is a paper work done by the SCM department and the results will disappear when the project is completed.

Aim: Through research and grounding observations, the difficulty of monitoring the human resources of construction projects that are scattered throughout Indonesia online and up-to-date has spurred the Building Department to create an Android-based online application to solve this problem, apart from being easy, Android is more down to earth than the system other smart phone operations.

Result : The implementation of the ADHI Manpower application which was initiated in the Department of Building began to show its resonance and benefits so that it has penetrated into other Work Units and it is hoped that this application will become a corporate standard application (ADHI) that is integrated with DHIERA (ADHI ERP) and ADHIQHSE. Now ADHI Manpower developed in version 2 which is available in web version and iOS.

Conclusion : in revolution industry 4.0, covid19 is a catalyst for speeding up our shifting such as how we manage OHS and Human Resource. An application is needed to control the workers in all around Indonesia using smartphone.

Keywords : Android Operation System, Smartphone, Manpower

Personal Factors Of Mechanical Workers In The Manufacturing Sector And Their Relationship To Unsafe Actions

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Background: This article reviews publications regarding studies on the personal factors of mechanical workers in the manufacturing sector related to unsafe actions. In the world, around 340 million occupational accidents occur every year, of which 80% are caused by unsafe acts due to personal factors. This article is important because it deals with the third goal of SDGs regarding health and wellbeing.

Aim: This study examines the relations between the characteristics of personal factors and unsafe action in mechanical workers in the manufacturing industry sector.

Method: This study is a literature review using descriptive narrative meta-synthesis techniques. There were 15 national and 6 international journals articles from Google scholar, Proquest, Springerlink and Scopus with publications in the last 10 years, from research journals accredited Sinta ? 3 or indexed by google scholar. Personal factor variables include age, tenure, education level, OSH knowledge, trainings, work attitude and emotional exhaustion. Unsafe action variable was seen from motivation to behave safely and awareness of using PPE.

Results: The results showed that 10 out of 16 articles showed unsafe action is not related with age. 8 of the 16 articles present relation between tenure and unsafe actions. 9 out of 12 articles showed relation between education level and unsafe actions. 4 of the 7 articles showed trainings are related with unsafe actions. 12 out of 13 articles showed unsafe action is related with OSH knowledge. 3 out of 5 articles showed relation between motivation to behave safely and unsafe actions. 4 out of 4 articles showed unsafe action is related with work attitude. 3 out of 4 articles showed emotional exhaustion is not related with unsafe actions.

Conclusion: This study concluded that mechanical workers ? 35 years old, working period ? 10 years, education level up to junior high school, OSH knowledge, training, poor work attitudes, and high emotional fatigue do more unsafe actions and increase motivation to behave safely on PPE awareness. Scheduled training and direction are needed to increase OSH knowledge and to conduct job rotation according to workers' skills every <10 years.

Keywords: SDGs, Personal factors, Unsafe actions, Mechanical workers, Manufacturing sector

Factors Influencing Employee Job Stress at Gas Processing Facility Project in Indonesia

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Background: Job stress and job satisfaction were two important workplace issues in modern organization. Job stress was occurred when there is a mismatch between job requirements and the workers' capabilities, resources, or needs. Job stress usually influences individual and organizational issues including behavioral, mental, as well as physical outcomes, performance, job satisfaction, and organizational commitment. Many workers must have experienced job stress as well as worker at Gas Processing Facility Project.

Aim: This study aims to analyzed employees job stress of worker at Gas Processing Facility Project in Indonesia.

Method: This cross-sectional study used simple random sampling to select 325 sample of employee, taking 5% of error margin with 100% of response rate. This survey was conducted on March 2021 located at Bojonegoro. An anonymous self-administered questionnaire was used to collect data. The questionnaire consisted of demographic and job stress survey. Demographic survey used to collect personal details, consisted of age, gender, position, and company. Job stress survey consisting of role ambiguity, role conflict, quantitative workload, qualitative workload, career development, and safety commitment to others, used to investigate the level of job stress. Data was collected and analyzed used SPSS into binary logistic regression.

Result: The result of this study showed that the level of employee job stress were 12,9% at low level, 78,8% at moderate level, and 8,3% at high level. The role ambiguity has significant influence on work stress with P-value = 0.009 and OR value = 12,103 that means there are 12x more impact of role ambiguity to impact job stress level at worker. The quantitative workload also has a significant influence on work stress with P-value = 0.009 and OR value = 8,470 that means there are 8x more impact of quantitative workload to impact to worker stress level. There was no significant impact of role conflict, qualitative workload, career development, and safety commitment to others, to level of job stress.

Conclusions: Nevertheless, corrective measures were necessary to reduce of role ambiguity and workloads that could suppress the onset of more severe stress. Support supervisor must be improved to reduce job stress.

Keywords: job stress, role, workload.

Analysis Of Work Accidents In Packaging Workers Using Ilci Theory In The Informal Metal Industry

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Background: Occupational Health and Safety (OHS) is an important indicator that must be carried out by any company that has a workforce of more than 100 or that has a large hazard level that is at risk of causing work accidents. The proliferation of increasingly sophisticated technological tools will also affect the risk of new hazards. The packaging unit is the last stage in a production process that has a risk of a work accident.

Aim: This study aimed to determine the relationship between Lack of Control and human factors, human factors and Immediate Causes, Immediate Cause and work accidents in packaging workers in the Informal Metal Industry.

Method: This study was observational quantitative research with cross sectional study design. The population in this study was 16 workers as respondents. The sample used was the entire population in the packaging unit of the Informal Metal Industry. One of the data collection instruments in this study was a questionnaire which was tested with the Spearman correlation test.

Results: The results of the study reveal that there is a relationship between OHS policy with individual commitment, provision of PPE with work stress, work stress with work noise – because the test value obtained is less than the p-value (0.05), meanwhile there is no significant relationship found in the relationship between OHS training and provision of PPE with individual commitment, lack of control with knowledge of OHS, OHS policies and OHS training with work stress, human factors with working behavior, human factors with work climate, human factors with lighting in the workplace, working behavior with work accidents, and working environment with non-occupational accidents.

Conclusion: Only OHS policy with individual commitment, provision of PPE with work stress, and work stress with work noise has a significant relationship.

Literature Review: Occupational Accidents and Causes of Occupational Accidents in Coastal Fishermen

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Background: Occupational health and safety is a right for workers in both the formal and informal sectors, including fishermen. The fishing profession has 3D job characteristics, namely dangerous, dirty, and difficult. The risk of a fisherman's work accident is 20-30 times compared to other types of work. The causes of occupational accidents on fishermen in Indonesia are caused by human error factors of 43.67%, natural factors of 32.37%, and technical factors of 23.94%.

Method: This study is a literature review conducted to explore the incidence of occupational accidents and the causes of occupational accidents that occur in coastal fishermen. The literature search was carried out in January-February 2021. The research sources were taken from several databases. The Google Scholar database found 17,820, Science Direct 45, and ProQuest 302. Of the entire database, only 12 articles met the inclusion and exclusion criteria. The variables in this study are the incidence of work accidents, forms of work accidents, types of injuries, and causes of work accidents.

Results: This literature review shows that fishing accidents occur in more than 50% of fishermen. Occupational accidents that occur include slipping/falling, being cut/stabbed, hit by falling objects, injured by the ship's engine, hit by an explosion, and falling into the sea. The resulting injuries include traumatic injuries, minor injuries, burns, to intracranial injuries. The causes of fishermen's work accidents can occur due to internal factors and external factors of fishermen.

Conclusion: Fishermen's work accidents still often occur, especially slipping/falling and being cut/stabbed. Injuries can range from mild to fatal. The most common cause of work accidents is a factor from within the fishermen.

Keywords: Occupational Accident, Fisherman, Coastal

Analysis Of Employee Job Satisfaction With The Management System In Dr. Iskak Tulungagung 2020

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Backgorund: In an organization, overall job satisfaction is important. Employee satisfaction is a prerequisite for increasing productivity, responsibility, quality, loyalty and service to customers. To create such conditions, efforts are needed to improve the quality and job satisfaction of each employee. This is possible if the realization of an optimal increase in employee motivation.

Aim: This study aims to measure the level of employee satisfaction Dr. Iskak Tulungagung, for input for management to make improvements and improve the quality of employee work in terms of employee expectations.

Method: This study used a descriptive observational method with a cross-sectional design. Using the Job Description Index (JDI) Aspect Assessment questionnaire. The research subjects were all employees in all units in the hospital as many as 800 samples.

Results: The results showed that 80% of employee satisfaction stated that they were satisfied, 19% was sufficient and 1% was less. The variable component of employee satisfaction with the best positive response is related to the delegation system (98%) and the variable with the lowest level of satisfaction is welfare / salary (46%). For statistical results using SEM, the results show that the order of indicators that most influence employee satisfaction is job security, hospital administration, welfare, benefits, improvement, recognition, working conditions, development, interpersonal relationships, leadership policies, team work, achievement, planning and delegation system.

Conclusion: So it is necessary to monitor the quality of service with the Employee Performance Appraisal activity program starting from the evaluation of organizational planning, system procedure mechanisms, human resources, service facilities and infrastructure, as well as the achievement of productivity performance of service providers.

Keywords: job satisfaction, performance, motivation, employees

Factors Affecting Job Stress in Construction Workers

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Background: In the 3rd SDGs target is “Ensure Healthy and Promote Wellbeing for all at all ages”, it is hoped that the workforce is not only free from illness but also free from psychological disorders, one of which is job stress. Job stress is a negative impact of a job, especially in dealing with situation and demand that exceed the workers ability to cope. Job stress arises because knowledge of workers problem solving not fit with job demand at organization or company. Job stress can degrade workers ability to solve problem. The worker's ability to cope with job stress is not same. Workers who have high stressor can cause health problem. Job stress may occur in construction workers whose jobs are monotonous. The implementation of a construction project consists of complex processes involving limited time, high cost, high quality demand and should be concerned safety in work.

Aim: This study aims to analyze the factors that affect job stress in construction workers. Internal factors include exercise habit and social support. External factors include job demand, work period and non-work activities.

Method: This was observational study which approach by cross sectional in a construction company. The sample of this study was 55 workers. This study used National Institute Occupational Safety and Health (NIOSH) Generic Job Stress Questionnaire instrument. The variables in this study were internal factors: exercise habit and social support. External factors: job demand, work period and non-work activities.

Results: Internal factor that have a significant effect was exercise habit variable ($p=0,014$). External factor that have a significant effect was job demand ($p=0,045$).

Conclusion: Exercise habit can affect the ability of workers to deal job stress. The job demand factor can affect the job stress. It is recommended that efforts to increase the capacity of workers with a healthy lifestyle and exercise habit. So workers can able to satisfy the demand of the company.

Keywords: The SDGs 3rd, Job stress, Construction workers

Using of Critical Reflection to Improve Safety Behaviour of Radiographer in CT Scan Services

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Background : Since the use of Multidetector Computed Tomography (MDCT) technology, the trend in the number and use of CT scans for diagnostic purposes currently has an impact on increasing the radiation dose used. The role of the radiographer in CT Scan services is very strategic related to patient safety, especially in the midst of global efforts to increase radiation protection culture. To improve safety behaviour in the workplace, radiographers need not only technical knowledge and skills but also knowledge that helps them have awareness in complex working conditions, namely a critical reflection approach.

Aim: Described the effect of critical reflection on the safety behavior of radiographers in CT Scan services.

Method: This research is a quasi-experimental study with a non-equivalent control group design. With purposive sampling method, a treatment group and a control group were created that met the inclusion and exclusion criteria. The research sample was 42 people, consisting of a treatment group of 20 people and a control group of 22 people from four hospitals in the city of Medan, Indonesia. .Data analysis using t-test and non-parametric statistics.

Results: The results showed that there was no significant difference in the safety behaviour of the treatment group before and after critical reflection training ($p = 0.250$). There was a significant difference in safety behaviour between the treatment group and the control group after critical reflection training ($p = 0.028$).

Conclusion: through critical reflection training can significantly improve the safety behaviour of radiographers in CT Scan services.

Keywords: critical reflection, safety behaviour, radiographers, CT Scan

Risk Assessment of Photokeratitis in Welding Activities of Gamelan Gong Craftsmen in Ponorogo Regency

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Background: Welding activity is one of the activities in the manufacture of gamelan gong which has the potential for photokeratitis to occur in workers. Photokeratitis can occur as a result of acute exposure to UV rays in the eyes of workers. Risk assessment is used to determine the magnitude of the risk of several factors causing photokeratitis.

Aim: The purpose of the study was to analyze the risk of photokeratitis in the welding activity of gamelan gong craftsmen in Ponorogo Regency based on the concept of epidemiology.

Method: The research design was cross sectional which was carried out during the covid19 pandemic, namely in May 2021. The population of this study were welding workers making gamelan gongs in Ponorogo, Indonesia. There are 6 respondents selected using non-probability sampling technique from several welding workers of gamelan gong craftsmen in Ponorogo Regency. Collecting data using interviews, discussions, and observations. Host, agent, and environment variables were identified risk factors, then risk analysis was carried out using semi-quantitative techniques by taking into account the level of frequency and severity. The risk evaluation uses the ALARP concept in the AS/ZNS 4360 guideline.

Results: The risk of photokeratitis based on the causative factor was found in the host variable, age and years of service including medium risk, and PPE use behavior including high risk. Variable agent intensity of UV exposure is included in the high risk category. Environment variables working time, exposure distance, and welding location are included in the medium risk category.

Conclusion: Age, working period, working time, exposure distance, welding location have a moderate risk of photokeratitis. Behavioral factors and UV light intensity from the length of exposure of workers have a high risk of photokeratitis. The factor of photokeratitis is still there so it needs continuous control efforts.

Keywords: welding risk, gamelan gong craftsmen, photokeratitis incidence, risk assessment

Analysis of the Effect of CSMS (Contractor Safety Management System) on Occupational Health and Safety Culture at PT. Indocement Single Prakarsa Tbk

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Background: It is known that the accidents that befell contractors are very high, so it requires the management of contractor workers, namely the Contractor Safety Management System (CSMS). Contractor workers are expected to be willing to follow the culture that exists within the company, especially the culture in occupational health and safety.

Aim: The aim of this research is, analyzing the implementation of CSMS, analyzing the company's K3 Program involving contractor workers and analyzing the factors that affect the effectiveness of CSMS implementation.

Method: The method used in this research is descriptive qualitative analysis method in-depth interviews, distribution of questionnaires, and field observations. In previous research known PT. Indocement Tunggal Prakarsa, Tbk has several K3 programs. This has become a reflection of a culture in the company for PT. Indocement Tunggal Prakarsa, Tbk.

Results: From the results of the study, it was found that the CSMS Program at PT Indocement Tunggal Prakarsa, Tbk had been implemented properly and adequately. However, the company should still assess the contractor's performance in accordance with the HSE Plan made at the prequalification and selection stages in accordance with the applicable regulations. PT. Indocement Tunggal Prakarsa, Tbk involving contractor workers in the most questionnaire results are Accident and Near Accident Investigations, Safety Monitoring, Safety Talks, Making Work Permits and Hazardous Work Permits, Equipment Certification, Emergency Response, Personal Protective Equipment.

Conclusion: The factors that most influence the effectiveness of CSMS implementation on contractor workers at PT Indocement Tunggal Prakarsa, Tbk are training factors, communication factors, and cultural and behavioral factors, this can be seen from fewer rejections from respondents regarding the contents of the questionnaire.

Keywords: CSMS, K3 Culture

Chemical Health Risk Assessment at SMEs in the Footwear Manufacturing Industries in Ciomas-Bogor, Indonesia

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Background: Small and medium-sized enterprises (SMEs) sector in Indonesia significantly contributes to Indonesia's GDP as well as by providing jobs to the people. However, its role has not been balanced with the protection of Occupational Safety and Health (OSH) to the workers. In a footwear SME, every day workers are exposed to an extensive range of chemicals, either through inhalation or dermal contact, which may lead to respiratory problems, eye and skin irritation, and other chronic effects.

Aim: This research aimed to analyze health risks associated with benzene and toluene vapor exposure at three footwear SMEs in Ciomas, Bogor, Indonesia.

Method: Exposure of benzene and toluene vapor to the breathing zone of the workers was measured by following NIOHS Manual Analytical Method 1501. A Chemical Health Risk Assessment (CHRA) method developed by the Department of Safety and Health Malaysia (2018) was used to evaluate the health risk level due to inhalation and dermal contact of benzene and toluene.

Results: It was found that the health risk associated with inhalation of benzene was ranged from moderate to high-risk; inhalation of toluene was categorized as moderate risk; while dermal contact with benzene and toluene was categorized as moderate risk.

Conclusion: Lack of control to the chemical exposure caused high concentration of organic solvent exposure to the workers in the footwear SMEs.

Keywords: chemical health risk assessment, Small Medium-sized Enterprises (SME's), footwear manufacturing, benzene, toluene

Ergonomic Risk Assessment and Prevalence of Musculoskeletal Disorders among Workers at Two Types of Tofu Small Industries in Tangerang 2019

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Background: Traditional methods of tofu production incorporate a lot of manual handling activities, which increases the risk of musculoskeletal disorders to the workers.

Aim: This study was aimed to assess the risk level of MSDs using the Quick Exposure Check (QEC) method and to also investigate the prevalence of MSDs in nine body regions using the Nordic Musculoskeletal Questionnaire.

Method: 52 workers (42 male and 10 female) from three different Tofu industries (2 traditional tofu industries and 1 silken tofu industry) were assessed.

Results: It was found that the prevalence of MSD was higher among traditional tofu workers than silken tofu workers. In the last 12 months, the highest prevalence of MSD among traditional tofu workers were lower back, right shoulder and neck region (94.4%; 77.8% and 61.1%, respectively) and lower back, right shoulder and upper back region (81.3%; 62.5% and 56.3%, correspondingly) among silken tofu workers.

Conclusion: There are three similar tasks in traditional and silken tofu industry, namely grinding, cooking and filtering. The MSD risk levels of those tasks were lower at silken tofu industry (high; low and low, separately) than at traditional tofu industries (very high; high and very high, respectively) since some manual handling processes were being replaced by machineries.

Keywords: Musculoskeletal Disorders, Ergonomic, Tofu MSMEs workers, Quick Exposure Check

Hospital for Occupational Health Care, What to Decide?

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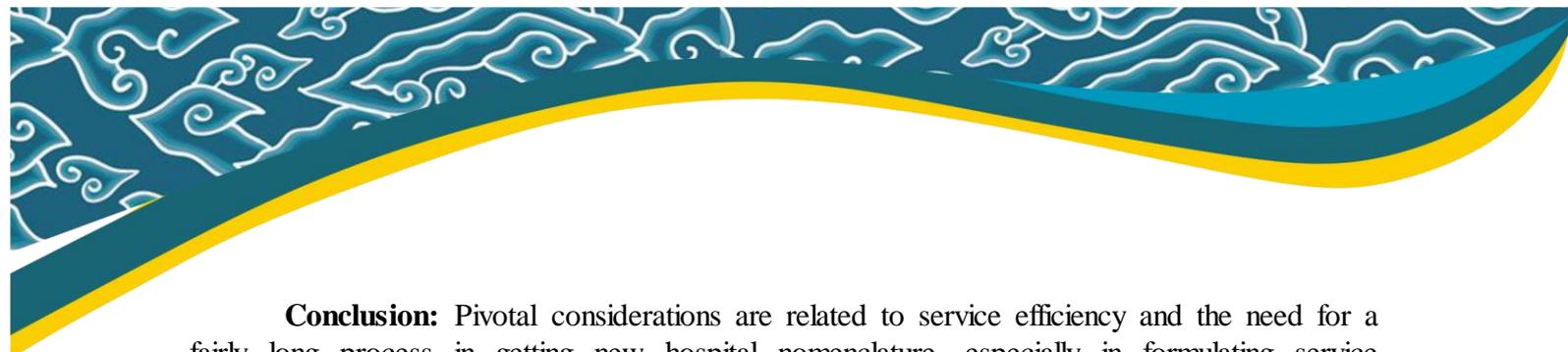
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Background: Occupational health has become a global concern as it is crystallized in many international and national level regulations. Workers' health right in Indonesia has been guaranteed in Article 27 of the constitution that "every citizen has right to get a job and a decent living for humanity". However, there are many cases workers get sick and injured in their workplace. Jawa Barat Province has many industrial areas, thereby increasing the risk to workers' health. To respond to that challenge, in 2006, the local government established the Occupational Health Community Center (Balai Kesehatan Kerja Masyarakat/BKMM) which has now changed its status to the Regional General Hospital with a specialization on Occupational Health (Rumah Sakit Umum Daerah Kesehatan Kerja/RSUD KK). In general, RSUD KK provides similar services as other general hospitals but with occupational health as prior services. The vision of providing broader and maximum occupational health services, accompanied by a linear historical background, and the challenges of occupational health issues in Indonesia raises the urgency to focus on occupational health services. However, there is no specific regulation and nomenclature regarding hospitals that specifically handle occupational health.

Aim: The study was conducted to identify the possibility of establishing an occupational health hospital. This is a qualitative study (desk study) using legal research methods. Data analysis used normative juridical methods in the form of secondary data analysis from legal and literature review and; empirical juridical with in-depth interviews, focus group discussions (FGD), and expert panels.

Results: The results show that there is a demand for comprehensive occupational health services (prevention and treatment) from workers and employers in the hospital area. In addition, the commitment from the hospital leader and managers, the support of local government stakeholders, and the non-conformity with existing regulations are levers for establishing the occupational health hospital.



Conclusion: Pivotal considerations are related to service efficiency and the need for a fairly long process in getting new hospital nomenclature, especially in formulating service standards and consolidating with professional organizations and hospital associations. For this reason, this study recommends to keep using the existing nomenclature (RSUD KK) for the short-medium term and do further studies to fulfill the gaps towards new nomenclature.

Keywords: occupational health, hospital, health, health services



Literature Review: The Factors that Affect Nurse Job Satisfaction

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Background: Since the Indonesian government established a COVID-19 pandemic in 2019, hospitals have been required to be ready to handle the COVID-19 pandemic, which must be served at any time. In the guidelines for the prevention and control of Corona Virus Disease 2019, in which hospitals must provide optimal services for patients. The surge in the numbers of patients covid 19 be a challenge for nurses, especially nurses who handle direct patient covid 19. Behind these challenges has its own job satisfaction that is different from other patients.

Aim: The purpose of this literature review to determine the factor that affect nurse job satisfaction.

Method: The study is using literature review were analyzed by using PIO with identification articles of scientific cross-sectional study are published on the year 2015-2021 full text English and Bahasa. Database used PubMed and google scholar with 205 article identified using key word Work Satisfaction OR Job Satisfaction AND Nurse OR Nurses. Result in get 7 articles. 7 articles were reviewed that the inclusion criteria and objectives of this literature review. The 7 articles obtained were the carried out a critical appraisal which was than analyzed using Duffy's Research Appraisal Checklist Approach.

Results: The that discuss factors that affect the work satisfaction of nurses such as age, salary, status of work, awards, recognition, supervision, co working, promotion and conditions of employment.

Conclusion: Work satisfaction will determine service excellent is getting better satisfaction or working meal will be inversely proportional to the ministry.

Complaaaints of Muscoloskeletal Disorders (MSDs) in Terms of Work Posture and Work Periodin The Polishing Section of Terazzo Crafstmen in The Sodo Village, Pakel District, Tulungagung Regency

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Background:Musculoskeletal Disorders are disorders related to muscle tissue, tendons, ligaments, and nerves. Factors that can lead to the formation of complaints of the musculoskeletal system are an odd form of work posture and a long work period.

Aim: The purpose of this study was to determine the effect of work posture and work period on complaints of musculoskeletal disorders in terazzo craftsmen polishing workers in Sodo Village, Pakel District, Tulungagung Regency.

Method: This research is a quantitative study, with a cross sectional approach. The population is 45 workers in the polishing section of craftsmen. A sample of 40 respondents with the sampling technique using simple random sampling technique. This study uses the REBA observation sheet to assess work posture, interviews to determine work period, and the NBM questionnaire sheet to assess complaints of musculoskeletal disorders. Data analysis technique using multiple linear regression test.

Results: The result of multiple linear regression tests show that the proportion of the effect of work posture and work period is 45% on complaints of musculoskeletal disorders. Variable work posture had an effect on complaints of musculoskeletal disorders with a p value of 0,042 and a β value of 2,353. Work period variable also affects musculoskeletal disorders complaints with a p value of 0,001 and a β value of 2,962.

Conclusion: To reduce complaints of musculoskeletal disorders, workers are advised to learn about the dangers of musculoskeletal disorders and how to overcome them, rest for a few minutes when the body begins to feel muscle fatigue, and business owners of terazzo craftsmen are advised to provide training to workers about the dangers of musculoskeletal disorders and how to overcome them, collaborating with health workers, providing ergonomic work facilities so as to avoid awkward postures.

Keywords: Musculoskeletal Disorders, Work Posture, Work Period.

Literature Review: Workload Relationship with Work Stress on the Performance of Nurses in Hospitals

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Background: Performance is closely related to how big the workload and work stress of nurses in providing health services. The higher the workload and work stress, the lower the work performance.

Aim: The purpose of this study was to identify the relationship between workload and work stress on the performance of nurses in hospitals.

Method: The research articles were obtained from three databases, namely Proquest, PubMed and Google Scholar. Search literature using keywords (Indonesian and English), namely (workload), work stress (work stress), nurse performance (nurse performance). with the inclusion criteria of research articles from 2018-2021, primary articles, full text and research subjects are Hospital Nurses (both primary and secondary).

Results: From 9540 research articles, fourteen articles were reviewed which met all the inclusion criteria and the objectives of this literature review. Fifteen articles obtained were then carried out with a critical appraisal which was then analyzed using simplified thematic analysis. The theme that emerged from this literature review was the negative impact of workload, the impact of Covid-19 and handling work stress

Conclusion: Based on the results of this article review, it is important to help nurses grow self-restraint and reduce stress so that nurses' performance in providing health care services is better.

Keywords: Workload, work stress, nurse performance

The Factors that Affect Nurse Job Satisfaction

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Background: The increase in the elderly population has an impact on various aspects of life, both social, economic and especially health. The aging process in the elderly causes the appearance of degeneration in the elderly both physically and mentally. the experience of caring for the elderly, namely changing attitudes to become more patient; and sources of health care needs. Family support is very important in improving the health status of the elderly. Affirmative reminiscence is an activity that explores therapeutic memories and strengthens the positive values of the elderly that can increase selfesteem and life satisfaction so as to improve the quality of life of the elderly. Elderly is a condition characterized by a person's failure to maintain a balance against physiological stress conditions.

Aim: This study aims to determine the factors associated with improving the quality of life of the elderly. Reminiscence Affirmative berbasis teori Lazarus.

Method: The study design was cross-sectional. with a sample of 99 respondents. Data collection by interview using the WHOQOL-BREF questionnaire, family support and family function questionnaires. Data analysis was carried out by Chi-square test and Logistic Regression test. The sample in this study were elderly people aged 60 years and over, diagnosed with hypertension BP 140/90 mmHg, elderly living with family, communicating verbally well, willing to be respondents.

Results: A total of 10 research articles that met the inclusion criteria were included in this review. Factors that can affect nurse job satisfaction in Indonesia include leadership, work environment, career path, relationships with coworkers, salary, rewards, communication, opportunities, organizational commitment, work schedule, job stress.

Conclusion: The results showed that there was a relationship between emotional support, appreciation, information, and instrumental support with the behavior of the elderly in controlling hypertension with a value ($p < 0.05$). Further analysis showed that information support was the dominant factor in the behavior of the elderly in controlling hypertension. Family support is very important in improving the health status of the elderly.

Impact of Benzene Exposure on Clinical Manifestations of Workers' Respiratory Tract Functions at Gas Stations

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Background: One of the fuel vapors is benzene, which is an irritant. Benzene can be absorbed through digestion, inhalation, and skin. Inhalation is the most likely route of benzene exposure, especially in workplaces such as gas stations. Exposure to benzene can cause disturbances in the function of the respiratory tract.

Method: This study uses a literature review method, namely secondary data, obtained from previous articles or journals or data from internet sites that are in accordance with the topic. The data used were 19 journals obtained from the results of screening a number of journals from the journal portals Google Scholar, Research Gate, and PubMed.

Results: In the 19 reviewed journals, 9 journals used spirometry, 2 journals used oximetry, 4 journals used peak flow, 3 journals used sakarin test, and 1 journal used RMS helios 401 as a research instrument. The most common respiratory tract disorders were COPD which were found in 9 journals, the least respiratory disorders were lung cancer and restrictive lung disorders were found in 1 journal. Duration of work 5-10 years of work can aggravate the respiratory tract function disorders of workers.

Conclusion: It can be concluded from a review of 19 journals that benzene exposure to gas station workers can affect the occurrence of a decrease in respiratory tract function.

Keywords: Benzene, gas station workers, respiratory disorders, duration of exposure

Determinant Factors of Low Back Pain (LBP) Disorders on Chicken Box Workers in Bujel Village, Mojoroto District, Kediri City

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Background: Low back pain is an occupational disease caused by non-ergonomic work postures such as standing, squatting, bending, transporting, and lifting loads while doing work. In addition to work posture, duration is the time a person does work. Workload is the object that is transported in a working day (kg). The purpose of this study was to analyze the workload, work position, duration of work on the symptoms of LBP in chicken box making workers in Bujel Village, Mojoroto District, Kediri City.

Aim: The purpose of this study was to determine the effect of workload, work position, work duration on Low Back Pain (LBP) disorders in chicken box makers in Bujel Village, Mojoroto District, Kediri City.

Method: Quantitative research method with cross sectional design. The technique of collecting samples is Simple Random Sampling. Test using Multiple Linear Regression

Results: The total sample of this study was 44 respondents. Characteristics of respondents based on age 18-2 years, as many as 19 respondents (43%). Characteristics of respondents based on education history, most of them were high school as many as 22 respondents (50%). Characteristics of heavy workload variables as many as 36 respondents (81.8%), non-ergonomic work positions as many as 28 respondents (63.4%), overtime work duration as many as 37 respondents (84.1%), severe LBP symptoms as many as 17 respondents (38,6%).

Conclusion: Heavy workload, non-ergonomic sitting, and inappropriate duration of work (overtime) are risk factors that affect back pain or Low Back Pain in chicken box workers.

Keywords: Workload, Work Position, Work Duration, Low Back Pain

Literature Review: Pain Management Nursing

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Background: Pain is an individual experience influenced by the patient's perception, history and expression of pain, e.g. ability to cope, mental wellbeing, previous experience of pain, communication skills, family or cultural background. The primary aim of acute pain management is to provide treatment that reduces the patient's pain, with minimal adverse effects, while allowing them to maintain function. A secondary aim is to prevent acute pain from progressing to chronic pain. Use multi-modal analgesia, provide an analgesic plan and consider other treatments or techniques which will optimise resolution of pain.

Aim: To provide treatment that reduces the patient's pain, with minimal adverse effects, while allowing them to maintain function and to prevent acute pain from progressing to chronic pain.

Method: The research articles were obtained from three data bases Proquest, PubMed and Google Scholar totally 20 articles. Search literature using keywords (Indonesian and English), pain management with the inclusion criteria of research articles from 2016-2020, primary articles, full text, removed duplicated and research subjects are pain management. 10 articles were reviewed that met all the inclusion criteria and objectives of this literature review. The 10 articles obtained were non-pharmacological treatment.

Results: The results of the study is effective pain assessment and management requires coordinated interdisciplinary intervention in collaboration with patients and their families. Patients have the right to appropriate assessment and management of pain. Unrelieved pain has consequences and should be prevented where possible. Unrelieved pain requires urgent treatment. Pain is a subjective, multidimensional and highly variable experience for everyone, and requires a critical analysis of pain-related factors and interventions. A multi-modal treatment approach that includes pharmacological and non-pharmacological interventions is recommended. Health care providers are professionally and ethically obligated to advocate for change in the treatment plan when pain relief is inadequate. Ongoing education is essential to maintain clinical competency in pain assessment and management. Health care providers must advocate for policy change and resource allocation that support effective pain management to improve a patient's quality of life and reduce their suffering.

Conclusion: A multi-modal treatment approach that includes pharmacological and non-pharmacological interventions is recommended.

Factors That Related to Unsafe Behavior on Overhead Crane Operator at HSE Management System Based Company

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Background: HSE management system based company means a company which has a zero accidents, but unfortunately not in reality. The main cause of the accident is unsafe behavior due to individual (internal factor) or environment (external factor).

Aim: The purpose of this study was to analyze which factors that related to unsafe behavior of workers in operating overhead cranes at a HSE based company, PT. Bangun Sarana Baja Gresik Indonesia.

Method: This research is an analytic observational research with cross sectional research design. The sample size is 80 people, taken randomly using simple random sampling method. The data have been analyzed statistically using the contingency correlation test.

Results: The results showed that internal factors are more dominant than external factors in having a correlation. Internal factor which related to unsafe behavior are knowledge ($p = 0.014$) and attitude ($p = 0.033$). External factors which related to unsafe behavior are supervision ($p = 0.004$) and training ($p = 0,000$).

Conclusion: The results of the study can be concluded that good knowledge and attitude, as well as adequate supervision and the absence of workers in training can influence the unsafe behavior. So that if the values of these variables are improved for the better it will reduce the unsafe behavior of workers in operating overhead cranes. Advice that can be given based is that companies should always maintain the balance between the knowledge and attitudes of workers with their behavior while working. In addition, the company should also maintain and improve the supervision of the performance and work environment also provide regular training related to overhead cranes to increase the ability and knowledge of workers in operating overhead cranes.

Keywords: Internal factor, external factor, overhead crane, unsafe behavior

Stress, Boredom, And Fatigue Among Coal Mine Operators In Kalimantan, 2021

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Background: Working with shifts, high workload, monotony, away from family are some of the conditions that can cause stress, boredom, and fatigue among workers. Coal mine workers are faced with that factor every day. Some studies also mentioned that stress and boredom have associated with fatigue at work including in coal mining workers.

Aim: To assess the prevalence of fatigue and an association between stress and boredom with fatigue among coal mining workers or operators in Kalimantan, Indonesia.

Method: This research has used a cross-sectional design by involving 6 coal mining sites in Kalimantan. A survey performed between March and April 2021 using online self-administered questionnaires. This study used checklist individual strength-20 to measure fatigue, perceived stress scale for stress, and Dutch boredom scale (DUBS) for boredom. 447 coal mining workers have completed the questionnaire. Chi-square and logistic regression were used to analyse the association of stress and boredom with fatigue at work.

Results: The samples in the study had average ages $32.1 \pm SD 6.04$ years (21-58). Samples have an average body mass index 24.86 ± 3.1 (16.5 – 33.8). Most of the coal mine workers working with 3 shift pattern (53.7%) and working at morning shift (51.9%) during the data collecting. The prevalence of fatigue was 20.1% in the total sample. The stress level was categorized as low, medium, high, but the stress level in the sample was moderate (48.8%) and light (51.2%). Boredom related to work was measured by DUBS and categorized to no, low, and high. The results show 42.1% of workers experienced mild boredom. Statistical analysis shows a positive association between stress with fatigue at work with a p-value of 0.01 (OR 2.4 (95% CI 1.46-3.84)). Workers with a high boredom have 2.6 to get fatigued compared to workers without boredom at work (p-value 0,003).

Conclusion: Stress and boredom among coal mine workers in Kalimantan have a positive association with fatigue at work, especially among operators. A higher level of stress and boredom will be caused by a higher probability of coal mine workers getting fatigued at work.

Keywords: boredom, fatigue, stress, coal mining workers.

The association between individual, physical, and psychosocial risk factors and occupational fatigue among commuter line train workers

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Background: Occupational fatigue is a common issue among workers in various industries, including transportation. Commuter line train drivers as well as office workers are simultaneously exposed to high physical (e.g., awkward posture, repetitive work and work in long duration) and psychosocial factors (e.g., rewards, social supports and work stress) which may lead to occupational fatigue.

Aim: To investigate the association between individual, physical, and psychosocial risk factors and occupational fatigue among commuter line train workers in Jakarta, Bogor, Tangerang, and Bekasi.

Method: A total of 78 commuter line train workers (both drivers and office workers) participated in this study. A set of validated self-administered questionnaires was used to gather information on individual (i.e., age, gender, marital status, type of work, duration of work, body mass index, smoking status), psychosocial (i.e., effort, reward, overcommitment, monotonous work, social support, job satisfaction, and work stress) factors, and occupational fatigue. Physical factors data (awkward posture, repetitive work, prolonged work, and material manual handling activities) were obtained by observing the workers' activities using Quick Exposure Check Questionnaire. Logistic regression models were used to examine the association between each risk factor and occupational fatigue.

Results: The 12-month period prevalence of occupational fatigue among commuter line workers was 52%. This study found that office commuter line train workers (OR 4.96, 95% CI 1.77 – 13.85), those who reported high overcommitment (OR 3.16, 95% CI 1.25 – 8.00) and high work stress (OR 1.54, 95% CI 1.19 – 2.00) were more likely to report occupational fatigue compared to train drivers, those who reported low overcommitment and low work stress, respectively. Whereas those who reported high job satisfaction were less likely to report occupational fatigue (OR 0.19, 95% CI 0.07 – 0.52) compared to those who reported low job satisfaction. None of physical factors was associated with occupational fatigue.

Conclusion: The 12-month period prevalence of occupational fatigue among commuter line workers was high. To reduce the prevalence, organisation should improve the psychosocial condition and focus on office commuter line train workers.

Risk Factors Indicating Acute Kidney Injury due to Heat Stress Exposure among Iron and Steel Manufacturing Industry Workers in Indonesia: a Literature Review

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Background: Decreased kidney function, such as acute kidney injury (AKI) and chronic kidney disease (CKD) as further effects of heat-related illness, has been identified in workers who work with extreme heat. Steel industry workers have been shown to be more susceptible to heat stress and have a higher risk of developing heat-related illnesses.

Aim: This study aims to obtain risk factors for indications of acute kidney injury due to heat stress exposure to workers in the iron and steel manufacturing industry in Indonesia.

Method: This study was conducted through a literature review to explain the risk factors of the work environment, occupation, individual, exposure to heat stress and indications of acute kidney injury among workers in the iron and steel manufacturing industry in Indonesia.

Results: Risk factors that indicate the occurrence of acute kidney injury due to heat stress exposure among iron and steel manufacturing industry workers in Indonesia include work environment factors such as temperature and humidity, work factors such as working time, workload, the usage of personal protective equipment, as well as individual factors consist of age, gender, body mass index, medical condition, physical activity, alcohol consumption and smoking habits. Research and data on indoor workers who are exposed to heat stress and have acute kidney injury in Indonesia are still limited. Research and data on indoor workers who are exposed to heat stress and experienced acute kidney injury in Indonesia are still limited. Prevention of occupational heat stress exposure presents a major challenge to the integrated multidisciplinary efforts of employers, health authorities, researchers and governments.

Conclusion: This literature review is the early step to determine recommendations to prevent and control risk factors for heat stress exposure that contribute to acute kidney injury which eventually leads to chronic kidney disease.

Keywords: heat stress, acute kidney injury, risk factor, literature review

Job Satisfaction Among Indonesian Health Worker Of Diverse Backgrounds: A Rasch Analysis

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Background: In developing countries, achieving the quality of health services provided in public health care facilities is the key to increase the utilization and sustainability of health services in the population. To achieve high quality health services, job satisfaction of the health worker is a must. People who are satisfied with their work will be happy and show their best performance.

Aim: In this study, we aim to assess job satisfaction among health workers that worked on public health center (PUSKESMAS) in Indonesia of diverse backgrounds.

Methods: This was a cross sectional study carried by the National Institute of Health Research and Development, Ministry of Health, Indonesia. The number of 249.914 health worker from all of 9.669 public health center in Indonesia were surveyed on 2017. Data was collected by self-administered Minnesota Satisfaction questionnaire (MSQ) Short Form using likert scale. The Data was analyzed using the WINSTEPS Rasch model measurement software to determine the validity and reliability of the instrument. Differential Item Functioning (DIF) analysis was also used to identify responses based on health workers' backgrounds. The demographic variables used were working regional, age, sex, job status, education, working experience, marital status, travel time to work, accessibility to workplace, ownership of residential buildings, official housing, official vehicles and fuel costs, training receipt, opportunity for further education, healthcare insurance, and old age protection.

Results: Findings identified that most of the health workers were moderately satisfied (52%), while 24,7% were low satisfied and the rest were highly satisfied. Further analysis indicated that there were differences in health workers' job satisfaction based on regional, age, sex, education, and working experience.

Conclusions: Using MSQ short form in this study setting was a correct choice. Most of the health worker were moderately satisfied of their job. There were differences in health workers' job satisfaction based on regional, age, sex, education, and working experience.

Keywords: job satisfaction, health worker, rasch mode

Association between Occupational Stress and Hypertension in Private Driver at Transportation Company Jakarta

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Background: Hypertension has become the most common non-communicable disease globally. It is estimated that around 40% of the world's population has hypertension. Emotional stress is one of its modifiable risk factors. In productive age individuals, most of their time is spent at work so they are very vulnerable to being exposed to occupational stress which in a prolonged period will have an impact on the health of workers. A driver is one of ten types of work with high level of occupational stress.

Aim: This study aims to determine the association of occupational stress with hypertension in workers who are private drivers in a transportation fleet company, PT Prima Armada Raya DKI Jakarta.

Method: The cross-sectional study design was conducted on 229 workers who were active during May-June 2021. Work stress was assessed using a Stress Diagnosis Survey (SDS) 30 questionnaire which aims to assess several components such as role ambiguity, role conflict, quantitative-work overload, qualitative-work overload., career development and responsibility towards others.

Results: The results of multivariate analysis showed that there was a statistically significant relationship between work stress and hypertension (PR 8.345 (95% CI: 1.010-68.946; p value:0.049)) after being controlled by covariate variables, namely age, smoking habits, alcohol consumption, level of physical activity, history of family hypertension and obesity. Periodic health monitoring programs and work stress management are important as interventions in preventing the occurrence of hypertension due to work stress.

Conclusion: Further research on other types of professions may need to be done.

Keywords: Occupational stress, hypertension, private driver

Analysis Fatigue Factor among Helicopter Pilot Fire Fighting and Disaster Management Team at PT X in 2021

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Background: Pilot fatigue define as a physiological state of decreased mental performance or physical ability of humans resulting from lack of sleep or wakefulness, circadian rhythms, or workloads (mental and physical activity) that could impair the alertness of flight crew members and the ability to operate the aircraft or perform safety-related tasks. Fatigue has become a major concern as a cause of accidents, decreased productivity, impaired judgment, absence due to illness and inability to work. Pilots, especially helicopter pilots, have a high risk of fatigue in carrying out their work as a Fire Fighting and Disaster Management Team.

Aim: The purpose of this study is to explain fatigue factors among Helicopter Pilot Fire Fighting and Disaster Management Team at PT X in 2021

Method: This study design is cross sectional and data collection was carried out by distributing online questionnaires using The Samn-Perelli Crew Status Check from ICAO Guidelines. In-depth interview also carried out to enrich fatigue experience among pilot. Data questionnaires were collected from 57 pilot and 5 Pilot interviewed in February - April, 2021. Data analysis questionnaires was accomplished by chi-square test.

Results: Findings showed that 98,25% of pilot experience fatigue on low level. Meanwhile, based interviewed pilot experience fatigue medium level. The result also found a relationship between fatigue (P value = 0.000) and life style, fatigue (P value = 0,006) and health status, fatigue (P value = 0,000) and rest time, fatigue (P value = 0,000) and organizational policy, fatigue (P value = 0,020) and pilot scheduling, fatigue (P value = 0,000) and working environment and fatigue (P Value = 0,000) and living environment.

Conclusions: The current study concluded that factors outside of work (such as life style and health status) work-related fatigue factors (such as rest time and organizational policy) and factor that cause pilot fatigue (such as pilot scheduling, working environment, living environment) were related fatigue factors among Helicopter Pilot Fire Fighting and Disaster Management Team at PT X in 2021

Keywords: Pilot Fatigue, Aviation, Pilot Fire Fighting and Disaster Management

Model of Physical Activity by Occupation on Quality of Life

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Background: Physical activity is a body movement produced by skeletal muscles that releases energy.

Results: Lack of physical activity is an independent risk factor for chronic disease, and can lead to death globally. However, excessive physical activity can cause complaints of Musculoskeletal Disorders (MSDs). If the complaints of Musculoskeletal Disorders (MSDs) are not resolved, they will experience a sense of comfort that can lead to stress, insomnia and other sleep disorders.

Conclusion: Factors that affect the quality of life include age, education, occupation, marital status, income, relationships with others and physical health.

Keywords: Physical Activity, Quality of Life, Worker

Correlation Between Age, Gender, Education, and Employment with the Incidence of Hypertension

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Background: Hypertension is one of the causes of death in the world. In 2018 the incidence of hypertension in Banjarmasin ranks 2nd with the number of 57 257 patients. However, deaths from hypertension were ranked first with a total of 444 patients. The incidence of hypertension in the city of Banjarmasin was highest in the working area of ??the Gedang Hanyar Public Health Center with a total incidence of 5,426 patients.

Aim: To analyze the correlation between age, gender, education, and employment with the incidence of hypertension in Gedang Hanyar Public Health Center working area.

Method: This research was an analytic observational quantitative study with cross sectional design. The subjects of this study were the people in Gedang Hanyar Public Health Center. The sample in this study amounted to 50 people with a sampling method using Frankel and Wallen's theory taken by purposive sampling technique. The instrument used questionnaire. Data analysis used chi square statistical tests (CI=95%, $\alpha=0,05$).

Results: There is a correlation between age ($p=0.050$) and gender ($p=0,001$) with hypertension incidence. While education ($p=0.143$) and employment ($p=0,143$) have no correlation with hypertension incidence.

Conclusion: It can be concluded that age and gender have a correlation with the incidence of hypertension, while education and employment do not have a correlation with the incidence of hypertension. Recommended to the community to pay attention for the risk factor of hypertension, and Gedang Hanyar Public Health Center to be able to carry out further socialization and conducting personal counseling about hypertension and how to prevent when patients go to the puskesmas.

Accident Analysis of Raw Material and Cement Transporter Using HFACS and SCAT in Cement Company

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Background: The cement company is one of the companies with various potential hazards such as dust, noise, hot materials, rotating equipment, height work, lifting, compressed air, vibration, blasting, electricity, and traffic. One of the potential hazards mentioned is traffic. The risk of traffic accidents that occur can be in the form of damage to components in the vehicle and can result in injury to workers. According to company data from 2018-2020 there have been 25 cases of accidents in the transport of raw materials and cement.

Aim: Accident analysis is needed to determine the factors that trigger accidents so that accidents do not occur again.

Method: The analysis used is the Human Factors Analysis and Classification System (HFACS) method because it is effective in analyzing accident cases for several years and has complete criteria. After that, giving recommendations can use the Systematic Cause Analysis Technique (SCAT) by compiling a chronology and the causes of events first.

Results: The results of the HFACS analysis after being improved using a chi square statistical test with a p-value of 0.05 stated that there were a relationship between criteria at each level. The next step is to find out the greatest chance of a relationship that can result in an accident using the statistical odds ratio test. After testing, it was found that the highest odds ratio was in the relationship between organizational climate at level 4 and planned inappropriate operations at level 3 having a chi-square value of 0.000 and the largest OR was 56 with a CI of 4.360-719.205. This shows that the relationship has the greatest chance of risk.

Conclusion: After that, make recommendations using SCAT by using the causes that exist in the related HFACS criteria to make it easier to find the root cause. Recommendations are given such as conducting a review for hazard identification and risk assessment in the transportation sector.

Keywords: Accident, HFACS, SCAT, Odds Ratio, Chi Square

Non-contact sleep estimation technique while in bed by using millimeter-wave radar

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Background: In Japan, many people have problems with sleep quality, in particular, with one in three older people complaining of insufficient sleep time or insomnia. In elderly care facilities, room visits by caregivers that are not based on the sleep-wake status of residents into their private rooms worsen the quality of sleep and lead to physical restraint. Sleep quality problems are diverse, and continuous sleep measurement is necessary for improvement. A sleep monitoring method that does not involve physical contact and does not infringe on privacy is expected.

Aim: The purpose of this paper is to develop a non-contact sleep monitoring method that uses millimeter-wave radar for body movement and distance measurement to continuously measure sleep in daily life without physical or mental strain.

Method: We measured the body movements of two subjects for one week using both Actigraph and millimeter-wave radar, which have been proven in sleep monitoring studies. Both body movement records in the measurement period were divided into two parts, and one part was used as training data and the other part as test data. The body movement records of the Actigraph were applied to the Cole-Kripke algorithm, and D values were calculated for all unit times while in bed to score sleep-wake status. Multiple regression analysis was performed with the sleep-wake scoring data of the Actigraph as the objective variable and the learning data of the millimeter-wave radar as the explanatory variable. The Cole-Kripke equation derived a sleep-wake scoring algorithm specific to millimeter-wave radar. We compared the Actigraph sleep-wake scoring status with the millimeter-wave radar sleep-wake scoring status and calculated the agreement rate, sensitivity, and specificity.

Results: As a result, 84-87% agreement rate, 80-84% sensitivity, and 81-96% specificity were obtained.

Conclusion: The effectiveness of a non-contact sleep monitoring method using millimeter-wave radar for body movement measurement was shown. This method has advantages over the existing wearable, mat-type, and infrared camera-type methods. It does not place a burden on the body and mind and is easy to operate and maintain.

A study on years of employment and occupational diseases among workers at mining company

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Background: Erdenet is the second largest mining company, employing more than 6000 people and it's located in Orkhon province, Mongolia. The Erdenet copper mining company produces copper concentrate and the company is considered as the largest copper and molybdenum ore mining producer in Asia. It was established in 1978 under the agreement between Mongolia and Soviet Union. The company produces 26 million tons of ore, 530 thousand tons of copper concentrate and about 4.5 thousand tons of molybdenum concentrates annually.

Aim: Investigate years of employment and occupational diseases among workers.

Method: Method A total of 348 people were included in the study, we were used for human resources and health data of the company workers. Documents from 2015-2019 were used in the study. The initial data was typed and processed in MS office EXCEL. The SPSS software was also used for in-depth statistical analysis.

Results: There were 378 workers with occupational diseases. The 73% (n=253) of the respondents were male and 27% (n=95) were female. The age groups were consisted of 9.5% (n=33) under the age of 50, 45% (n=157) between the ages of 51-60, 34.5% (n=120) between the ages of 61-70, and 11% over the age of 71 (n=38). Company workers lost their ability to work due to a total of 23 diseases. These were; 38.1% (n=122) for diagnosis J68 according to ICD 10, 31% (n=108) for diagnosis G54, 9.2% (n=32) for diagnosis T52 and 4.9% (n=17) for diagnosis M21. 38% (n=132) of workers who lost their ability to work after working in the factory for 5-15 years, 56.6% (n=197) who lost their ability to work after 16-25 years, and 5.5% (n=19) of those who worked for more than 26 years.

Conclusion: The common pattern in the workers of the company are losing their ability to work was caused by diseases of J68, G54 and T52. Therefore, it is important to take appropriate actions to prevent and protect against the risk factors for those diseases.

Keywords: occupational disease, ICD 10, mining company

Appointment status of various management controllers in charge of occupational safety and health

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Background: In Japan, occupational safety and health regulations are specified by laws, ministerial ordinances, and notifications. Safety and health personnel with various job titles have been appointed, and their duties are defined for each job. Since 2000, it has been obligatory to make an effort to appoint management controllers (MCs). The notification etc. stipulates, for example, "MCs in charge of respiratory protective equipment". However, since the duties of these MCs are not clear, no reports examine whether they have been appointed in the companies or not.

Aim: This survey was conducted with the aim of clarifying their appointment, focusing on the "MCs in charge of respiratory protective equipment", "ones in charge of vibration tools", and "ones in charge of chemical substances."

Method: A questionnaire survey was conducted with 94 participants who attended the occupational safety and health workshop for hygiene managers after the workshop. The questionnaire was anonymous self-administered. We asked a representative of the company to fill it out. Then, 81 companies responded to it. The survey was conducted in September 2019.

Results: There were 54 companies that had harmful works such as dust, organic solvents, specified chemical substances, and vibration. Of these, 50 companies needed to appoint the MCs. Among them, 28 companies had appointed them, of which 15 appointed "MCs in charge of respiratory protective equipment", 3 did "MCs in charge of vibration tool", and 14 did "MCs in charge of chemical substances" (duplicate response). Among 28 companies that had appointed MCs, 10 were ones with 300 or more employees, 8 were ones with less than 50 employees, 6 were ones with 50-99 employees, 3 were ones with 100-199 employees, and 1 was ones with 200-299 employees. As to the reasons why MCs had not been appointed at companies that had harmful works, "general health and safety managers performed such duties" in 9 companies, "nobody had known the notification" in 9 ones, and other reasons, such as lack of human resources, in 5 ones.

Conclusion: Few companies appointed MCs even though they had harmful works. Awareness of the law, and their appointment are desirable in such companies.

Keywords: Occupational safety and health, Management controller, Notification

Age and Working Period with Musculoskeletal Disorders Complaints on Sales Promotion Girl in Surabaya

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Background: Working in a standing position is more tiring than sitting and is at risk of causing musculoskeletal disorders (MSDs). One of the jobs done with more standing is SPG or sales promotion girl, including SPG at cosmetic outlets. In addition to standing position, individual factors such as age and working period can be risk factors for MSDs complaints.

Aim: The aim of this study was to analyze the relationship between age and work period with complaints of musculoskeletal disorders in sales promotion girl cosmetic outlets in Surabaya.

Method: This study is an analytic observational with cross-sectional data collection. The study was conducted from November 2020 to March 2021. The population is 64 SPGs. There were 47 respondents and the sample was taken using simple random sampling with exclusion criteria. Data analysis was conducted with Spearman Correlation Test.

Result: The results showed that MSDs complaints are in the low to moderate range, there is no relationship between age variables and MSDs complaints (p-value = 0.617, r = 0.075, positive), no relationship between working period and MSDs complaints (p-value = 0.319, r = 0.148, positive).

Conclusion: There is no relationship between age and working period with MSDs complaints at SPG cosmetic outlets in Surabaya. Keywords: age, work period, MSDs complaint



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*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0
AND THE COVID-19 PANDEMIC*

Carcinogenic and non-carcinogenic risk assessment of chromium in soil and groundwater wells in limestone karstic area, Indonesia.

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Background: The rapid growth of industrial activities in Indonesia are leading to environmental degradation and affect human health. Combustion of fossil fuels also contributes to the release of heavy metals such as chromium (Cr) into the environment. Cr able to accumulate around industrial areas and pollute water bodies, especially in Cr(VI) forms.

Aim: This study aimed to evaluate the potential threat in human health from Cr exposure in adult and children surrounds Maros-Pangkep Karst area through ingestion and skin contact/dermal.

Methods: The concentration of Cr was investigated on twenty soils and fourteen water samples using atomic absorption spectrophotometry. The USEPA health risk assessment method was applied to assess the carcinogenic risk and non-carcinogenic risk through combined pathways (ingestion and skin contact).

Results: Non-carcinogenic risk assessment showed that exposure to Cr in adult and children were below the permissible limit ($HQ < 1$) Carcinogenic risk values through ingestion and skin contact for adult and children were considered acceptable. The risk varied from 1.93×10^{-6} to 2.46×10^{-13} . However, Cr exposure for both pathways in soil for adult was borderline or nearly exceeding the carcinogenic risk guideline values.

Conclusion: The results showed no adverse effects on health for residents in the case of ingestion and skin contact. Moreover, the calculation of human health risk showed a low risk for non-carcinogenic and carcinogenic. The findings could be valuable to proper adjustment of community activities which influenced the daily exposure and maintaining groundwater protection for the future.

Keywords: Chromium, Health risk assessment, Ingestion, Skin contact, Groundwater

Environmental Risk Factors and Hookworm Infection among Schoolchildren in rural areas of Indonesia

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Background: The prevalence of hookworm infection is serious public health concern globally. In Java Island and Kalimantan Island have differential environmental risk factors of hookworm infection especially in rural areas of Indonesia have high risk environmental factors of the prevalence of hookworm infection.

Aim: In this study showed the infection rates, correlation analysis between environmental risk factors and prevalence of hookworm infection.

Method: We performed a cross-sectional study among 226 schoolchildren from rural of East Java p province, Central Java Province and East Kalimantan Province, Indonesia. In this study used two diagnostic methods: Kato Katz and Koga agar plate culture/KAP culture for diagnosing of hookworm infections. Pearson chi-square analysis was used for study correlation between environmental factors and hookworm infection.

Results: Hookworm, *Strongyloides sp*, and *Ascaris sp* infections were found in this study; 137(60.63%), 25(11.1%), and 124(9.84%) respectively. Environmental risk factors such as; rainy season, quality of soil and infection hookworm in pet have significant correlation (p value < 0.05) with hookworm infection among schoolchildren in rural area in Indonesia..

Conclusion: The prevalence of hookworm infection has correlation with environmental factors, and the finding in this research could be contributed for decreasing program of hookworm infection especially among schoolchildren in rural area.

Effectiveness of Clove Leaves (*Syzygium Aromaticum*) and Betle Leaves Extract (*Piper Betle*) Against *Aedes Aegypti* Mosquitoes

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Background: Natural insecticides from plant extracts are one way to prevent mosquito resistance to chemicals. Clove (*Syzygium aromaticum*) and Betle (*Piper betle*) are types of plants that can be used as natural pesticides because they contain chemical substances including eugenol, flafonoid, saponin and tannin compounds which can be used as antiseptic, antifungal, and even insect repellent because they can play a role as contact poison, stomach poison, respiratory poison and nerve poison.

Aim: To determine the ability of Clove (*Syzygium aromaticum*) leaf extract and Betle leaf extract (*Piper betle*) against the mortalities of *Aedes aegypti* mosquitoes.

Methods: this type of research is an experimental study with a post test design only with control group design with one control model each and three treatments of clove leaf extract (*Syzygium aromaticum*) and betle leaf extract (*Piper betle*) with a concentration of 1 ml, 5 ml, and 10 ml. Each treatment contained 20 *Aedes aegypti* mosquitoes and observations were made every 1 hour until 3 hours of observation.

Results: From the observation for 3 hours, it was found that Clove (*Syzygium aromaticum*) leaf extract had 100% mortality at a concentration of 10 ml for 1 hour and Betle Leaf Extract (*Piper betle*) had 30% mortality with a concentration of 10 ml for 2 hours of observation. Conclusion: both types of plants have the potential to be used as natural anti-mosquito agents even though betle leaves have not provided significant results in mosquito mortality rates.

Keywords: Extract, Mortality, *Aedes aegypti*, *Syzygium aromaticum*, *Piper betle*

Community Awareness Toward Zoonotic Disease and One Health (Study In Lamongan District, Indonesia)

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Background: Improving global health and ensure its sustainability would be impossible unless a genuine partnership exist with communities. As the interaction between human and animal continue to intensify, community awareness toward zoonotic disease and one health is needed to build partnership in order to achieve sustainable and optimal health outcomes.

Aim: This study aims to quantitatively asses the community awareness about zoonotic disease and One Health, especially in Lamongan District.

Method: A cross-sectional study was conducted using knowledges, attitudes, and practices (KAPs) questionnaire. This study was approved by East Java Province review board (BAKESBANGPOL no: 070/6575/209.4/2019). The total 300 Lamongan district's residents provided their response.

Result: The majority of respondents were females (69.7%). While most of respondents (62.3%) agreed that animals can transmit disease to human, only 13% agreed that human can transmit disease to animals. However, most of the respondents (76.7%) gave positive respond to collaboration between human, animal and environment sectors. Based on occupation of the respondents, farmer had the lowest mean (4.43 ± 0.21) KAPs score.

Conclusion: Although the result showed the positive attitude from the respondents toward the collaboration, nevertheless the community had lack knowledge about zoonotic disease and one health. This indicate the need to increase the knowledge of zoonotic disease and one health in the community, especially for farmer who work in a high risk working environment.

Protection of Clean Water Sources and The Incidence of Diarrhea in Rural Area

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Background: Diarrhea is a disease that is currently has a high morbidity and mortality rate. In children under 5 yearsold, diarrhea can cause malnutrition, stunting or even death. One of the cause of diarrhea is Escherichia coli bacteria. This bacteria can be found in human waste and can contaminate clean water sources that is consumed daily and eventually cause diarrhea. The contamination could happen if the clean water source is located too close with pollution source, such as septic tank and garbage disposal.

Aim: The objective of this research is to learn if there is any villages in Tuban Regency which the residents are consuming clean water from the sources that is protected from pollution, to know about incident of diarrhea and the correlation between these.

Method: This study is an analytical research with cross sectional study design by observation. The condition of clean water source that ptotected from pollution and the incident of diarrhea is known from interview towards 330 housewife in 33 villages in Tuban Regency chosen by systematic random sampling. The data is then analyzed using Spearman's Rho Correlation.

Result: The study shows that from 33 villages in Tuban, 51,5% of the vilages have less then 30% families which get their clean water from sources that are protected from pollution and 39,4% villages have 31-60% families which a family member has suffered from diarrhea in the last 6 months. There is a negative correlation between consuming water from sources that is protected from pollution and incident of diarrhea in family members in the last 6 months with p value 0.037 and a correlation coefficient of -0.365.

Conclusion: Health institutions must improve their health promotion and enhance the early alert system for contamination of clean water sources and the community is expected to protect their clean water sources from contamination.

Keyword: Diarrhea, Water Source, Protected from Pollution

Impact of Sanitation and Drinking Water Sources on The Prevalence of Diarrhea in Children Under 2 Years in Indonesia

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Background: Diarrhea is an important cause of child morbidity and mortality in developing countries, including Indonesia. The availability of drinking water and good sanitation can help prevent diarrhea.

Aim: The aim of this study was to measure the impact of sanitation and drinking water sources on the prevalence of diarrhea in children under 2 years olds in Indonesia.

Methods: This study used a cross sectional study design using secondary data from the Indonesia Demographic Health Survey (IDHS) 2017. Data from 6,163 mothers who had children under 2 years old were analyzed. Sampling was done by multistage cluster sampling. Multivariate logistic regression was used to analyze the relationship between sanitation and clean water sources with diarrhea in the last 2 weeks.

Results: The results of the analysis showed that about 17.3% of children had diarrhea in the last 2 weeks. In addition, about 48.6% of respondents had unimproved drinking water sources, 27.8% respondents had unimproved toilet types, and 54.2% of respondents did not have proper disposal of feces. Respondents who had unimproved drinking water sources (AOR=1.19, 95%CI=1.01-1.40), unimproved toilet types (AOR=1.33, 95%CI=1.12-1.59), and unimproved feces disposal (AOR=1.30, 95%CI=1.10-1.53) had a higher odds of having diarrhea in the last 2 weeks.

Conclusion: There was a significant relationship between the source of drinking water, the type of toilet, and the disposal of feces when not using the toilet with the prevalence of diarrhea in children aged 2 years in Indonesia. Therefore, policies need to be focused on the coverage and use of proper sanitation facilities and drinking water sources. In addition, education is important to increase public awareness in the use of sanitation facilities and clean drinking water sources.

Keywords: Clean & drinking water/water source, Child mortality, diarrhea, Water & sanitation and hygiene

The determinant factors of sanitation improvements in Bobonaro, Timor-Leste

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Background: Timor-Leste has made progress in ending open defecation, and improving sanitation and hygiene behaviours through engaging local leadership and their communities. Overall the trend is positive, with open defecation at 47% in 2005, 36% in 2010 and 32% in 2015. The Government of Timor-Leste's Strategic Development Plan (2011-2030) states that by 2030, all citizens will have access to clean water and improved sanitation.

Aim: This study aims to assess behavioural determinants affecting household demand for sanitation improvements and produce recommendations to strengthen community access to sanitation and hygiene improvements in Bobonaro, Timor-Leste.

Methods: This is a cross-sectional study with a mixed methodology approach using a triangulation method. For the quantitative study, a total of 349 were recruited. For the qualitative methods, 49 in-depth interviews were conducted with masons and suppliers.

Results: 80.8% of households used their own improved sanitation facilities while 19.2% used unimproved sanitation facilities including open defecation. A high proportion of households (61.9%) said they were interested in improving or modifying their toilet facilities. The top emotional benefits reported were comfort (15.9%) and safety (10.4%). The top rational benefits were health (11.9%), cleanliness (8.0%), the need to repair the toilet (22.9%) because it was broken, damaged, old, or had a full pit; as well as durability (19.9%) to extend the life of the toilet by building a permanent one.

Conclusions: Strengthening household knowledge and skills, particularly for the main decision maker, by ensuring that information is appropriate, attractive and accessible, will help ensure households can upgrade or build an improved toilet.

Keywords: sanitation, hygiene, open-defecation free

Lead Exposure In The Environment And Its Effects On Children: A Systematic Review

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Background: Children are vulnerable to exposure to environmental pollutants such as lead

Aim: To identify the effect of lead pollution on children

Methods: Electronic databases (Science Direct, PubMed, ProQuest, Scopus) were searched. Keywords Lead OR Plumbum AND Children OR Childschool were used to search for literature in English for a 5 years period (2016-2021), it was conducted in April 2021

Results: Twenty six articles met inclusion criteria with the studies area from Indonesia, China, Australia, Canada, USA, Uganda, Vietnam, Poland, Brazil, Kenya, Iran, Nigeria, Bangladesh, Palestine, Mexico. The results show that lead concentration in the environment affects blood lead concentration. The blood lead concentration on children was related to the increase in TNF- α , kidney disorders. It showed negative association with Intelligent Quotient, hemoglobin, hematocrit, erythrocytes, BMI, communication skills, learning achievement

Conclusions: Lead exposure has an impact on immunity, learning achievement, physical development

Keywords: children, effect, exposure, lead

The Effect of Land and Water Conditions on Clean Water Supply in Floods and Mining

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Background: Lack of clean water sources to meet sanitation needs in everyday life and coupled with a lack of knowledge on how to use water properly has an impact on the increase in diarrhea cases, namely number 2 as many as 3,317 with the highest prevalence number 1 is in under five as many as 280 and child mortality as many as 121 cases with CFR 8.4 in South Kalimantan in 2020. Another factor causing the lack of clean water is the low location of Banjar Regency from sea level causing the water flow on the ground surface to be less smooth. As a result, some areas are always inundated (29.93%) while others (0.58%) are periodically inundated. In general, the soil in this area is fine-textured (77.62%) which includes clay, loam, sandy and dusty. Meanwhile, 14.93% was medium-textured, namely loam, dusty, sandy loam, the remaining 5.39% was coarse, namely loamy sand, dusty sand.

Aim: The purpose of this study was to analyze land conditions (soil, land color, thickness of organic matter and land cover) and water management (water sources, water quality (physical, chemical, bacteriological, water discharge) on the availability of clean water in flood prone areas and mining areas.

Method: The research method used is a systematic literature review.

Result: Based on the results of the literature review, 11 articles were found that discussed land conditions and water management on the availability of clean water in flood-prone areas and mining. Mining

Analysis the Factor of Community Potential in Flood Prevention and Environmental Based Diseases

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Aim: The purpose of this study is to analyze the potential of community knowledge related to clean water management in preventing floods and environmental-based diseases, analyzing the potential of community resources in preventing banjar and environmentalbased diseases, analyzing potential risk areas in preventing floods and environmental-based diseases, analyzing community institutions that play a role in flood prevention and environmental based disease.

Method: Article searches were conducted on Google Scholar and PubMed with a limited publication date to get up-to-date data and results (2012-2021). The search strategy includes keywords, namely knowledge, risk areas, community resources and community institutions.

Result: The results of this study are the knowledge variable is the main factor and is the key to preparedness. The knowledge possessed can usually influence public awareness to be ready and alert in anticipating disasters. Second, the value of the resource mobilization index which is in the almost ready category is an indication of the lack or low capacity of the head of the family in mobilizing their resources during and after the flood occurred. Third, land characteristics tend not to be correlated with the intensity of the flood impact. Meanwhile, land use patterns have a tendency to correlate with the intensity of the flood impact. Fourth, the Government conducts outreach to schools and communities in flood-prone areas.

Conclusion: The conclusion is that knowledge is still lacking, and the results of community resources are still lacking and still being developed, and disaster-prone areas are related to flooding, and the results of community institutions have been implemented well.

Health risk identification of multi-route exposure to chromium hexavalent and lead in well water surrounds the watershed area of Pangkajene, Indonesia.

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Background: Environmental pollution by heavy metals derives from the escalation of economic growth and improper effluent and waste disposal is a major concern worldwide. The ecological and human health aspect will be affected by its contamination. There are carcinogenic and non-carcinogenic effects of heavy metals exposure to humans.

Aim: Aim of this study is to assess human health (carcinogenic and non-carcinogenic) risk of heavy metals exposure from well water in the Pangkajene watershed area.

Methods: Cr(VI) and Pb in well water were analyzed by atomic absorption spectrophotometry. We used the human health risk assessment method (Target Cancer Risk (TCR), Target Hazard Quotient (THQ) and Hazard Index (HI) value) by US EPA to estimate carcinogenic non-carcinogenic risk from well water through drinking and dermal route exposure.

Results: The mean concentration of Cr(VI) and Pb is 1.7E-04 and 5.4E-04, respectively. The THQ value showed that ingestion and dermal route exposure in adults and children were lower than 1. Where All THQ values for children and adults (men and women) are 1E-01. It means that exposure of Cr(VI) and Pb was acceptable or safe from noncarcinogenic risk. The TCR value for Cr(VI) and Pb via ingestion route in children and adults was below the threshold. It indicates water was acceptable as drinking water. While the TCR value for Cr(VI) for adults and children exceeds the threshold value for adults and children through dermal exposure. It means that there is potential cancer risk through dermal exposure for Cr(VI) for the community surrounds the Pangkajene watershed area. Cancer risk was higher in females than men and children.

Conclusions: There is an indication of carcinogenic risk through dermal exposure of Cr(VI). Monitoring of heavy metals routinely in well water and providing proper water purification are critical to protecting community health in the Pangkajene watershed area. These findings could be valuable for improving environmental health management of watersheds on a rural area or regional scale.

Keywords: Cr(VI), Dermal, Human Health Risk, Ingestion, Pb

Integration of Climate Factors and Holiday Season with Dengue Fever Distribution in the Southern Region of Bali Province

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Introduction: The incidence rate of Dengue Fever (DF) in the Southern region of Bali province has been very high for the last five years. Current studies that investigate factors contributing to the incidence rate of DF in Bali are still limited.

Aim: This study aimed to provide the distribution of DF incidents in the Southern region of Bali and analyzing their relationship to climate factors and visitors during 2017 – 2019.

Method: This study used monthly DF surveillance, air climate data, temperature, humidity, rainfall, and the number of visitors reported. The data of the study were analyzed using the Pearson Product-Moment Correlation and simple linear regression.

Result: The result shows that there was a relationship between air temperature and DF cases in the Southern region of Bali from 2017 – 2019, but there was no significant relationship between climate factors (rainfall and humidity) and DF incidence rate.

Conclusion: Climate integration in tourism is needed to strengthen the DF monitoring and control program in Bali during the holiday season.

Keywords: Dengue Fever (DF), climate, Bali, the holiday season.

Household Resilience to Flood in Bengawan Solo River Watershed, Bojonegoro District, Indonesia, 2019

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Background: Asia Pacific is the most disaster-prone area in the world. In the last few decades, a majority of the natural disasters were caused by hydrometeorological disasters. In order to minimize the disaster impacts and shorten the recovery period, the resilience of a disaster-prone area is required to be assessed. Every year, the Bengawan Solo River caused flooding and the largest area crossed by the river is Bojonegoro District.

Aim: This study aimed to assess household resilience to flood in the Bengawan Solo River watershed.

Method: A descriptive study with primary data collection conducted in October-November 2019 in Bengawan Solo River watershed in Kanor Subdistrict. Households were divided into two area: households who live in unprotected area by levee (50 households) and unprotected area by levee (50 households). The dimensions were five capitals (financial, human, natural, social and physical) and 19 indicators based on sustainable livelihood framework and analyzed using Community Disaster Resilience Index. The household resilience index was categorized into five criteria: very low (0.00-0.20), low (0.21-0.40), moderate (0.41- 0.60), high (0.61-0.80) and very high (0.81-1.00).

Results: Households in unprotected area by levee showed lower resilience index score in financial capital (0.39), human capital (0.69), natural capital (0.80) and physical capital (0.43) than households in protected area by levee that had index score of each were financial capital (0.47), human capital (0.70), natural capital (0.81), physical capital (0.63). Both area showed same resilience index score on social capital (1.00). The household resilience capacity showed lower index score in unprotected area by levee (0.66) than protected area by levee (0.72).

Conclusion: Households who live in unprotected area by levee showed lower resilience index score than another area. We recommend to improve the planning program for lower capitals households such as financial capital (e.g. household budgeting), physical capital (e.g. providing water tank) to cope flooding.

Physical, Chemical and Bacteriological Quality of Drinking Water in Indonesia

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Background: Drinking water is a major need for mankind, everyone needs at least 2 liters of drinking water everyday. For health, the quality of drinking water is very important, water must be physically, chemically and bacteriological health standards quality.

Aim: This study aims to determine the quality of drinking water tested physically, chemically and bacteriological, likes Total Dissolved Solid (TDS) and pH, nitrate and nitrite, also chromium-6, microbiological examination was carried out for total *coliform* and *e-coli*.

Method: The study was conducted by cross sectional, samples were taken from 25,000 households randomly in all districts and cities in Indonesia in 2020. Samples were taken from ready-to-drink water storage likes kettles or teapot and others. One glass of water is taken which is then tested with a sanitarian kit by the sanitarians staff from health center..

Results: There were 21,829 households that could be visited and were willing to take drinking water samples, 31% of the main source for drinking water needs comes from refilled water, 16% from protected dug wells, and 53% from other sources. There is 59% of the water treated first before consumption, 99% by cooked. Ready-to-drink water that meets the following health standards are TDS was 98% with very good, good, and moderate categories, pH 83%, nitrate 98%, nitrite 97%, chromium-6 73%, and 74% of ready-to-drink water is free from E-coli.

Conclusions: There are ready-to-drink water is consumed by Indonesian people that does not health standards, physical, chemical and bacteriological qualities. If the processing and storage methods are not optimal, there is a potential for contamination when consumed. So that drinking water meets health standards, it is necessary to increase the knowledge and skills of the community in processing and storage of ready-to-drink water and drinking water is taken from safe water sources.

Key words: drinking water, quality, physical, chemical, bacteriological

Dengue Fever Distribution in Bali Province, Indonesia 2010 - 2018: An Interplay of Population Density and Climatic Factors

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Background : Dengue Fever (DF) incidence in Bali is the highest in Indonesia for decades.

Aim: This study describes annual distribution of DF and analyze its association with population density, number of rainy days and average humidity during 2010 – 2018 at district level.

Methods: The choropleth maps and Poisson regression were employed to provide geographical distribution and quantify the association. The p value, 95% confidence interval (CI), and Akaike Information Criterion (AIC) were adopted to assess the significance and the goodness of the association.

Results: During 2010 – 2018 there were 55 215 new DF cases notified. The annual dengue cases in Bali increased by 0.0182% (95% CI 1.79×10^{-4} : 1.86×10^{-4}) for every increment 1 person of population density per kilometers square and increased by 1.14% (95% CI 1.11×10^{-2} : 1.17×10^{-2}) for every additional 1 rainy day annually. The dengue cases also increased by 0.73% (95% CI 3.90×10^{-3} : 10.73×10^{-3}) for every 1% increase of average humidity. Population density and climate factors are positively associated with dengue cases incidence in Bali during 2010 – 2018.

Conclusion: The results underline the urgency of integrating population dynamics and climatic determinants into DF control program and customize the intervention program based on local characteristics.

Key words: Dengue Fever, Bali, Population Density, Climatic, Rainy Days, Humidity

Assessment of Human Health Risk of Heavy Metal from Fish species in Badung River, Denpasar, Indonesia

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Background: Heavy metal concentration in freshwater bodies can be transferred through food chain to the highest tropic level. Most importantly is the transfer from the consumption of freshwater fish by the community. Badung River has become one of favorite fishing sites in Denpasar, and thus the health risk of consuming fish from this river should be monitored.

Aim: The research aim to examine the concentration of heavy metals Pb, Cd, Cu and Cr in freshwater fish and estimate the potential human health risk through the consumption of the fish.

Method: Fish samples were limited to tilapia (*Oreochromis Mossambicus*) and tilapia (*Oreochromis niloticus*) that are common in Badung River. Twenty samples of composite fish muscle were collected from 20 respondents in three fishing sites. The heavy metals were quantified in the samples with Atomic Absorption Spectrophotometer (AAS). Human health risk was assessed by calculation of estimated daily intake (EDI), Target Hazard Quotient (THQ) for both carcinogenic and non-carcinogenic risk.

Results: The average concentrations of Pb, Cd, Cu and Cr in muscle samples of *Oreochromis Mossambicus* at different sampling sites of the river ranged from 2.76 – 12.53, undetected, 0.43 – 45.69, undetected to 0.28 mg kg⁻¹ wet weight, respectively. The same metals concentration in *Oreochromis niloticus* ranged from 2.32-11.6, undetected, 0.32-32.68, and undetected to 0.69 mg kg⁻¹ wet weight, respectively. The average EDI from consuming *Oreochromis Mossambicus* with Pb, Cu and Cr are 0.0026 (male) and 0.0025 (female); 0.0062 (male) and 0.0037 (female); 0.0001 (pria) and 0.0001 (female) mg kg⁻¹ body weight. day⁻¹, respectively. EDI from consuming *Oreochromis niloticus* with Pb, Cu and Cr are 0.0025 (male) and 0.0015 (female); 0.00 (male) and 0.00 (female); 0.00 (pria) and 0.00 (female) mg kg⁻¹ body weight. day⁻¹, respectively. The THQ for carcinogenic and non-carcinogenic show no health risk from consuming the fish from Badung River. The possible risk is shown from consuming fish with maximum Pb concentration.

Conclusion: The study conclude that the consumption of *Oreochromis Mossambicus* and *Oreochromis niloticus* from Badung River was generally safe for female and male respondents in regards to potential health risk of Pb, Cd, Cu and Cr.

Keywords: health risk, heavy metal, fresh water fish, river

Behavior Analysis of Household Waste Management With The Incidence of Ispa in Sukowetan Village, Karangany District, Trenggalek Regency

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Background: Acute Respiratory Infection (ARI) lasts for 14 days and is a respiratory infection caused by a virus or bacteria.

Aim: The purpose of this study was to determine the effect of household waste management behavior on the incidence of ARI in Sukowetan Village, Karangany District, Trenggalek Regency.

Method: This study used a cross sectional design. The population is all 155 houses in Sukowetan Village, Karangany District, Trenggalek Regency. The sample is 112 houses with simple random sampling technique. The independent variable is the behavior of household waste management, while the dependent variable is the incidence of ARI. The results of this study were analyzed with logistic regression.

Result: The results of this study found that most of the respondents had low category household waste management behavior as many as 87 respondents (86.6%). Nearly half of the respondents did not experience ARI incidence, namely as many as 99 respondents (88.4%). There is a relationship between household waste management behavior and the incidence of ARI in Sukowetan Village, Karangany District, Trenggalek Regency (p value 0.003).

Predation Power of Sepat Fish (*Trichogaster Trichopterus*) and Tilapia (*Oreochromis Niloticus*) Against Mosquito Larva as A Vector Control

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Background: Vector-borne diseases that are still a public health problem in Indonesia are dengue fever, malaria and filariasis. Utilization of fish as natural predators of mosquito larvae such as sepat fish (*Trichogaster trichopterus*) and tilapia (*Oreochromis niloticus*) is one way of biological control that is easy for the community to do.

Aim: This study aims to determine the predation power of sepat fish (*Trichogaster trichopterus*) and tilapia (*Oreochromis niloticus*) against mosquito larvae as an effort to control vectors.

Method: This type of research is experimental using the One shoot case study design. The variables of this study were 9 mosquito larvae, sepat fish (*Trichogaster trichopterus*) and tilapia (*Oreochromis niloticus*) each. Each time the observation used 100 mosquito larvae and was carried out 9 repetitions. Observations were made for 1, 2, 4 and 6 hours. Data analysis used the Independent Samples Test.

Result: The results of the Independent Samples Test obtained a p value of 0.000, proving that there is a difference between the predation power of sepat fish (*Trichogaster trichopterus*) and tilapia (*Oreochromis niloticus*) against mosquito larvae.

Conclusion: According to this study, the best predatory fish is tilapia (*Oreochromis niloticus*). It is recommended that the public use predatory fish in an effort to control diseases caused by mosquitoes.

Keyword: Mosquito Larvae, Fish, Vector

Analysis of Black Soldier Fly (BSF) Larves as An Effort To Reduce Organic Waste in The Traditional Market of Jombang District

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Background: The high population density causes high public consumption, resulting in increased waste accumulation. The waste produced in Jombang Regency is high (417,838 m³/day in 2010).50% organic waste comes from market waste because traders sell vegetables, where vegetables can be sold when they are still fresh, then each vegetable has a different period and some can still be sold for a few days.

Aim: The purpose of this study was to determine the ability of Black Soldier Fly (BSF) larvae as an effort to decompose organic waste in the traditional markets of Jombang Regency.

Method: This study uses an experimental quantitative research design. The population is organic waste obtained from traditional markets in Jombang Regency. The sample is organic waste with 8 different treatments and using repetition. The independent variable is the Black Soldier Fly (BSF) larvae, while the dependent variable is the feeding treatment. Data analysis uses the oneway ANOVA test.

Result: The results of this study showed a difference in the speed of decomposition of organic waste using Black Soldier Fly (BSF) larvae and without treatment. Judging from the results of the one-way ANOVA statistical test output in the Homogeneous Subsets table, it shows that the control column does not have a decomposition speed equation with treatment 1 to treatment 8. There is an effect of feeding on the decomposition speed of organic waste. With the one way ANOVA statistical test, the sig value is 0.000

The Influence of Aerobic Biofilter Methods WWTP System on Phosphate in Kediri Regency Hospitals Year 2020

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Background: Laundry activities at the Kediri District Hospital are the largest producer of pollutants in the form of phosphate in the waters in addition to other pollutants if they are not processed first. The data from the analysis of the effluent wastewater quality test in April to October 2020, which amounted to 1,853, 1.8448, 1,490, 2,836, 1,202, 1,340, 1,966 which have a standard value of 2 mg/L (East Java Governor Regulation No.72 Year 2013). This shows that the phosphate parameter in the effluent has a tendency to increase. Other data show the presence of all indicator fish that died gradually in July 2020 suspected of high phosphate levels.

Aim: The objectives of the research is to determine the effect and effectiveness of the WWTP system, the aerobic biofilter method in reducing phosphate levels.

Method: The design of this research is quantitative using analytic observational research with cross sectional approach. The sample in this study is part of the hospital wastewater taken from the WWTP. The data analysis used was univariate and bivariate analysis using the Sample T test.

Results: The results showed that from T1 to T2 phosphate levels increased by 8.46%. At T2 to T3 decreased 17.43%. At T3 to T4 decreased 40%. The effectiveness of the WWTP system with the aerobic biofilter method was 46.27%. The statistical test results showed that there was no significant reduction effect after going through the WWTP system with the aerobic biofilter method.

Conclusion: Applicative suggestions, it is necessary to clean the bottom mud of the reservoir regularly and periodically, adding aeration in the reservoir, regulating the discharge at the reactor and measuring DO daily, with an optimal oxygen value of 2-4 mg/l. Need a review of probiotics that may need replacement or addition of bacteria. Aerators in the final treatment can be added for better phosphate reduction. An effective and economical way is deposition with the addition of a coagulant which is usually used, namely lime, it will produce a precipitate of hydroxyapatite or $\text{Ca}_5(\text{PO}_4)_3\text{OH}$.

Keywords: Phosphate Levels, Hospital Liquid Waste, WWTP System

Preventive Interventions: Tera Exercise on Quality of Life from Environmental Aspects In Cimahi City, West Java

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Background: It is predicted that the number of elderly people in 2025 is 33.69 million people with a span of 10 years (2035) will reach 48.19 million people. Indonesia is a country with an aging population structure. The increase in the number of elderly people affects several aspects of life, both physically, mentally, psychosocially, environmentally, and economically.

Aim: To determine the effectiveness of preventive interventions: (tera exercise) on improving the quality of life of environmental aspects in Cimahi City, West Java.

Method: Quasi-experimental design in the elderly group aged 60 years. The intervention group was 120 people and the control group was 120 people. The variable of this research is the quality of life seen based on environmental aspects. The research intervention was in the form of tera exercise which was carried out for 3 months. Sources of data were obtained primarily by filling out the WHOQOL-BREF questionnaire. Data analysis used the Wilcoxon and Mann Whitney statistical tests.

Result: The intervention group with good quality of life pretest was 7 people (5.8%) while the control group was 7 people (5.8%). After being given treatment (posttest) the intervention group with good quality was 67 people (55.8%) while the control group was 8 people (6.7%). The average environment of the elderly between before the intervention and after the three-month intervention, after the one-month intervention and after the three-month intervention, was significantly different ($p < 0.05$)

Conclusion: Preventive intervention of tera exercise once a week for three months is effective in improving the quality of life based on environmental aspects.

Keywords: Tera gymnastics, quality of life, quasi-experimenta

Growth and Development of Brassica juncea Using Compost from Organic Waste Management: Biopore

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Background: Indonesia produced 64 million tons of waste every year, dominated by organic waste, which reaches 60% of the total waste. In 2019, in Kediri Regency, there were 503 tons of garbage from domestic waste, one of them was organic waste. Sanitary landfill is increasingly limited and resistance from public to landfill is becoming a complex problem, so waste management efforts are needed to decrease garbage in sanitary landfill.

Aim: Analyze the effectiveness of compost from biopore results for the growth and development of Brassica juncea, so become one of method for organic waste management.

Method: The research method used an experiment with the Complete Randomized Design research. Samples in this study as many as 25 Brassica juncea with 4 treatment groups and 1 group for control that is 100 gr, 150 gr, 200 gr, 250 gr compost biopore results. Data analyze used One Way Anova.

Results: The results of this study obtained p - value $0.000 < 0.05$ which states that there was a difference in growth of Brassica juncea between the control group and treatment groups for 5 weeks. Similarly, development of Brassica juncea there was a difference between the control group and treatment groups with p - value $0.017 < 0.05$. The best dose for growth and development specially increasing the number of leaves of Brassica juncea is 200 gr with 11.9 cm and 5.8 leaves averages for 5 weeks.

Conclusion: So it can be concluded that, organic waste can be managed to be more useful, namely compost by using biopore method. Compost biopore at a dose of 200 gr can give a significant effect on the growth and development especially number of leaves of Brassica juncea for about 5 weeks intervention.

Keywords: Brassica juncea, Biopore, Organic Waste Managment

Occupational factors associated with Individual level climate change adaptation and mitigation: A descriptive study among school teachers in Sri Lanka

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Background: Climate change is happening and living and coping with it is no longer an option but an imperative. Being the biggest global health threat of the 21st century it call for action at all levels where individual level adaptation and mitigation actions may impose a significant global impact.

Aim: To determine the work related factors associated with the level of knowledge on climate change adaptation and mitigation at individual level among school teachers in Kalutara District.

Methods: A descriptive study was done among 618 school teachers in three educational zones of Kalutara district using random cluster sampling. Self-administered questionnaire of equally weighted questions was used. Association of knowledge categories with work related factors were analyzed using chi square test.

Results: The response rate was 98.8% [n=618] and more than 95% of the study population agreed that the global warming is happening. It was revealed that 23% of the study population had poor knowledge. Majority had identified local newspapers and magazines [74.4%, n=460] followed by the TV [66.8%, n=413] as the most useful methods of climate awareness. Involvement in school environmental societies, Average income, working duration, and highest education qualification showed statistically significant positive association whereas age and current grade had a statistically significant negative association with good knowledge.

Level of knowledge had no significant association with having had training on climate change or gender.

Conclusions: Overall knowledge on was poor among more than 20% of the teachers highlighting the need for school and community based awareness programs to be implemented to address the issue. In addition to that teachers' training curriculum revisions, knowledge sharing forums would be beneficial to fill the knowledge gap between different strata of teachers.

Keywords: Climate Change, Adaptation, Mitigation, School Teacher

MALARIA VECTOR CONTROL MODEL IN COASTAL AREA

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Background: Lifuleo village is coastal area with the highest malaria incidence and is classified as a high malaria endemic area.

Aim: The objectives of this study are to examine the components increasing the vector density of malaria, to intervene in order to overcome the problems, and to measure the success of interventions to obtain models and evaluate the application of malaria vector control models in coastal areas.

Method: The research designs used were exploratory research (I) and cross sectional study (II).

Results: Lifuleo village as a very prominent area for malaria transmission with close proximity of mosquito's habitat to the settlement, mosquito density is quite high and the behavior of the local community is very supportive of contact between humans and vectors. Control activities in the second year were focused on controlling adult mosquitoes and pre-adult mosquitoes, conducting environmental management interventions and community interventions using the IVC.

Conclusion: This model can be applied in the coastal area having the same characteristics with the research area as of it can assist the government in the elimination of malaria .

Keywords: Integrated Vector Control, Coastal Areas

Analysis of Microplastic Content in Tuna Fish (*Thunnus sp*) and White Snapper Fish (*Lates calcarifer*) in The Coastal Area of Bangkala Subdistrict, Jeneponto Regency

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Background: Microplastics are currently a problem for the environment and public health because of its relatively small size of 0.3-5 mm.

Aim: To analyze the microplastic content of Tuna (*Thunnus sp*) and White Snapper Fish (*Lates calcarifer*) on the Coastal Coast of Bangkala District, Jeneponto Regency.

Method: The method used is an analytical survey with a laboratory approach using Minitab software 16. Fish samples were identified using FishBase. Furthermore, the number of microplastics obtained was counted by the number of each type, photographed with optic lab, and then measured with raster image software.

Results: Microplastic content in White Snapper Fish (*Lates calcarifer*) is more than that of Tuna (*Thunnus sp*) at each station. Microplastic content of White Snapper Fish (*Lates calcarifer*) at station 1 is 11 particles/fish while Tuna Fish (*Thunnus sp*) 7 particles/fish. Microplastic content of White Snapper Fish (*Lates calcarifer*) at station 2 is 19 particles/fish while Tuna Fish (*Thunnus sp*) 15 particles/fish. Microplastic content of White Snapper Fish (*Lates calcarifer*) at station 3 is 14 particles/fish while Tuna (*Thunnus sp*) 10 particles/fish. This happens because the White Snapper Fish (*Lates calcarifer*) has several more prominent characteristics of the Tuna Fish (*Thunnus sp*), including those that tend to have more greedy eating behavior, have relatively faster growth, are more active and are very tolerant of turbidity and salinity so that the habitat of the White Snapper (*Lates calcarifer*) tends to be broader than that of the Tuna (*Thunnus sp*). Based on these characteristics, the chance of microplastic entry into the body of the White Snapper Fish (*Lates calcarifer*) through eating activities is higher than that of Tuna (*Thunnus sp*).

Conclusion: Tuna fish (*Thunnus sp*) and White Snapper Fish (*Lates calcarifer*) originating from the Coastal Coast of Bangkala District, Jeneponto Regency contain microplastics. Microplastic content in White Snapper Fish (*Lates calcarifer*) is more than Tuna (*Thunnus sp*).

Keywords: Microplastic, Tuna Fish (*Thunnus sp*), and White Snapper Fish (*Lates calcarifer*).

INDOOR AIR QUALITY MONITORING IN THE PUBLIC SPACE IN THE ORDER TO ADVOCACY SMOKE FREE AREA (SFA) IN JEMBER DISTRICT

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Background: Cigarette smoke is a complex mixture of gases and particles that contain many carcinogenic and toxic compounds, which is the result of smoke in the room. One way to solve the problem of smoking in the room is the implementation of SFA regulation. This regulation is very important to reduce air pollution caused by cigarette smoke and reduce the harm of smoking and provide healthy air to the community. There are seven areas covered by SFA regulation. Therefore it is very important to know about "What is the 7th public places containing air pollution caused by cigarette smoke so that the necessary implementing legislation SFA in Jember?".

Aim: The aim of this study is to monitor the air quality in areas which are covered by SFA regulation in Jember, with details of the following specific objectives: Measuring the concentration of particulate matter (PM_{2.5}) in places which are covered by SFA regulation, as well as proving their smoking activities affect the poor indoor air quality.

Method: This study is a descriptive cross-sectional study design using regional monitoring and observation. The study population is SFA that located in Jember. The total sample is 100 public places. Samples were selected purposively with the criteria area frequented by the general public, is a place whose existence to the characteristics of a city (icon). The air quality is measured by PM_{2.5} monitoring will be done in the building for at least 1 hour with the first 15 minutes of the procedure outside the building, 30 minutes in the final 15 minutes of the building and back outside the building.

Results: The results showed that there were 56% of the 100 public places that have air quality above the threshold the WHO standard is 25 ppm. Public areas in question consists of; hotel, office, modern markets, traditional markets, health centers, restaurants, terminals, hospitals, places of worship, educational facilities, entertainment venues, and other public places. From an average of PM_{2.5} measurement result, traditional markets and entertainment venues occupy first and second place for air quality above the threshold the WHO standard (25 ppm), which amounted to 69.2 ppm and 60.6 ppm. While the lower level of education facilities has cleaner air quality according to the WHO standard is 18.4 ppm.

Conclusion: From this study it can be concluded that most of the area public places in Jember have poor indoor air quality that is above the standard threshold of WHO. This is due to the policy of SFA in Jember. Efforts are required to advocate for SFA regulation in Jember in order to protect the public's right of non smokers to breathe clean and healthy air at the public facility.

THE EFFECT OF SIMPLE WATER TREATMENT TECHNIQUES AND METHODS BASED ON LOCAL RESOURCES APPLICATION FOR POST FLOOD, MINING, AND WET LAND

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Background: The existing water problem does not only originate from household waste, but also comes from floods, mining, and also wetland areas. At the time of a disaster, the availability of water is very crucial. The need for clean water for daily needs such as drinking, bathing, cooking, washing and so on is very difficult to fulfill in the midst of a flood disaster. In addition, mining involves a process that uses an open mining system involving a lot of heavy equipment for excavating the ground or using blasting. This results in the loss of the shape of the earth's surface resulting in a decrease in environmental quality. One of the impacts of the mining process is the emergence of Acid Mine Water (AAT).

Aim: The purpose of this study was to analyze the effect of simple water treatment techniques and methods based on local resources in providing clean water for post flood and mining.

Method: The used method is by Article searches were carried out using search engines using Google Scholar and Garuda Portal with keywords used were simple clean water treatment, water treatment in wetlands, mine water treatment, and flood water treatment. There are 20 articles that reviewed.

Results: Based on the results of a study is based on the 20 articles obtained, there are 2 articles (10%) that use the settling pond method, 3 articles (15%) that use the coagulation method, there are 6 articles (30%) that use the wetland method (artificial wetland), 3 articles (25%) using the filtration method, 1 article (5%) using the safe drip method, 1 article (5%) using the compact reactor model method, 1 article (5%) using the acid and alkaline treatment system method, 1 article (5%) using the solar power plant method, 1 article (5%) using the method of adding calcium hydroxide solution, adding lime, increasing the cascade system and applying the baffle aerator, 3 articles (15%) using the adsorption method.

Conclusion: The conclusion is several scientific articles that have been conducted, 13 articles were found with different simple water treatment methods and techniques, some treatment methods are effective and some of them are not.

Mapping of the Larvae and Pupae Existence Based on Physical and Chemical Environments in Flood Prone Areas

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Background: WHO estimates there are currently about 50-100 thousand *dengue* infections in human populations worldwide each year and nearly half of the world's population in countries endemic to *dengue*. Flood-prone areas in Makassar city, including areas endemic to *dengue* fever. Environmental factors have a major influence on the increase and transmission of *dengue*. Increase of *Aedes aegypti* is supported by physical and chemical environmental characteristics.

Aim: This study aims spatial pattern of the presence of larvae and pupae based on physical and chemical environmental characteristics in flood-prone areas of Biringkanayya District in 2018.

Method: The type of research used was observational. The sample in this study were houses in RWs and RTs that were prone to flooding, namely 100 houses in Sudiang and Paccerakrang sub-districts. Data was collected by conducting interviews and direct observation, as well as measurements of environmental indicators, namely pH, water temperature, and air humidity, as well as taking home coordinate points that will be displayed in the form of mapping using ArcGIS 10.3.

Results: The results of the study were found in Sudiang and Paccerakrang sub-districts respectively, with potential humidity of 75% and 40% of houses. The pH of potential water was 77% and 33% of houses. In addition, the potential temperature was only 4% and 1%.

Conclusion: Most of the houses in flood-prone areas have high and medium density of *Aedes aegypti* larvae. Therefore, it is recommended that the community pay attention to the surrounding environment and strive to carry out 3M plus activities and eradicate mosquito nests.

Keywords: Mapping, Haemorrhagic *Dengue* Fever, Flood Prone Areas

Identification and Morphology of Malaria Vectors in Kemelak Bindung Langit Subdistrict, Ogan Komering Ulu, South Sumatera

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Background: Indonesia is a tropical region that risks the spread of vectors caused by mosquitoes. Mosquitoes in Indonesia that have been identified are in 5 genera, such as *Mansonia*, *Anopheles*, *Culex*, *Aedes*, and *Armigeres*. South Sumatra Province has endemic areas for the spread of diseases caused by mosquitoes as a vector.

Aim: to identification and analyze the morphology of malaria vectors in Kemelak Bindung Langit Subdistrict, Ogan Komering Ulu, South Sumatera.

Method: This study uses Free Collection Method with various sampling locations, which are rice fields, plantations, and settlements in Kemak Bindung Langit Subdistrict, Ogan Komering Ulu Regency. The mosquitoes will be captured by Human Landing Collection technique for 40 minutes and resting for 10 minutes. The capturing will be done at night by 6 collectors, where 3 people doing it inside the house, while the others at outside, both for 12 hours from 06.00 pm to 06.00 am.

Results: The results of the identification of mosquito morphology found 10 species of mosquitoes from 4 genera. They are *Culex vishnui*, *Culex quinquefasciatus*, *Culex nigropunctatus*, *Culex tritaeniorhncus*, *Culex gellidus*, *Armigeres subalbatus*, *Aedes albopictus*, *Anopheles nigerrimus*, *Anopheles crowfardi*, and *Anopheles barbumrosus*.

Conclusion: *Culex* and *Armigeres* are potentially to become disease vector for filariasis and Japanese encephalitis. Species from *Armigeres* that have been confirmed as vector is *Armigeres subalbatus*. *Aedes albopictus* is potentially as Dengue fever vector, while species from *Anopheles* that has been confirmed as malaria and filariasis vector in South Sumatra Province are *Anopheles nigerrimus*, *Anopheles barbumrosus* and *Anopheles crowfardi* as malaria vector alone.

Low Polymorphism Of Plasmodium Vivax Merozoite Surface Protein-1 Among Local and Migrant Communities at Cental Kalimantan Province, Indonesia

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Background: Plasmodium vivax is often regarded as a benign and self limiting infection, it can lead to debilitating illness and remains a major cause of Malaria. Merozoite surface protein 1 is the most commonly used genetic marker for the determination of the genetic diversity of the malaria parasite. PvMSP-1 protein is a protein found on the surface of merozoites which is important for parasite invasion into erythrocytes and is a potential vaccine antigend.

Aim: The aimed of the study was to investigate genetic diversity and population structure of parasites in local and migrant communities in Central Kalimantan Province.

Methods: 140 samples in this study were RDTs and Giemsa-stained thick blood films of malaria-infected patients . The samples were cracked down using a sterile spatula prior to DNA extraction by a commercial DNA extraction kit. The extracted DNA were applied to single-step polymerase chain reaction (PCR) using specific primers to detect P.vivax, furthermore the primers based on Pvmosp-1 gene to analyze the diversity of its family allele including F1, F2 and F3 allelic families were applied to nested PCR.

Results: Three samples were diagnosed as P. vivax, eight samples as P. falciparum, and 14 samples were mixed of both species. The results of nested PCR showed a genetic diversity of Pvmosp-1 allele F1 in 1 sample, F2 in 1 sample and F3 in 1 sample.

Conclusion: Polymorphism of Pvmosp-1 in three districts of Central Kalimantan is low, probably caused by recent malaria intervention efforts by government in this study area.
Keywords: Malaria, Plasmodium vivax, PCR, Polymorphism



SCOPE : HEALTH PROMOTIONS

52nd Asia-Pacific Academic Consortium for Public Health (APACPH) Conference

*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0
AND THE COVID-19 PANDEMIC*



Social Media-Based Health Promotion through Whatsapp Status “Sari Sasik” One Day One Health Information at The Community Health Center Of Pakel, Tulungagung Regency

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Background: Information is a fundamental thing related to knowledge, and the population who possess sufficient education and knowledge becomes citizens who experiences empowerment so that they can participate in activities associated with population, social development, and progress (Suri D, 2019). During the Covid-19 pandemic, we are forced to think more carefully so that people can still get information despite limitations in space, distance, and time.

Method: To anticipate this, the Community Health Center of Pakel launched an innovative Health Promotion in the form of online media in a simple way, namely updating a daily WhatsApp status by all employees starting at 08:00 a.m. with different themes according to the information needs at that time.

Results: With a minimum number of 32% of employees who upload the status, it will obtain an average of 2746 viewers per day. With 20 days of uploading, approximately 54,920 people will see it. This means that this information is seen more by people and is measured than by using offline media methods such as leaflets or others.

Conclusion: This method is indeed very simple, but it can be one of the solutions for health promotion in this pandemic era. In the future, efforts to approach policy stakeholders will be further improved, especially at the sub-district and village level for the scope of the Community Health Center of Pakel, even to a higher level because this method has proven to be more effective, economical, and easy.

Keywords: Health promotion, online communication media, effective and efficient solution

**Competence of Health Promotion Officers in Community
Empowerment in the Healthy Living Community Movement (Germas)
Program
in the Covid-19 Pandemic Era in Enrekang Regency**

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Background: Health promotion plays a role in the process of improving the quality of health workers to be more responsive, so as to achieve fair and equitable quality health services. In the past year, the Ministry of Health has launched the Healthy Living Community Movement (Germas), which is now a new branding. Competence really needs to be understood by Promkes officers in carrying out their duties and authority during the Covid19 pandemic era. Competence and skills are needed by Promkes personel

Aim: Aimed at analyzing the competence of Promkes officers in community empowerment in Germas program in the Covid19 pandemic era in Enrekang

Method: Qualitative research with a case study approach, the informant is a Promkes officer in Enrekang District. Determination of informants us purposive sampling as many as 21 people

Results: The competence of health promotion officers for community empowerment has not been maximized. There needs to be training and coaching for health promotion officers to empower the community

Conclusion: The ability to analyze the stage of capacity building for promkes officers with a background in promkes and not promkes is not optimal and Ability to analyze officer steps health promotion at the stage of transformation of officer science health promotion with the background of health promotion education and non-promkes are considered good, in general they do counseling.

Keywords: Competence, Officer, Health Promotion

Even Lecturers Must Jiggling to Achieve Well-Being: A Scoping Review

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Background: Based on Healthy University Framework, every university is expected to apply health promotion policies and programs in order to achieve health and wellbeing among the students, staff and also lecturers. One of the health promotion area which has been an interest among researchers is work-life balance among lecturers. Higher level of work-life balance has been related to a better well-being in every profession including lecturers.

Aim: The purpose of this study is to explore how work-life balance influence well-being among lecturers.

Method: This paper was developed by conducting a scoping review from three electronic database (Science direct, Emerald and Proquest). After selection, there were eight articles which were analyzed. Data were extracted to build the framework.

Results: The scoping review revealed that work-life balance among lecturers has positively associated on several components of well-being such as general health, group dynamics skills, positive attitude, job satisfaction, and happiness. On the other hand, it is negatively associated to turnover intention and stress. All of these lead to a better job performance.

Conclusion: The review suggest that most lecturers have perceived positive impact of work-life balance on components of well-being. This is inline with the Health Promoting University concept.

Keywords: Health promoting university, lecturers, well-being, work-life balance

Potential Mediation by Psychological Distress in the Association between Bullying Victimization and Suicidal Behaviours among Indonesian Adolescents: Causal Mediation Analysis

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Background: Bullying victimisation has been found to be associated with suicidal behaviours among adolescents. However, there is a paucity of studies examining the mediating pathways.

Aim: This study aimed to investigate psychological distress as a candidate mediator of the association between bullying victimisation and suicidal behaviours.

Method: This was a cross-sectional study involving 10,883 records of school-going adolescents, retrieved from the 2015 Indonesia Global School-based Student Health Survey. The main independent variable was the experience of being bullied in last 30 days, whereas the dependent variable was any suicidal behaviours (i.e., suicidal ideation, planning, or attempt) reported in last 12 months. Psychological distress as a candidate mediator was measured as loneliness, anxiety-induced sleep disturbance (in last 12 months), and a combination of both measures – psychological distress. Causal mediation analysis with single mediation models was used to investigate the mediation by psychological distress measures, adjusting for potential confounders (age, gender, experience of hunger as a proxy of socioeconomic status, parental support, and peer support). Potential gender differences in mediation by psychological distress were explored.

Results: Nearly equal proportions between girls and boys were recruited (51.49% vs. 48.27%) and the majority of the adolescents aged \geq 15 years (82.13%). The prevalence of suicidal behaviours was 8.82%, and 18.61% of the adolescents reported being bullied. This study found potential pathways linking bullying victimisation to suicidal behaviours through all measures of psychological distress with statistically significant natural indirect effect (NIE): loneliness (aOR=1.17; 95%CI=1.11-1.27), anxiety-induced sleep disturbance (aOR=1.16; 95%CI=1.10-1.27), and psychological distress (aOR=1.21; 95%CI=1.15-1.31). The proportions mediated by loneliness, anxiety-induced sleep disturbance, and psychological distress accounted for 24.58%, 23.03%, 29.27%, respectively. Findings from gender-disaggregated analyses suggest that all measures of psychological distress mediated the association between bullying victimisation and suicidal behaviours, irrespective of gender. The proportions mediated by psychological distress were slightly higher among boys.

Conclusion: Psychological distress mediated the association between bullying victimisation and suicidal behaviours. Anti-bullying programmes implemented in school settings might help reduce the occurrence of psychological distress, which in turn, prevent suicidal behaviours among adolescents. Future studies with rigorous methodology (e.g., longitudinal study), and investigating other potential pathways are warranted.

Investigating the State of Nutrition Education of the People on Charge of Nutrition Care Management at Home in Japan

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Background: Nutritional problems have recently been increasing among elderly people living at home rather than at nursing homes in Japan, as they are unable to prepare healthy meals due to their living situation (living alone or elderly couple staying together). Although local governments have established nutrition care stations with registered dietitians (RDs), RDs are not always handling. Generally, nurses or care-workers who assist elderly people at home take care of their nutrition. But they are not nutrition specialists. RDs' intervention is required on home care sites too.

Aim: To grasp the situation of nurses and care-workers engaging in nutrition care management in home care; ? To clarify the contents of home care nutrition education at training schools for nurses and care-workers. Method: We analyzed the contents of the syllabus and textbooks of the training course.

Results: In the training course for nurses syllabus, contents related to home care comprise 20% and those related to food and nutrition comprise only 4.7%. ? In the training course for care-workers syllabus, home care contents constitute less than 20%, and food and nutrition contents constitute 15%. ? In the training course for nurses textbook, the relevant contents constitute only 5.8% and include details only on metabolism, and not food or cookery science. ? In the training course for care-workers textbook, the relevant contents constitute about 20% and include details only about attitudes, including prevention of accidental ingestion and quantity to be consumed at meal time, without balanced nutritional diet. ? The results reveal the difficulty nurses face in preparing suitable meals for elderly people and patients, because nutritional diet therapy at home is intertwined with practicable food and cookery science.

Conclusion: Nutrition care management at home is crucial for elderly people and patients. However, those responsible for implementation are nurses or care-workers, who lack of knowledge about nutrition, food and cookery science. RDs are indispensable for nutrition care management in home care, because they are specialists. With the rapidly increasing elderly population in Japan, we need to urgently systematize the utilization of RDs with the curriculum in nutrition care management at home.

Breast Milk Sharing: Knowledge and its Acceptance among Malaysian

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Background: WHO recommends all babies to be exclusively breastfed and in the absence of mother's own milk, donor milk is the next best alternatives. The establishment of a human milk bank is still being debated in Malaysia leading to informal milk sharing practices, but little is known on the knowledge, attitude and perception of women towards breast milk sharing and its health benefits.

Aim: The aim of this study is to determine the knowledge, attitude and perception among Malaysian towards breast milk sharing and to explore the acceptance on the establishment of human milk bank.

Method: A cross sectional study with 421 participants were enrolled to answer an online validated questionnaire. Data on sociodemographic, knowledge on breastfeeding benefits, general attitude and perception on breast milk sharing and the establishment of a human milk bank was analyzed in terms of frequency and proceeded to the association to the establishment of a human milk bank using binomial logistic regression.

Results: This study obtained a 100% response rate and out of which majority of the mothers were willing to be a donor (64.1%) or a recipient (77.9%) to a known mother. Approximately half of the respondent never heard of a human milk bank but 61% of the participants are agreeable to the establishment of a human milk bank in Malaysia. Majority of the participants believe that it is permissible to share breastmilk (95%), marriage between the foster siblings are forbidden (92.9%) and milk kinship is an issue that is of concern (391 participants). In univariate analysis, a good score on the general knowledge of breastfeeding ($p:0.044$) and cost or monetary charges ($p:0.001$) are factors associated with the acceptance to the establishment of a human milk bank.

Conclusion: A high prevalence rate of mothers are willing to participate in breast milk sharing and accept the establishment of a human milk bank. Educating mothers on the benefits of breastfeeding, addressing the issue of milk kinship and the monetary charges can increase the acceptance of milk sharing practices and contribute to a culturally and religiously abiding human milk bank.

Poster Solicitation: Obtaining More Candid Response during Study on HIV Stigma

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Background: Talking about HIV and AIDS is always a challenge in a situation where culture and religion are interlinked to treat discourse on sexuality as a taboo topic. HIV awareness campaign, oftentimes, is viewed as a contradiction against morality in Indonesia. On the other hand, high adherence to the Asian values which seek conformity usually leads to difficulties in gaining candid and in-depth information from research participants during the study on HIV stigma and discrimination.

Aim: We explore how using the poster solicitation method improves participants' responses and enable the researcher to triangulate information from interviews. The overall objective of the project was to understand the degree of awareness and acceptance among dietetic students in Indonesia towards People Living with HIV (PLHIV) and how their training can be tailored to improve their competence.

Method: The overall study was conducted using symbolic interactionism as a theoretical foundation, to understand how students make meaning of their interaction with symbols associated with HIV and AIDS. We interviewed 20 students from three dietetic schools in Indonesia. Students were asked to find two HIV related posters on the internet (via Google search) that they identify as 'good' and 'bad' posters during the interview and corroborate their answers.

Results: By infusing the poster solicitation technique to the interviews, we were able to prompt more lengthy, candid, and in-depth discussions with students. We were also able to identify the symbolic HIV-related stigma, inconsistencies in responses as well as performing triangulation. Students identified 'good' posters as those depicting messages about abstinence and drug avoidance, whereas posters containing messages about safe sex and condom use were considered as 'bad' posters.

Conclusion: Education-based initiatives to improve knowledge on sexual and reproductive health remains lacking in Indonesia. HIV education needs to be improved to address gaps in knowledge and awareness that may further impact the stigma against those living with HIV

Keywords: poster solicitation, HIV, stigma, interview

Program Dharma: Education Program and Community Empowerment in Amed, Bali Related to Rabies Prevention in Covid-19

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Background: Amed is one of the tourism areas in Bali, there are still many tourist who remain in Amed in the covid-19 situation. The one indicator of good tourism is rabies free. In Karangasem 2020, there are 2 human dead of rabies and from the beginning of 2021; 11 dogs are confirmed positive rabies. In order to prevent the transmission of rabies, a prevention program should implemented.

Aim: Describing education and community empowerment programs in the Amed area for the prevention and control of rabies as well as program changes in the era of COVID-19.

Method: Using Experimental Pilot Study. The population study are 2 villages in the Amed area, namely Bunutan and Purwakerti villages. Researchers developed a educational and community empowerment program called the “Program Dharma” to prevent rabies with “One Health” concept from 2020. The activities of the Program include mapping dog ownership, vaccination status, attitude and behavior surveys of the villagers related to rabies prevention and the control, and community education and empowerment using mobile app.

Results: The Program Dharma is a combination of educational, human and animal health, and community empowerment. The program coverage has targeted 15 banjars in 2 villages. The form of educational program is counseling and educating villagers when mapping houses regarding animal welfare and human health. Human and animal health treatment implemented by collaboration public health centers and veterinary practices for curative action. Community empowerment implemented by Village representative “kader” who are trained: they provide information to educate villagers. There are 15 village representatives. One health concept has now succeeded in preventing the incidence of rabies in these 2 villages when Karangasem Regency is rabies red zone. Program Dharma activities during COVID-19 changed by implementing strict health protocols.

Conclusion: Until now, only 2 villages have implemented Program Dharma as a education and community empowerment program to prevent rabies. Multi sectors-stakeholders and community parties in other Karangasem areas are needed to reduce the incidence of rabies. Later, with the success of the 2 pilot project in these villages, Program Dharma can be implemented in other areas.

Keywords: Dharma Program, Rabies, Empowerment, Education

Empowerment of Kader Posyandu as an Alternative to Collect Data on Food Intake for Toddlers During a Pandemic in The HDSS FK-KKMK UGM Working Area

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Background: The COVID-19 pandemic causes significant changes to everyone's lives, including researchers in the field of nutrition. Physical restrictions during the pandemic, either directly or indirectly, can affect individuals' food intake, especially toddlers. However, the limitation of taking data directly to the community is a new challenge for researchers.

Method: This manuscript reports an alternative way of collecting data on the intake of toddlers in Sleman by using the services of Kader Posyandu as enumerators and a media booklet for respondents as a guide for filling out questionnaires.

Results: The critical concern while conducting this research was good and harmonious communication between researchers, Kader Posyandu, and respondents. The data generated using this method is not optimal and still cannot replace the direct interview method.

Keywords: food intake, toddlers, pandemic, Kader Posyandu, SQ-FFQ

Characteristic's Impact of target Information Reporting System to change supportive Behavior

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Background: Changes in the primary care center information reporting system involve many interested parties and cross functional boundaries within the organization.

Aim: This study aims to improve understanding of how Performance Expectancy and Effort Expectancy affect on change supportive behavior. Based on Theory Planned Behaviors, testing the mediating effect of usage intention on change supportive behavior was conducted. Discrepancy behavior is a change supportive behavior that is more active in supporting change which includes cooperation and championing.

Method: This research was conducted on 254 health workers who work at the Primary care center in Kediri District and are the implementers of the Primary care center Information System. Data were collected by conducting a survey and analyzed with STATA 15 using path analysis to determine the relationship between Performance Expectancy (PE) and Effort Expectancy (EE) on Change Supportive Behavior (CSB) through Usage Intention (UI). Discrepancy behavior is a change supportive behavior that is more active in supporting change which includes cooperation and championing

Results: The results show that there is a positive relationship between performance expectancy and effort expectancy on usage intention. These results provide further support for the importance of performance expectancy and effort expectancy on the formation of usage intention. Usage intention mediates performance expectancy and effort expectancy on cooperation and championing behavior which are change supportive behavior.

Conclusion: TPB provides an understanding to provide convenience for organizational change, namely changes in health information system reporting carried out by Primary care center. The results of the study provide evidence that PE and EE provide the basis for the reaction to changes made by health workers. In addition, TPB becomes a lever to explain change supportive behavior. And in particular it can be seen that usage intention is an important factor for resources when changes are made by the organization because it is a positive reaction to changes made by the organization.

Keywords: Perfomance Expectancy, Effort Expectancy, Usage Intention, Change Supportive Behavior

Dolpin (Dolanan Pintar): The Future of Sex-Ed Tool Kit in Indonesia Ratnakanya Hadyani

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Background: In Indonesia, sexuality education is considered taboo. Giving information about reproductive health to children has never been seriously documented and measured. In Indonesia sex-ed is fragmented and ineffective. Sex-ed only partly covered as biology taught at a later age or provided as moral instruction. Moreover, parents also lack the skills and confidence to provide sex-ed to their children. Dolanan Pintar or Dolpin was developed by Tulodo funded by Grand Challenges Canada.

Aim: This study will explore the co-design process between product designers, parents, and children on the development of a family-based sexuality education teaching kit for children aged 5-9 year in Jakarta, Indonesia. The testing is to generate evidence showing that Dolpin can effectively used by parents and children and satisfy users needs and encourage conversation regarding sex-ed issues among users. Methods: The products were tested to 15 intervention families with children aged 5-9 years to measure the contextuality, durability, and age appropriateness of the information for children. Another set group, a total of 15 families with children aged 5-9 years participated as the control group.

Results: Dolpin has increased the discussion between parents and children about reproductive health and their functions by 53% (from 47% to 100%). However, in the control group only half of the parents (50%) taught about genitals and their functions. Around 80% of the intervention families use the correct terms for mentioning genitals such as penis and vagina, compared to only 10% of the families who did not use Dolpin.

Conclusion: Dolpin will be a great solution for families in Indonesia to access information particularly about sexuality education for young children. Parents will have an effective tool to introduce reproductive health to their young children comfortably through stories and DIY activities. However, a continuous effort must be made to swift the paradigm in society that discussing sexuality and reproductive health is taboo.

Keywords: Sexuality Education, Reproductive Health, Family Planning, SHR

Psychologists' Role in Mental Health Promotion Program at Public Health Centre

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Background: Psychologists have a role in behavioural education of patients, families, and the functioning of a community's mental health care. However, there was insufficient monitoring and evaluation of psychologists' performance related to the mental health promotion program at Public Health Centre in Sleman District.

Aim: To analyze psychologists' roles in mental health promotion program at Public Health Centre in Sleman District.

Method: This was a qualitative study with a case study approach. In-depth interviews and focus group discussions were conducted with 32 informants selected by purposive sampling.

Results: (1) a difference was observed with the presence of psychologist in education system, community, and mental health services, (2) participants were involved from inside and outside of Public Health Centre, (3) there was coordination between psychologists with cross-profession to promote mental health (4) here were internal and external assessments of psychologists' roles.

Conclusion: Psychologists played their roles such as communication, giving information, and education.

Analysis of PLWHA Compliance Factors in Antiretroviral Therapy based on Health Action Process Approach (HAPA)

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Background: The HIV and AIDS epidemic in the community has not been carried out optimally, this can be seen from the high rate of passing follow-up and stopping ARVs so that it needs to be balanced with PLWHA compliance so that control efforts to reduce mortality and morbidity can be achieved. In controlling behavior factors and unhealthy lifestyles, individual motivation concepts are needed to prevent HIV transmission and maintain adherence to ARV therapy commitment.

Aim: This study aims to analyze the factors that influence HIV and AIDS control behavior based on the Health Action Process Approach (HAPA).

Method: This type of quantitative research is correlational analytic using cross sectional design. This study involved 275 PLWHA who met the study inclusion criteria. Analysis of the relationship between variables using Spearman rho to determine the closeness of the relationship between research variables using SPSS 25.

Results: The statistical test results of the study in the motivational phase showed that there was a significant relationship between knowledge and risk perception ($p = 0.017$), risk perception was related to behavioral intention ($p = 0.004$). Behavioral intention is also influenced by outcome expectations ($p = 0,000$) and action self-efficacy ($p = 0,000$). The relationship between behavioral intention is known to be the closest to the outcome expectations ($r = 0.359$). The change from the motivational phase to the volition phase was closely related to behavioral intention ($r = 0.654$) compared to maintenance self-efficacy ($r = 0.221$). PLWHA adherence to ARV therapy has a significant relationship with planning ($r = 0.264$), maintenance self-efficacy ($r = 0.152$) and recovery self-efficacy ($r = 0.119$). It is known that planning is closely related to PLWHA adherence to ARV therapy.

Conclusion: The conclusion of this study is that individual motivation and belief need to be maintained to increase positive outcome expectations and increase individual confidence in order to be able to overcome obstacles that arise when maintaining adherence to ARV therapy.

Keywords: ARV, Behavior, Control, HAPA, HIV / AIDS

Association between Socio-Economic Status and the Presence of Soap at Handwashing Place in Lao People's Democratic Republic: A Cross-Sectional Study

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Background: Although handwashing with soap is effective in preventing diarrhea, many households do not place soap at their handwashing place. Survey data from multiple countries suggest that socio-economic status is associated with the presence of soap at handwashing place. However, few studies rigorously examined the association while considering confounding factors.

Aim: Our study aimed to examine the association between socio-economic status and the presence of soap at handwashing place in households in Lao People's Democratic Republic (Lao PDR).

Methods: Our study used data of the Lao Social Indicator Survey II conducted in 2017. Households where handwashing place with water was observed were included in this study. The outcome variable was the presence of soap at handwashing place. The predictor variables included socio-economic status such as educational attainment of household head (no formal education/primary/lower secondary or above) and household wealth which was ranked into quartiles, existence of children under five years, ownership of domestic animals and living area (urban/rural). Logistic regression was performed in both bivariate and multivariate analyses. A mixed-effects model was used to account for village clustering. Chi-square trend test was conducted to assess the linear trend between the outcome and the household wealth.

Results: Of the 18,842 households, 61.5% presented soap at handwashing place. Even after adjusting for predictors, households whose household heads had the highest educational attainment were significantly more likely to present soap at handwashing place, compared to households whose household heads had the lowest educational attainment (odds ratio: 1.66, 95% confidence interval: 1.47-1.88). Likewise, the least poor households were significantly more likely to present soap at handwashing place, compared to the poorest (odds ratio: 7.61, 95% confidence interval: 6.51-8.88). There was a significant linear relationship between the presence of soap and household wealth ($p < 0.001$).

Conclusions: Of the variables examined, household wealth was the strongest association with the presence of soap at handwashing place. The proportion of households with soap increased with the increasing level of household wealth. Further studies are needed to design strategies for making soap more affordable and attractive to poor households.

The fight against stigma: A Multilevel Stigma Interventions in

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Background: Stigma is one of the main factors causing pasung (physical restraint or confinement in Indonesian terms) in schizophrenia patients. It is the main obstacle to reducing the number of pasung throughout the world. Thus, there is a need for appropriate interventions to reduce stigma in schizophrenia patients who go through pasung. This study aims to identify multilevel stigma interventions in people with schizophrenia who go through pasung (physical restraint and confinement). It can be applied and adapted to various cultural contexts.

Method: Quasi-experimental research with pretest and post-test analysis consists of 82 people with schizophrenia who go through pasung. Respondents were divided into the intervention group and the control group. A multilevel stigma intervention was given to the intervention group for three months.

Results: There was a significant difference in the average stigma score in the control group (moderate category stigma) and the intervention group (mild category stigma) after multilevel stigma intervention (p-value = 0.04). The average stigma score of schizophrenia patients in the intervention group decreased by 8.2%, while the average stigma score in the control group increase of 20.4%.

Conclusions: Multilevel stigma interventions are effective in reducing stigma in people with schizophrenia who go through pasung. We underline that multilevel stigma interventions through collaboration from various parties can provide great opportunities in stigma reduction programs in people with schizophrenia who go through pasung.

Perceived Challenges to Tour Guides Involvement in Travel Health Promotion in Bali

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Background: Tourists visiting tropical destinations, including Bali, are at risk of experiencing health problems. Tour guides as the frontline actors of tourism industry have a potential to provide information regarding the prevention and first aid of travel-related health problems. However, about half of tour guides in Bali were never or rarely provide health information to tourists they served.

Aim: This study aims to explore tour guides' perceptions regarding challenges to involve in travel health promotion.

Method: A qualitative explorative study was conducted in May to June 2021 in Bali. Data was collected through in-depth interviews to 21 informants who were selected purposively, consisted of representative of tour guides from 11 language divisions, The Head and Secretary of Indonesian Tour Guide Association Bali Branch (HPI Bali). Data was analyzed using thematic analysis.

Results: We found that there is negative attitude regarding the provision of health information due to belief that tourists have better health knowledge and behavior and no past experiences of serious health problems among tourists they served. Some informants perceived that health information is not needed by tourists since they are already familiar with the destination. Delivering information regarding health risks is considered to cause inconvenience to tourists and deterioration of destination's image. Most of the informants also stated that travel agents do not require them to provide health information to tourists. Majority of informants perceived their knowledge about travel health as insufficient due to inadequate exposure to health education. They concerned that tourists will not believe the information they deliver. There is also a fear of providing misleading information. Some misconceptions regarding prevention and first aid of travel-related health problems exist. All of the informants mentioned that there is no facility (i.e., guidebook) to support provision of health information. Most informants identified themselves as 'non-health professional' so that providing health information is not essential part of their job.

Conclusion: Challenges of the health information provision to tourists are tour guides' attitude, subjective norms, perceived behavioral control, knowledge, supporting facilities and role identity. Therefore, intervention to improve tour guides involvement in travel health promotion should address those determinants.

Keywords: travel health, health promotion, tour guide, challenge

Analysis Use of Gadgets With Toddler Development (2 - 4 Years)

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Background: The high rate of developmental delays (2-4 years) in Gembongan Village, Blitar Regency. The development of toddlers is still doubtful / deviant / late.

Aim: The purpose of this study was analyze the relationship between the use of gadgets and the development of toddlers (2 - 4 years).

Method: The research design used correlational analytic with cross sectional approach. The population in this study were all mothers and toddlers (2 - 4 years) with a sample size of 48 respondents who were taken using simple random sampling technique. The independent variable is the use of gadgets while the dependent variable is the development of toddlers (2 - 4 years). The instruments are the observation sheet and KPSP. Data analysis using Spearman Rank.

Results: The results showed that a small proportion of respondents (20.8%) medium and high use of gadgets with the development of toddlers were categorized as deviant and doubtful. The value of sig (p) = 0.008, $\alpha = 0.05$, $p < \alpha$, then H1 is accepted, meaning that there is a strong enough relationship between the use of gadgets and the development of children aged 2-4 years.

Conclusion: The longer and more frequent use of gadgets can affect the development of toddlers 2 - 4 years old. So, with this research it becomes a reference or literature for the midwifery profession to in order to provide insights to parents to reduce the use of gadgets in toddler.

Keyword: Use of Gadgets, Development, Toddler

Health Promotion, Sustainable Development, And Ir4.0: Understanding The Reciprocal Structures for Enhancing Public Health Policies

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Background: There are two main challenges with which humanity is struggling today. One is the achievement of the Sustainable Development Goals (SDGs). The other is adapting to the innovations which define the Industrial Revolution 4.0 (IR4.0). Both challenges require innovative thinking and a ground-breaking change of attitude. The first one is an existential challenge while the second one is of a more technical character. By using the first principle of the Rio Declaration on Environment and Development (1992) as starting point i.e.: Human beings are at the center of concerns for sustainable development so that they are entitled to a healthy and productive life in harmony with nature.

Aim: The article will uncover how the concepts of sustainable development and health promotion can be understood as the 'reciprocal structures'. From a duality perspective, integration means conceiving sustainability from a health perspective and health from a sustainability perspective.

Method: First, the paper explores how the relation between health and sustainability is articulated in international policy documents. Next, it will be developed a model for understanding the relation between health promotion and sustainability. Third, it will give an example about digitalization in public health programs.

Result: It will be defined 'digitalization' in its broader sense, as well as applied to public health then build a conceptual framework where key public health domains are associated to available digital technologies in a matrix that help to identify digital features that bolster public health action.

Keywords: health promotion, sustainable development, IR4.0, public health policies

The Effectiveness of Spiritual Approaches and Deep Breathing Relaxation on Changes in Depression Levels in The Elderly

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Background: Psychological changes in the elderly include feelings of loneliness, fear of loss, fear of facing death, anxiety, feelings of uselessness, dependence and neglect and depression. Early detection proper treatment of depression can improve the quality of life for the elderly.

Aim: The purpose of this study was to determine the effect of a spiritual approach and deep breath relaxation on changes in the level of depression in the elderly at the Tresna Werdha Blitar Social Service Unit.

Method: The design of this research is a pre-experiment, one-group pre-post test design with a population of all elderly people in the UPT Social Services Tresna Werdha Blitar with a total of 80 respondents. The sample is part of the population with a purposive sampling technique of 40 respondents. The collected data was processed using the Wilcoxon Match Pairs Test statistical test with a significance of $\alpha = 0.05$.

Result: The results showed that from 40 respondents, before the spiritual approach therapy and deep breath relaxation were carried out, most of the respondents had a mild level of depression in the elderly, namely 26 respondents (65.0%). depression, namely 23 respondents (57.5%). The results of the Wilcoxon Match Pairs Test analysis showed that the p-value = 0.000 which is less than the α value (0.05), it can be concluded that H_0 is rejected, meaning that there is an effect of the spiritual approach and deep breathing relaxation on changes in the level of depression in the elderly at the Tresna Social Service Unit. Werdha Blitar.

Conclusion: This spiritual approach and deep breath relaxation therapy is effective in overcoming depression in the elderly so this needs to be done continuously, in collaboration with the local health center and involving the participation of the orphanage staff.

Keywords: Spiritual Approach, Deep Breath Relaxation Therapy, Depression

The Effect of Endorphin Massage Combination and Murottal Therapy on Reduction of Haid Pain Adolescents at Islamic Al Azhaar High School Tulungagung

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Background: Menstrual pain is a cramp that occurs during menstruation. Menstrual pain that occurs in young women makes it difficult for young women to concentrate because of the discomfort felt when experiencing menstrual pain (dysmenorrhea). Menstrual pain can be reduced by pharmacological and non-pharmacological measures. Non-pharmacological treatment to reduce menstrual pain including endorphin massage and murottal therapy.

Aim: This study aims to determine the effect of endorphin massage and murottal therapy on decreasing menstrual pain in young women at Al Azhaar Tulungagung Islamic High School.

Method: This study uses an observational analytic research design with an experimental approach. With purposive sampling technique, a sample of 18 respondents was obtained, the independent variable was endorphine massage and murottal therapy and the dependent variable was menstrual pain for young women before and after being given a combination of endorphine massage and murottal therapy. The Wilcoxon test statistic test was used to determine the effect of the two variables.

Result: The results of the 18 respondents before the combination treatment of endorphin massage and murottal therapy found that almost all respondents, 15 respondents (83.3%) experienced menstrual pain in the moderate category whereas after the combination of endorphin massage and murottal therapy, almost all respondents were 14 respondents (77.8 %) decreased menstrual pain in the category of no pain. Analysis using Wilcoxon statistical test showed $p = 0,000 < 0.05$ then H_0 was rejected and H_1 was accepted, which means that there was a combination of endorphin massage and murottal therapy on decreasing menstrual pain in young women at Al Azhaar Tulungagung High School.

Conclusion: Endorphin massage techniques combined with murottal therapy can stimulate the body to release and increase the production of endorphins and encephalins which function to reduce menstrual pain, improve the mental system to reduce violent behavior exhibiting body chemistry.

Keywords: Endorphin massage, murottal therapy, menstrual pain, adolescent girls

Analysis of Factors Related to Open Defecation Behavior in Punjul Village Plosoklaten District Kediri Regency

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Background: Open defecation is one of major public health problem in Kediri regency. Data from the UPTD Puskesmas Pranggang shows that as many as 885 households in Punjul village do not have latrines.

Aim: This study aims to analyze the associated factors of open defecation behavior in Punjul Village, Plosoklaten District, Kediri Regency.

Method: This study used a quantitative method with a cross sectional approach. This research was conducted in Punjul Village, Plosoklaten District Kediri Regency. Using simple random sampling technique, the number of sample was 93 respondents. Data analysis method was bivariate analysis using the chi-square test.

Result: The research finds that only one variable has no correlation on open defecation behaviour while the rest variables show significant association. Education has no correlation with open defecation behavior ($p = 0.059$, $RP = 1.424$). While other variable shows significant association; occupation ($p = 0.025$, $RP = 1.985$), income ($p = 0.001$, $RP = 1.944$), distance between houses and rivers ($p = 0.007$, $RP = 0.307$), attitudes towards regulations ($p = 0.000$, $RP = 2,710$), community habits ($p = 0,000$, $RP = 8,049$), latrine ownership ($p = 0,000$, $RP = 4,785$).

Conclusion: The most of open defecation is caused by uncertain income in Punjul Village so it is difficult to have a proper toilet. The close distance between the house and the river makes people prefer to defecate in the river. Community habits that have become a tradition / culture (passed down) from parents to defecate in the river. Only a few people who have healthy latrines. So, it is hoped that the public health center and the local government will conduct more frequent education to reduce open defecation, as well as provide an example for triggering healthy latrines by building public toilets.

Keywords: Habit, Open Defecation Behavior, Latrine Ownership.

The Effect Of Using Gadget With Insomnia Events At Teenager In Semambung Village Kanor Sub Districts Bojonegoro Districts

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Background: The high number of gadget use among teenagers today causes many negative impacts for them. Things that have a negative impact are experienced by teenagers in using gadgets, because at this age they tend to have no maturity in recognizing their identity and environment, considering that teenager has vulnerabilities in self-esteem and depression.

Aim: The purpose of this study was to analyze the impact of using gadgets with the incidence of insomnia in teenagers in Semambung Village, Kanor Sub District, Bojonegoro District.

Method: The design in this research is analytical observation, which is a research that is directed to explain a situation. The population in this study were all teenagers in Semambung Village, Kanor District, Bojonegoro Regency as many as 215, the number of samples in this study was 143 respondents taken by purposive sampling technique. The instrument used in this study was a questionnaire. The data processing technique uses editing, scoring, coding and tabulating, while data analysis uses the Spearman Rho Correlation statistical test and is processed using SPSS 16 for windows.

Result: The results showed that the majority of respondents, namely 113 respondents (79%) playing long gadgets, more than some of the respondents, namely 102 respondents (71.3%) experienced insomnia, based on the results of the SPSS test on the Rho Speraman correlation test with a significance value of 0.000 ($0.000 < 0.005$) concluded there is a relationship between the use of gadgets with the incidence of insomnia in teenagers.

Key words: Gadget, Insomnia, Teens

The effect of the experiential learning method on increasing the knowledge, skills and self-confidence of nursing students

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Background: Nursing student practice aims to get to know the real world of the nursing profession. During clinical practice, students are guided by clinical supervisors and Hospital Clinical Instructors (CI). Supervising lecturers and CI use guidance methods based on guidelines from educational institutions, some use bad side teaching, coaching, preceptoring and mentoring methods as well as experiential learning clinical guidance methods, which are not very familiar in Indonesia.

Aim: The purpose of this literature review is to determine whether there is an effect of the experiential learning clinical guidance method on increasing the knowledge, skills and self-confidence of nursing students.

Method: Research articles were obtained from databases, namely pubmed and google scholar. Literature search used keywords (English) experiential learning, knowledge, skills, practice, self-confidence and nurse student, with inclusion criteria for research articles from 2017-2021, primary articles, full text, and the research subjects were nursing students. From 440 research articles, 5 articles were obtained. Then, a critical appraisal was carried out which was then analyzed using simplified thematic analysis.

Result: It was found that the experiential learning method was able to improve: knowledge, clinical skills, confidence and self-esteem. Besides that, the experiential learning method was also able to provide valuable insight into the empathy of nursing students.

Conclusion: Based on the review of this article, it is possible to use the experiential learning method in the practice of nursing students.

Keywords: experiential learning, skills, practice, self confidence, nurse student

**“What do they understand about Health Promoting School?” A
qualitative
study on school stakeholder at Surabaya and Banyuwangi, East Java
Province**

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Background: Health promoting school (HPS) has been identified effectively to enhance student health status. HPS recommended by WHO, emphasizes comprehensive and holistic concepts in school health programs because it is realized that the components of the school health program cannot be achieved independently by schools but must be organized. Most research on health promotion in schools in Indonesia always uses the UKS Trias element as a reference for assessing the success of the program. Even though there are actually six elements of HPS.

Aim: this study aims to identify knowledge and understanding of HPS, supporting and inhibiting factors in the implementation of those six elements, and an overview of the current implementation of those elements among school stakeholders, including Steering and Implementing Team.

Method: A Qualitative study with descriptive approach was conducted to collect the data. In-depth interview, observation and document study were used to compile the data. The study involved informants from various sectors, including the Education Office, Health Office, Ministry of Religion and Government up to the sub-district level. The implementing team at school was involved too.

Results: Knowledge and understanding of HPS among informants varies greatly, especially informants from the steering team. Most of the informants understand that HPS is limited to schools that meet the physical requirements, namely a clean and green school environment. Supporting factors and inhibiting factors in implementing school health programs are basically complementary. The implementation of the six elements of HPS in both the city of Surabaya and the district of Banyuwangi is still limited to the Trias UKS reference.

Conclusion: The results of the study indicate the need to increase capacity building related to the HPS concept for school stakeholders. That a healthy school cannot be built by the school itself, but requires coordination and cooperation with various sectors.

Keywords: health promoting school, qualitative, multisector, education, partnership

Predictors of disease prognosis awareness among Indonesian breast cancer patients: a cross-sectional study

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Background: Breast cancer is the leading female malignancy among Indonesian women, mainly diagnosed at advanced stages compared to Western countries. It is a common phenomenon that breast cancer patients often unaware of their accurate prognosis. From patients' perspectives, it is necessary to understand their prognosis to plan cancer treatment that meets their expectations and preferences; however, evidence on this context is scarce.

Aim: The study objective was to determine which individual characteristics were associated with disease prognosis awareness in Indonesian breast cancer patients.

Method: This cross-sectional study was conducted on 160 female breast cancer patients prior to their palliative oncology treatment from January 2020 to February 2020 in a cancer hospital. A custom questionnaire was designed to assess patients' awareness of their accurate disease prognosis and several potential factors. Binomial logistic regression model was used to determine predictors associated with patients' awareness of disease prognosis.

Results: The mean age of included patients was 50.2 (range: 29 to 75) years, most of them lived in urban area (72.5%), had a low level of education (71.9%), and most patients were married (81.9%). Only 30 (18.8%) patients were aware of their disease prognosis. Binomial logistic regression analysis showed that age, educational level, marital status, religion, and occupational status were not associated with awareness of disease prognosis ($p>0.05$). Place of residence was the only predictor of disease prognosis awareness in this study. Patients who lived in urban (aOR=0.2, 95% CI: 0.06 to 0.78) were more aware of their disease prognosis than those who resided in rural areas.

Conclusion: Indonesian breast cancer patients were commonly unaware of their current disease prognosis. Healthcare providers should pay close attention to patients living in rural areas through locally based effective health promotion strategies.

Keywords: disease prognosis, breast cancer, patient awareness

The Impact Of Posyandu Program On Adolescent Reproductive Health Behavior In The Indigenous Community Of The Tengger Tribe, Indonesia

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Background: The number of adolescents aged 10-24 years in Indonesia reaches a quarter of the total population of Indonesia. Adolescents are very vulnerable to various health problems, especially those originating from risky sexual behavior.

Aim: This study aims to assess the impact of the youth posyandu program on the reproductive health behavior of the Tengger tribe in Tosari District, East Java.

Method: This cross-sectional study was conducted on 233 adolescents aged 10-24 years (72 respondents attended the Youth Posyandu regularly and 161 respondents did not attend the Youth Posyandu).

Results: The results showed that as many as 21.7% of teenage boys had high-risk sexual behavior, while only 8.6% of girls had high-risk sexual behavior. Multivariate logistic regression analysis showed that adolescents who actively participate in posyandu activities tend to have lower risky sexual behavior than adolescents who do not actively participate in posyandu (ORa 0.5, 95%CI 0.16-1.71, sig 0.281). Other variables related to risky sexual behavior were negative attitudes (ORa 17.68, 95% CI 4.36 – 71.70, sig 0.001), sources of information not from parents or family (ORa 12.08, 95% CI 1,43-101.94, sig 0.022) 19—24 years old (ORa 9.4, 95% CI: 2.50-35.51, sig 0.001) High school or college education (ORa 6.9, 95% CI 1.54-31.29, sig 0.012) and the level of knowledge is less (ORa 4.1, 95% CI: 1.16-14.76, sig 0.028).

Conclusion: There is a positive impact of the posyandu program on the reproductive health behavior of the Tengger ethnic group. It is necessary to continue to promote the youth posyandu program according to the technical instructions that have been set and to increase the capacity of youth cadres through training and coaching is important to optimize the impact of the program.

Keywords: Youth, Posyandu, Reproductive health behavior, Tengger tribe, Indonesia

Potential Double Financing Of Immunization As Social Services Sourced From Government Funds Through The Perspective Of Batam Island District Health Accounts (DHA)

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Background: The Health financing is the main component in the framework of the National Health System, in districts/cities often faced with various problems such as the tendency of physical spending budgets used for double financing to occurs in the local health services, less operational costs, the tendency to provide free regional health services to the community and the entire population, the realization of the government budget is late and so forth. Various problem from health financing can be detected and identified through the implementation of District Health Account (DHA) at the district/city level.

Aim: The research aims in this study is to find the real cost of the program/activity (realization from pandemic COVID-19) on a number of government and private institutions in the last year in the District/City of Batam Island (2020).

Method: The study designed by descriptive cross-sectional study. The purposive sample was selected from institutions including data household expenditures from Central Office of Statistic/BPS using the pivot table menu in Excel.

Results: This study shows that budgets allocation for the health budget 2019 were reached 10% under the terms of 36 on the National Health Act Indonesia. The health budget allocation according to priority programs such as immunization is not optimal, the operational budget allocation still focused on indirect activities, the intensity of the activities carried out at the level of community health centers, the presence of the role of non-governmental sectors (private/community) in immunization sector financing, potential health insurance system in favor of the Social Security.

Conclusion: Immunization program expenditure of DHA known dimensions is still needed major improvements in operations and directly oriented aspects of public health than individual health efforts, beneficiaries of the immunization programs are still needed in the productive age group in the remote, border, and island areas (as human investment in health issue).

Keywords: Immunization, District Health Account, pivot tables, budget financing

Designing a Web-Based Information System to Monitor School-Based Nutrition Promotion Program Implementation in Indonesia

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Aim: The purpose of this study was to design the very first web-based information system to monitor School-based Nutrition Promotion (SBNP) program implementation using the experience of the Nutrition Goes to School (NGTS) Program in Indonesia.

Method: The development of this information system consisted of two main activities, namely: (1) identifying the key monitoring indicators, 2) developing the information system through several specific steps, such as providing high-fidelity mockup, testing the usability from the high-fidelity mockup, developing the application based on the usability test result, and evaluating the application using User Acceptance Test (UAT) form to check the functionality of the system to make sure that the target users can input the required information and get back usable result for further needs (n=5).

Results: This study found that the monitoring indicators reflected the variations in the progress of activities conducted by the partner schools in the NGTS Program, and 100% of the system features were executed according to their functions. Respondents confirmed that the information system was easy to use and beneficial to them in reporting the activity progress of their schools and SEAMEO RECFON in monitoring the NGTS program implementation.

Keywords: School-Based Nutrition Program; SIPP-NGTS; Information System; Program Monitoring; Nutrition Goes to School; Web-Based

Development of New-onset Hypertension Risk Prediction Model Using Machine Learning

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Background: Hypertension is known as a significant risk factor for cardiovascular diseases. Early identification and appropriate treatment are believed to suppress and delay the occurrence of hypertension and its further implications. The prediction model for hypertension risk, especially in Indonesia, is still limited to prevent hypertension problems.

Aim: This study aims to develop a robust predictive model of new-onset hypertension to support the prevention and control of cardiovascular disease risk factors.

Method: This study uses longitudinal panel data from the Indonesia Life Family Survey (IFLS) 1997-2014, with the unit of analysis being individuals 15 years and above and followed until 2014. The predictors in this study include unmodified factors (age, gender) and modifiable factors (smoking behaviour, physical activity, body mass index, and stress level). Multivariate analysis using Generalized Estimation Equation (GEE) and machine learning algorithms such as support vector machine (SVM), neural network, AdaBoost, random forest, and naïve Bayes were used in the study to generate formulation models.

Results: Compared with other risk prediction models, the neural network model produces better parameter values than others. The neural network model has Area under curve (AUC) value of 0.787, Precision 0.755, and recall of 0.773. In comparison, another model such as SVM, random forest, AdaBoost, and naïve Bayes has AUC values lower than neural network respectively 0.51, 0.71, 0.70, 0.76. The model was then converted into a web-based decision support system application with an artificial intelligence approach. Flask framework from Python uses to develop the system.

Conclusion: The hypertension risk prediction model can be used to estimate an individual's risk for developing hypertension and provide suggestions for short-term follow-up or treatment. This model can be a tool that can facilitate the management of individuals at high risk of hypertension.

Keywords: prediction model, hypertension, machine learning, expert system, artificial intelligent

Portrait of the Healthy Family in Banyuwangi District, Indonesia: Implementation Evaluation of the Healthy Indonesia Program with Family Approach (PIS-PK) in Banyuwangi District

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Background: The Healthy Indonesia Program with Family Approach (PIS-PK) implementation is a way to implement Minimum Service Standards (SPM) in the health sector through family empowerment. The achievement of families visited in Banyuwangi District in 2017-2019 was 42%. Healthy Family Index (IKS) Banyuwangi is 0.08 (unhealthy category). That IKS is the second lowest value in East Java in 2019. Six PIS-PK indicators are far from the total coverage.

Aim: The study purpose is to evaluate the implementation of PIS-PK in Banyuwangi based on the PIS-PK Regulation of the Minister of Health Republic of Indonesia Number 39 of 2016.

Method: The type of research is descriptive exploratory research. The study was conducted in 10 Primary Health Centers and the Banyuwangi District Health Office. The informants are the Family Advisor at the Primary Health Care, head of the Primary Health Care, and the person in charge/coordinator of PIS-PK at the Banyuwangi District Health Office. This study uses primary data and secondary data. Primary data obtained from in-depth interviews and Focus Group Discussions. The data collection instruments were interview guides and FGD guidelines. Analyzing research data descriptively.

Results: The stage of family visits and initial intervention has been carried out by the Primary Health Center (PHC) quite well. At the family visit stage, the data collection team has various perceptions of healthy family instruments, there are signal problems in some areas and not yet total coverage. The PIS-PK data analysis stage has not been carried out thoroughly. The stage of further intervention on health problems has not been carried out thoroughly by all PHC because the majority of PHC is still in the family visit stage. The monitoring and evaluation phase is carried out by most of the PHC from the PIS-PK preparation stage to family visits and initial intervention. Several PHC has carried out monitoring and evaluation up to the initial IKS analysis stage and advanced intervention.

Conclusion: The implementation of PIS-PK in Banyuwangi is not fully following the guidelines for implementing the PIS-PK Regulation of the Minister of Health Republic Indonesia Number 39 of 2016.

Program Evaluation Of 1000 Volunteer Promoter Jago Preventive In Covid-19 Prevention By System Approach And Program Sustainability Assessment Tool

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Background: On the late December 2019 the world was shaken by pneumonia epidemic which spread out rapidly. It was called Corona Virus Disease 2019 (COVID-19) which caused by Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2). The information development of Covid-19 virus arise difference perception. It was caused a massive incorrect (hoax) and invalid information spread out there in society. Jago Preventive Learning Platform is contributing in taking care of Covid-19 through education as well as spread out the reliable information about Covid 19 by The 1000 Volunteer Promoter of Covid 19 Prevention Program.

Aim: The purpose of this research is to evaluate the implementation of the 1000 volunteer promoter program using a systems approach and program sustainability assessment tool (PSAT).

Methods: The type of research is descriptive study using a qualitative approach. Primary data obtained from in-depth interviews Volunteer Promoter of Covid 19 Prevention Program Jago Preventive Learning Platform. The research design used was cross sectional.

Results: The results of an analysis of system approach which consist of input, process, and output, that the implementation of the 1000 volunteer promoter program, human resources who were not updated on the development of Covid-19 information and educational materials that were not up to date with developments Covid-19 information, it cause society less attractive to the given information. The results of the Sustainability Assessment Tools (PSAT) found that there were two domains that owned low scores those are financial stability and strategic planning.

Conclusion: The Jago Preventive platform is required to maximize more on the capacity and ability of the company's internal human resources and as well as maximize the two domains that possessed low score in program sustainability assessment tool (PSAT), hence the program of 1000 volunteer promoters of Covid-19 prevention can run sustainably.

Keyword: Covid-19, Jago Preventif, 1000 Volunteer Promoter Program, Public health

The Effect of Socioeconomic Status and Nutrition Status on Executive Function

Jhoni Warmansyah

Aim: The objective of the research was to find out the empirical information of the effect of socioeconomic status and nutrition status on the executive function of children.

Method: The research method is a survey, and the analysis technique is path analysis by simple random sampling. The instrument used was the Executive Function with BRIEF-T, Nutrition Status with Anthropometric Standards, Socio-Economic Status developed by the researcher.

Results: Empirical findings of the research revealed that: 1) There is direct positive effect of socioeconomic status to executive function. 2) There is direct positive effect of socioeconomic status to nutritional status. 3) There is direct positive effect of nutrition status to executive function.

Conclusion: Thus, socioeconomic status and nutrition status are two factors where there is a direct effect on executive function.

Persuasive Communication, Behavior Supervisors Swallowing Medication (PMO) and Prevention of Multi Drugs Resistance (MDR) of TB patients

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Background: Communication has the purpose to influence a change of mind, views, opinions, affective, and behavioral changes are in accordance with the will of the communicator. Persuasive communication is carried out by the supervisory Swallowing Drugs (PMO) to TB patients is an attempt to convince the pulmonary TB patients that pulmonary TB patients behave as expected by the supervisory Swallowing Drugs (PMO) as a communicator by persuading without forcing

Aim: The study aims to determine the relationship of persuasive communication and behavioral treatment supporter (PMO) on the prevention of Multi-Drug Resistance (MDR) pulmonary tuberculosis patients in Martubung health center, Medan. Method: This type of research is observational research with this type of explanatory research. The population in this study is the entire supervisory Swallowing Drugs (PMO) of pulmonary TB patients in as many as 52 people.

Results: The results of this study will be carried out until the bivariate analysis using the chi-square test. Results: The results showed that the Supervisory Swallowing Drugs (PMO) largely persuasive communication in the form of attention, comprehension, and acceptance in either category, knowledge, and attitudes in both categories and the prevention of Multi-Drug Resistance pulmonary TB patients (MDR TB) in both categories. There is a relationship in persuasive communication (attention, understanding, and acceptance), knowledge and attitudes about the treatment of pulmonary TB with Multi-Drug Resistance prevention of pulmonary TB patients (MDR TB). Supervisory knowledge Swallowing Drugs (PMO) and the Supervisory attention Swallowing Drugs (PMO) becomes the dominant factor against Multi-Drug Resistance prevention of pulmonary TB patients (MDR TB).

Conclusion: There is a relationship in persuasive communication (attention, understanding, and acceptance), knowledge and attitudes about the treatment of pulmonary TB with the prevention of Multi-Drug Resistance of TB Patients (MDR TB). Knowledge of Drug Swallowing Supervisors (PMO) and the attention of Drug Swallowing Supervisors (PMO) become the dominant factor in the prevention of Multi-Drug Resistance of Lung TB Patients (MDR TB).

Effectiveness Of Game Applications Calistung Digital Based On Android For Update Early Childhood Cognitive Skills

Evi Selva Nirwana

Aim: This article aims to determine the effectiveness of the application of game calistung digital-based android to improve the skills of cognitive children ages early.

Method: Methods of experiments carried out on 26 students garden child aged 5-6 years. Design research that is used is a pre-experimental design. The sampling technique used in this research, purposive sampling. Collected Data skills of cognitive using guidelines observations which consist of the dimensions of cognitive (1) think symbolically recognize the concept, (2) learn solving problems and cause a result, (3) association and classification. Assessment skills cognitive using a scale of 1 - 4.

Results: The results of the study concluded that there is an increase in the value of the average skills of cognitive student garden of childhood age 5-6 years through the game calistung.

Conclusion: The study implies that k Competency of teachers in the use of media calistung digital needs to be improved through inservice training as an effort to improve the skills of cognitive students park childhood.

Keywords: Effectiveness, Applications Games, based on Android, Skills Cognitive, Child Age Early

Encouraging Action on Fruit and Vegetable Consumption in Children Through Quartet Games

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Background: Lack of consumption of fruits and vegetables in children can cause them to experience deficiency of nutrients such as vitamins, minerals and fiber, leading to various diseases. The efforts to encourage the consumption of fruits and vegetables in children by providing education are needed to overcome this. One form of education that is tailored to the child's needs, namely using a quartet card.

Aim: This study aims to assess changes in children's actions in consuming fruits and vegetables before and after receiving an education using a quartet card game.

Method: This study is a quasi-experiment with The One Group Pretest Posttest design. The target population is all 73 students who become students at TPA Mir'aatul Khaerat Makassar. The sample selected was 48 people according to the inclusion criteria. The sampling technique was purposive sampling. Data analysis used the Wilcoxon Sign Rank test.

Results: The results showed that the size of the change in action with good categories for children in consuming fruits and vegetables after receiving education through a quartet card game was 81.25% ($p < 0.005$). The pretest results showed that eight people (16.67%) with the act of consuming fruit and vegetables were in a suitable category. Furthermore, the post-test results showed that there were 47 children (97.92%) who had actions with good categories in the consumption of fruits and vegetables ($p = 0.001$).

Conclusion: Education through quartet card games can encourage children's actions in consuming fruits and vegetables. Thus, it suggested that health promotion officers at Primary Health Centre can replicate the quartet game method in providing education on fruit and vegetable consumption to children who are targeted in their working areas.

Keywords: Action, Fruit and Vegetable, Children, Quartet Games

Physical Activity Among Adolescents in Rural and Urban Area in South Sulawesi Indonesia: Exploring the Influence of Neighborhood Environmental Factors

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Background: The neighborhood environment can affect the physical activity of adolescents, including the problem of the availability of sports or play facilities, sidewalks for pedestrians, fields and environmental hygiene problems. The influence of the environment on physical activity (PA) in adolescents between urban and rural areas will have a different effect.

Aim: This study purpose to explore environmental factors that influence adolescent's participation in PA in the context of the urban and rural area environment.

Method: Snowball sampling technique was used to get twenty students from urban and rural area respectively. Students aged 13 to 15 years were involved in the offline and online interview (by a videocall through WhatsApp) with semi structured questions guideline. Interview guidelines consisting of five item topic questions and each topic has a different number of questions, with total 17 questions. This study also involved the photovoice procedures, such as photo-taking, selecting, contextualizing and codifying themes. NVivo 12 software for qualitative data analysis.

Results: The results show that adolescents in rural area being endowed with natural resources such as forest and hills, the adolescents and the community did not capitalize on these rich resources to promote and engage in PA. Poor maintenance of natural resources, the lack of pedestrian infrastructures and road safety, the lack of PA facilities, and negative perception of ancestors' agricultural activities were among factors that constrained adolescents' PA. Whereas, in urban area with rich and clean facilities, as well as variety of sport communities, adolescents were more likely to stay at home to play with gadget.

Conclusion: It is suggested that health promotion and education about physical activity is urgently needed for adolescents in urban area, especially focusing on limitation of gadget used and intervention related safety should be improved. For rural area, basic enities such as play spaces and pedestrian infrastructure are necessary to increase adolescent's PA, any intervention should make the most of the natural resources, which are cheaper, environment friendly and sustainable.

Keywords: Physical activity, adolescents, environmental factors, photovoice, qualitative

Determinants of Depressive Symptoms in Young Adults with Physical Disability in Indonesia

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Background: Depression has a major contribution to the burden of disease. People with physical disabilities are prone to experience depressive symptoms.

Aim: This study was aimed to identify the determinants of depressive symptoms in young adults with a physical disability in Indonesia.

Method: This cross-sectional study used data from the Indonesian Family Life Survey (IFLS) wave 5. The study subjects consisted of 535 young adults (15-25 years old) with a physical disability. Depressive symptoms were measured by using the Center for Epidemiologic Studies Depression Scale (CES-D 10). Determinants of depressive symptoms were analyzed by multiple logistic regression.

Results: Among the study subjects, 35.9% had depressive symptoms. Having a vision problem had the highest proportion of being depression. Respondents who had chronic conditions, poor self-rated health, and poor life satisfaction had higher odds for having depressive symptoms after being controlled by sex, marital status, body mass index, and smoking behavior.

Conclusion: Chronic conditions, self-rated health, and life satisfaction had a significant association with depressive symptoms in young adults with a physical disability. Giving more attention to detecting depression in young disabled persons could be a good thing. Increased self-esteem and support for them can encourage a better health status.

Keywords: depression symptoms, life satisfaction, physical disability, young adult

Sociodemographic factors, depression and food insecurity status among older adults in Malaysia: Findings from Elderly Health 2018.

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Background: Food insecurity and depressive symptoms are two public health concerns in

developing countries. Food insecurity is linked to several chronic diseases, while little is known about the association between food insecurity and depressive symptoms among the older adults. Food-insecure person is defined as someone with limited, uncertain availability or access to nutritionally sufficient, socially relevant and safe foods.

Aim: This study aims to determine the association between food insecurity with depression and sociodemographic factors.

Method: Data were derived from a cross sectional survey; National Health and Morbidity Survey 2018. A stratified cluster sampling design involving a total of 3977 older adults aged \geq 60 years. A face to face interview using mobile device was conducted during data collection. Food insecurity was categorised to low level (score 2-4) and very low (score 5-6) based on the

USDA Short Form Food Security Survey Module. Depressive symptoms were assessed using Geriatric Depression Scale-14 (GDS-14) standard questionnaire. Respondents obtained scores of 6 and above was classified as depression. Data was analysed using descriptive and complex sample logistic regression with SPSS version 23.0.

Results: The overall prevalence of food insecurity and depression was 10.4% and 11.2%.

The prevalence was significantly higher among older adults from rural area, with no formal education, from lower income group, living alone and having depression. Multiple logistic regression revealed that older adults from rural area [aOR:1.98 (95% CI: 1.25-3.13), without formal education, achieved primary education level [aOR:8.05 (95% CI: 2.49-25.95) and secondary education levels [aOR 4.68 (95%CI: 1.59-13.77), earned income below RM 1000 [aOR:5.78 (95% CI: 2.31-14.42), income RM1000-RM 1,999 [aOR 2.82, (95%CI: 1.21-6.55) and diagnosed as depression [aOR:5.30 (95% CI: 2.87-7.27) significantly associated

with food insecurity.

Conclusion: In general, lower sociodemographic status and depression were associated with food insecurity issue among older adults. Systematic food security and depression screening within the health systems suggested to improve the food security status of older adults.

Keywords: Food insecurity, depression, older adults, NHMS 2018

Association between socioeconomic factors and medical conditions with depression among the Malaysian elderly: Findings from the National Health and Morbidity Survey (NHMS) 2018

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Background: Depression is a common mental illness among the geriatric population and is easily missed by physicians. It is one of the ten leading Malaysian burden of disease for those aged 60 years and above in 2013. Important risk factors for depression include socioeconomic status and medical conditions but the data regarding this is limited in Malaysia.

Aim: This paper aims to ascertain the associated factors of socioeconomic and different medical conditions on depression among the elderly in Malaysia.

Method: Data for this study were gathered from the National Health and Morbidity Survey (NHMS) 2018: Elderly Health Survey. This survey is a cross-sectional study involving a total of 3977 persons aged 60 years and above in Malaysia. Depression was assessed using the validated GDS-14 questionnaire, where a cut-off score of 6 is taken as positive for depression. The association of depression with multiple different socioeconomic factors and medical conditions was analysed using multiple logistic regression with SPSS version 26.0.

Results: Total respondents were 3772 persons. The prevalence of depression in the elderly population was 11.2% (95% CI: 9.37-13.40%). Higher odds of depression were noted among rural dwellers (AOR 1.26: CI 1.01-1.56), those with lower education (AOR 1.57: CI 1.19-2.08), low monthly income (AOR 1.68: CI 1.31-2.15) and those who were unemployed (AOR 1.37: CI 1.05-1.78). On the other hand, lower odds of depression were observed in those aged less than 70 years old (AOR 0.68: CI 0.54-0.83) and those who were married (AOR 0.69: CI 0.55-0.85). Higher odds of depression were also found in those with hypertension (AOR 1.47: CI 1.16-1.86), cancer (AOR 2.59: CI 1.28-5.24), urinary incontinence (AOR 5.15: CI 3.79-6.99), and current smokers (AOR 1.74: CI 1.34-2.26).

Conclusion: Wider depression screening should be done in the elderly population as low socioeconomic status and certain medical conditions can be associated with depression among elderly in Malaysia.

Keywords: Depression, elderly, Malaysia, socioeconomic, NHMS

Schistosomiasis as social constructs: understanding socio-cultural contexts that shape behavior surrounding schistosomiasis and their implications for health promotion

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Background: Schistosomiasis is considered as one of the Neglected Tropical Diseases that has persisted through time. The Department of Health (DOH) of the Philippines reported that the national prevalence for the disease is 4.68% based on a Focal Survey conducted in 2017. Strategies implemented by the DOH for the elimination and control of schistosomiasis included preventive chemotherapy through Mass Drug Administration and Water, Sanitation and Hygiene programs, among others. Program gains have been reported particularly in bringing down the incidence rate in some areas in the country, however, total elimination is yet to be attained. In some other areas on the other hand, a lag in reducing the incidence rate has been reported. Thus, reinfection remains to be a major health concern.

Aim: This paper looked into the socio-cultural contexts and meanings that shape behaviors surrounding schistosomiasis as well as its prevention and control and the implications of such behaviors for health promotion in two endemic communities in Southern Philippines. Delving into socio-cultural contexts and meanings was viewed as an attempt to achieve a more nuanced understanding of peoples' behaviors. To take into consideration such understanding in the design of more contextualized and inclusive health promotion programs was deemed to be vital in furthering the gains of schistosomiasis prevention and control efforts.

Method: The study employed in-depth interviews, focus group discussions and community mapping exercises among purposively selected men and women in the study sites in gathering qualitative data. Key schistosomiasis personnel at various levels of program implementation were also interviewed. The study investigated the meanings and socio-cultural contexts surrounding schistosomiasis as part of the daily lives of people in two communities, and also, how these shaped their responses to both institutional and local strategies for schistosomiasis prevention and control. Data were analyzed using the social constructionism perspective.

Results: The results showed that the complex and dynamic interplay of various contexts that included socioeconomic background, gender, faith-based beliefs and practices as well as knowledge and practices as informed by experiences with health programs, were key in meaning making on schistosomiasis and eventually, how such meanings shaped peoples' health-seeking behaviors. Community mapping exercises revealed continued exposure to infected snail sites through activities of daily living, thus, the risk of contracting schistosomiasis continued.

Conclusion: Based on the study results, recommendations were given for the development of health promotion programs and activities for the prevention and control of schistosomiasis.

Keywords: social construction, health promotion programs, sociocultural

Factors Influencing Physical Activity Behavior Among Young Women in Saudi Arabia Based on the Theory of Planned Behavior

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Background: Inactive behaviour is highly prevalent amongst young Saudi females aged 18- 35 years. The use of a theoretical framework to investigate the psychological factors that influence Saudi women's engagement in physical activity (PA) is unstudied.

Aim: Using the Theory of Planned Behaviour (TPB), the research aimed to identify the psychosocial factors that influence engagement in behaviour that meets the global PA guidelines.

Method: In cross-sectional research, young Saudi women aged 18-35 years completed the BPAQ-YSF and a follow-up questionnaire on two separate occasions: first, at the baseline, time one (T1) and again two weeks later, time two (T2). The validity and reliability of the theory-based scale evaluated before conducting the regression analysis.

Results: The results indicated the TPB standard constructs, including attitudes, Subjective Norms (SN), and Perceived Behavioural Control (PBC), explained 33% ($R^2 = .3$, $p < .01$), whereas the additional constructs, including self-efficacy, self-identity and descriptive norms, accounted for 29% ($R^2 = .29$, $p < .001$) of intention variance over and above the TPB standard constructs influence. The full model, the extended-TPB, explained 62% ($R^2 = .62$, $p < .001$)

of intention variance. The intentions and PBC, the proximal predictors of TPB behavioural performance, explained 6.7% ($R^2 = .067$, $p < .001$) of the PA behaviour variance. After controlling the proximal predictors and incorporating the extended-TPB constructs into the regression equation, PBC, attitude and past behaviour are the only statistically significant predictors above and beyond the extended-TPB variables accounted for 13.6%, ($R^2 = .136$, $p < .001$) of the PA behaviour variance.

Conclusions: This research represents an initial move towards a theoretical perspective for identifying the factors that influence young women's physical activity intentions and behaviour based on global guidance in Saudi Arabia. The TPB and its expanded form are indeed a fitting theoretical basis for further research into this phenomenon. This research supported the utility of the extended-TPB in understanding and predicting the intentions and behaviour of young women in a cross-cultural context.

Motivation for and Effect of Cooking Class Participation after the 2011 Great East Japan Earthquake and Tsunami

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Background: Natural disasters affect some eating patterns and behavior among affected residents. However, postdisaster changes in residents' eating patterns and behaviors have not been examined. Furthermore, limited studies explore the kinds of post-disaster dining activities or eating supports that have motivated the survivors in the past, including the results of current eating support interventions.

Aim: We aimed to examine the association between the motivation for and effects of cooking class participation, hosted by the Ajinomoto Group and The Ajinomoto Foundation (participatory health and nutrition lectures) in disaster-affected areas after the 2011 Great East Japan Earthquake and Tsunami.

Method: We conducted questionnaire surveys in January and February 2020 and applied three Poisson regression models to a cross-sectional dataset of participants, analyzing three perceived participation effects: increase in new acquaintances and friends, increase in excursion opportunities, the potential for gaining motivation, and a new sense of life purpose. We applied the interaction term of motivation variables and usual eating patterns (eating alone or with others).

Results: We obtained 257 valid responses from 15 cooking venues in the disaster-affected areas. The interaction term for participants' motivation and eating patterns was associated with their perceived participation effects. "Motivation for nutrition improvement × eating alone" was positively associated with an increase in new acquaintances and friends (IRR: 3.05, 95% CI, 1.22–7.64). "Motivation for increasing personal cooking repertoire × eating alone" was positively associated with increased excursion opportunities (IRR: 5.46, 95% CI, 1.41–21.20).

Conclusion: This study highlights the social dining methodologies designed to embrace local culture and cuisine to create a sense of normalcy in a post-disaster context. The motivation for participating in cooking classes was associated with the effects of participants' social aspects and dietary behaviors, especially for people eating alone. We conclude that social dining methodologies encourage fellowship and motivate individuals to advance beyond

their current dining circumstances.

Oral Health Knowledge, Attitude And Practice Among Primary Caregivers Of Visually Impaired Children At Hospital Universiti Sains Malaysia – A Preliminary Study

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Background: Primary caregivers play an important role in preventing caries and maintaining good oral health of their children especially those with visually impaired (VI), whereby they are heavily dependent on their caregivers.

Aim: To determine the oral health knowledge, attitudes, and practices (KAP) among primary caregivers of the VI children.

Method: A cross sectional study were conducted on primary caregivers who accompany their VI children attending the Ophthalmology clinic at Hospital Universiti Sains Malaysia. A selfadministered, validated questionnaires on sociodemographic profiles and KAP towards child's oral health were distributed to the consented caregivers. Data were analysed using SPSS software, version 24.0 and descriptive analysis was done.

Results: A total of 27 primary caregivers of the VI children had participated and their mean(SD) age was 41.7(7.10). Most (92.6%) of them were Malays and majority (48.1%) had up to secondary level education with a median(IQR) monthly income of RM2000.00(3200.00). The caregivers showed a relatively good attitude and practice towards their child's oral health with a mean(SD) score of 23.2(2.95) out of 28 and 12.8(2.15) out of 19 respectively . However, the mean (SD) of oral health knowledge was low of 5.5(1.50) out of 11. Most of the caregivers did not know the amount of toothpaste that was supposed to be used and almost half (48.1%) of the caregivers mentioned that their children took snack between their main meals.

Conclusion: Although the caregivers in this study showed only basic understanding on children's oral health, their attitude and practice towards children's oral health were much better. Owing to the important role's caregivers play in their children oral health care, efforts need to be made to improve oral health awareness of the caregivers to ensure effective oral healthcare can be practiced.

Keywords: knowledge, attitudes, practice, visual impairment, caregivers

Adverse Childhood Experience, Depressive Symptom, Uncertainty Stress and Suicidal Ideation Among Chinese University Students: A Moderated Mediation Modeling Analysis

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Background: Multiple studies have reported the associations of adverse childhood experience (ACE), depressive symptom, and uncertainty stress with suicidal ideation. However, whether depressive symptom mediate the relationship between ACE and suicidal ideation, and whether uncertainty stress moderate the direct effect of ACE on suicidal ideation and the indirect effect through depressive symptom was little known.

Aim: This study aimed to explore the potential mechanisms between ACE, depressive symptom, and uncertainty stress with suicidal ideation among Chinese university students.

Method: A total of 1830 university students were recruited from 25 universities in several cities of China. A link of an online questionnaire was sent to participants through WeChat, which is one of the most popular social media applications in China. The mediated and moderated mediation models were used to examine the potential mechanisms between ACE, depressive symptom, uncertainty stress, and suicidal ideation by Haye's PROCESS macro for SPSS 25.0.

Results: ACE was positively correlated with depressive symptom ($r=0.253$, $P<0.001$) and suicidal ideation ($r=0.258$, $P<0.001$), and depressive symptom was positively related to suicidal ideation ($r=0.272$, $P<0.001$). Furthermore, ACE, depressive symptom and suicidal ideation were positively associated with uncertainty stress ($r=0.218$, 0.612 , 0.239 respectively, all $P<0.001$). Depressive symptom partially mediated the association between ACE and suicidal ideation (indirect effect= 0.16 , 95%CI: $0.11-0.22$). Moreover, the interaction effect of ACE and uncertainty stress on depressive symptom ($\beta=0.04$, $t=4.70$, $P<0.001$) and the interaction effect of depressive symptom and uncertainty stress on suicidal ideation ($\beta=-0.004$, $t=-2.81$, $P=0.005$) were statistically significant. Simple slope tests indicated that the indirect effect of ACE on suicidal ideation through depressive symptom were significant, when uncertainty stress was at low ($\beta=0.06$, 95%CI: $0.02-0.11$), moderate ($\beta=0.08$, 95%CI: $0.05-0.13$) and high ($\beta=0.09$, 95%CI: $0.05-0.14$) levels.

Conclusions: Uncertainty stress significantly moderated the association between ACE and depressive symptom as well as the relationship between depressive symptom and suicidal ideation among Chinese university students. These findings suggested that it is urgent to develop strategies based on Chinese culture for controlling uncertainty stress to decrease depressive symptom.

Keywords: Adverse childhood experience, Depressive symptom, Uncertainty stress, Suicidal ideation

School Health Promotion in Southeast Asia by the Japanese Consortium on Global School Health Research and Partners

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⁶School Health Division, Bureau of Learner Support Services, Department of Education, Philippines School health promotion in Southeast Asia has developed rapidly in recent years, and Japan has been one of the significant contributors to the reinforcement of school health promotion in the region

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Background: Starting from the Hashimoto Initiative on global parasite control, Japan advocated for international partnerships with several agencies for the development of school health programs in Southeast Asia since 1997.

Aim: Through a strengthened collaboration with international organizations, countries such as the Lao PDR, Cambodia, the Philippines, and Thailand have created and implemented school health programs on nutrition, sanitation, and deworming, among others.

Results: In addition to school health program formulation and implementation, the expanded network in Southeast Asia led to amore capacitated school health personnel, with many workers in the education and health sectors benefitting from the training programs jointly held by collaborating organizations

The Development of Family Empowerment Model Based on Health Promotion to Improve Nutritional Behaviour in Preventing Childhood Stunting

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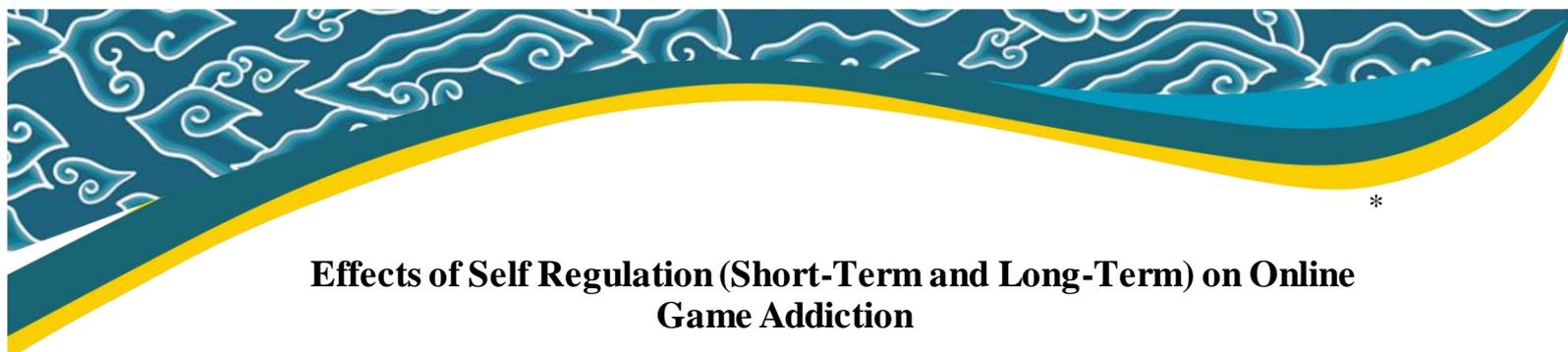
Background: Empowered families consistently provide appropriate nutrition to prevent childhood stunting.

Aim: This study was aimed to develop a family empowerment model based on health promotion to improve nutritional behaviour in preventing childhood stunting.

Methods: The study used an analytic observational design involving a pair of mothers and their youngest 12-23 months old children, who are registered at Posyandu in Surabaya City. A total of 146 respondents were taken using cluster sampling technique across 6 health care centers in Surabaya City (Mulyorejo, Klampis Ngasem, Tenggilis, Ketabang, Dupak, and Sememi). The variables in this study were prior related behaviour, child factors, family factors, cognition and affection, social support, commitment, empowerment, and nutritional behaviour to prevent childhood stunting. Data were collected by using a questionnaire for three months. The data obtained were then analyzed by using the Partial Least Square (PLS) test.

Results: The study revealed that: prior related behaviour, child factors, and family factors influence cognition and affection; cognition and affection as well as social support influence commitment; commitment influence empowerment; and empowerment influence nutritional behaviour to prevent stunting (T-stats>1,96).

Conclusion: Empowerment is essential to support commitment, so family's nutritional behaviour can be improved. The family empowerment model based on health promotion can be used as a nursing intervention to improve family's nutritional behaviour in preventing childhood stunting and supporting child's optimal growth and development.



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Effects of Self Regulation (Short-Term and Long-Term) on Online Game Addiction

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Aim: This study describes the effect of self regulation (short term and long term) on online game addiction in adolescents who join the E-Sport Community in Kupang City.

Method: The sampling technique used total sampling with a total sample of 488 participants and then analyzed using Structural Equation Modeling (SEM).

Results: This research show that there is a significant influence between self regulation (short term and long term) on online game addiction.

Keywords: (Self Regulatory (Short-term dan Long-term), Adiksi Game Online.



The Effect of Stress on Musculoskeletal Disorders on Students during Online Lectures

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Background: The stress that occurs during online lectures can trigger Musculoskeletal Disorders (MSDs).

Aim: This study aims to examine the effect of stress on MSDs in college students during online learning.

Method: This study is an observational analytic study with a cross-sectional design. The sample amounted to 264 people who were taken by simple random sampling technique.

Results: The results showed that there was a significant effect of the stress variable on MSDs by 10.6% and every 1% increase in the stress variable in the normal category would increase the probability of MSDs in the moderate category by 0.44%, and MSDs in the severe category by 0.12%.

Conclusion: Stress management is very necessary for students to prevent the severity of stress and symptoms of MSDs for convenience when carrying out online lectures.

Keywords: Stress, MSDs and Online Lectures



SCOPE : COVID-19

52nd Asia-Pacific Academic Consortium for Public Health (APACPH) Conference

*ENHANCING PUBLIC HEALTH STRATEGIES DURING INDUSTRIAL REVOLUTION 4.0
AND THE COVID-19 PANDEMIC*

Analysis of Factors Influencing Anxiety in Midwife Public Health Center at Bungah Puskesmas During Pandemi Covid-19 (Study at The Bungah Public Health Center, Bungah District, Gresik Regency)

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Background: Midwives must continue to carry out their duties in checking the health of mothers and children and childbirth during the COVID-19 pandemic. Midwives must continue to interact with mothers and children. This condition makes them feel anxious about the risks they face. The prevalence of anxiety for health workers during the pandemic is 44.7%.

Aim: This study aims to analyze the influence of factors that influence anxiety in midwives at the Bungah Gresik Health Center during the covid-19 pandemic.

Method: This type of research is an analytic study with a cross-sectional approach. The sample in this study were all midwives at the Bungah Health Center as many as 32 respondents. The variables in this study were age, education, knowledge, availability of PPE, and anxiety measured using the Hamilton Anxiety Range Scale (HARS) questionnaire, and the data were analyzed using binary logistic regression statistical tests.

Result: The results showed that 50% of midwives experienced anxiety. Most (68.75%) midwives are >35 years old. 84.37% of midwives have Diploma 3 education, 59.37% of midwives have good knowledge, and most (68.75%) midwives stated that PPE is complete. The results of statistical tests showed that there was no significant effect between education (OR 0.211) and the availability of PPE (OR 1.122) with anxiety. While age (1.877) and knowledge (0.306) affect anxiety.

Conclusion: Age and knowledge have an effect on anxiety in midwives at the Bungah Health Center, midwives with age > 35 years are at risk of experiencing anxiety by 1.87 times greater than midwives with age <35 years, and midwives with good knowledge are at risk of experiencing anxiety by 0.3 times greater than midwives with poor knowledge.

Keywords: Anxiety, Midwife, Covid 19 Pandemic

Overview of COVID-19 Reinfection in Front-Line Health Workers in Bandung City, West Java

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Background: The Covid-19 pandemic continues with the number of cases increasing cumulatively. Of the confirmed cases of Covid-19, there have been several reinfection incidents in which reinfection occurred twice or even more. Meanwhile, information on the incidence of reinfection cases of Covid-19 is still limited.

Aim: This study aims to describe the characteristics of reinfection of Covid-19 cases among front-line health workers in Bandung City based on the variables of person and time.

Method: The method used in this study used a case series using a questionnaire. Questionnaires were distributed online and filled out voluntarily by front-line health workers who were re-infected with Covid-19 during 22-29 May 2021. In addition, Covid-19 reinfection was proven by laboratory examination results.

Result: Of the 31 reinfection cases, the mean time span to reinfection was 150 days. Of the 31 cases, only 7 people had symptoms in the first infection while at reinfection 14 people had symptoms. Of these, only 4 people had symptoms both at the time of their first and second infection. In addition, the dominant symptoms in the first infection were anosmia (100%) and fever (85.71%) while in the second infection was fever (69.23%), anosmia (57.14%), and dry cough (57.14%).

Conclusion: In conclusion, the second infection tends to produce more symptoms than the first infection. There is no guarantee that those affected by covid-19 will be immune from covid-19 attacks. Health protocol is mandatory to be implemented to prevent transmission, especially for cases that have been infected.

Keywords: Reinfection, Covid-19, Front-line Health Workers

Analysis of Pandemi Covid-19's Risk Control in Cilandak Marines Hospital

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Background: The number of confirmed positive patients found at the Cilandak Marine Hospital was increased by the time. In the period June - August 2020, the total patient suspect Covid-19 was 356 people with 107 confirmed positive patients.

Aim: This study aims to analyze the risk control of Covid-19 pandemic disaster at the Cilandak Marine Hospital.

Method: This research was a qualitative research by examining the changing situation regarding the preparedness of the Cilandak Marine Hospital in anticipation of the COVID-19 pandemic. This case study was conducted through in-depth interviews, document review and observations. This study conducted through the problem analysis method. Analysis method to found the priority problem used Focus Goup Discussion and CARL (Capability, Accessibility, Readiness dan Leverage).

Result: This study found that the priority problem was the control of the risk of the COVID-19 epidemic disaster in the Cilandak Marine Hospital which not optimal. The causes of the problem were the manual documents and SPO have not been updated, limited budget, gaps between the policies and chain of command, the guidelines and procedures have not been running well, and the logistics for the health materials and non health materials were limited. An alternatif priority solution to solve this problem was update the document and SPO that related SOP to pandemic Covid -19. Cilandak Marine Hospital needs to update all regulations related to disaster mitigation, and recalculate with the Hazard and Vulnerability Assessment (HVA), Hospital Safety Index (HSI). The priority for the solution is to provide input for changes to the Cilandak Marine Hospital Disaster Plan.

Conclusion: The conclusion of this study was the risk control process for the Covid 19 pandemic disaster at the Cilandak Marine Hospital is not yet optimal because there has been no updating of the guidelines for the Hospital disaster Plan. Recommendations of prevention and mitigation (reducing the impact of risk), namely implementing an updated Hospital Disaster Plan and derivative regulations based on the updated Hospital Disaster Plan.

Keywords: Covid-19, Disaster risk control , Problem Solving circle, Hospital Disaster Plan

Relationship of Environmental Factors, Community Behavior with Larva Free Number (LFN) and Cases of Dengue Hemorrhagic Fever (DHF) in Surabaya During the COVID-19 Pandemic

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Background: In the midst of the ongoing COVID-19 pandemic, Indonesia is faced with another health problem, namely dengue hemorrhagic fever (DHF). Until now, dengue hemorrhagic fever (DHF) is still an important public health problem in Indonesia and often causes extraordinary events with large deaths. As a vector for transmitting mosquitoes is *Aedes aegypti*.

Aim: To analyze the larva free rate (ABJ) and the emergence of dengue cases amid the COVID-19 pandemic in the endemic area of Surabaya.

Method: This type of research is cross sectional with a sample size of 200 households.

Result: The results showed that environmental factors related to the larvae free Number (LFN) DHF during COVID19 were climate factors (temperature, humidity and rainfall), population mobility, population density, occupancy density, presence of garbage in public places, presence of rainwater channels, presence shrubs of plants and the presence of containers.

Conclusion: Community behavior factors related to the existence of the dengue vector are the use of mosquito nest cleaning (MNC) and 3M plus.

Keywords: Environmental factors, community behavior, larva free Number (LFN) for dengue cases during the COVID-19 pandemic

Assessing Types And Causes Of Domestic Violence Against Women During Covid-19 In Bandung Urban Slums, Indonesia

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Background: Physical distancing was enforced when Covid-19 cases soared. Limited personal movement and people confined to homes, this raises concerns about the potential increase in domestic violence. The victim was trapped by the perpetrator of the violence while in the house.

Aim: This study was conducted to describe the types of domestic violence experienced by married women who live in urban slums in Bandung, Indonesia and to assess the causes.

Method: A total of 300 married women living in the urban area of Bandung, Indonesia were selected as the study sample using purposive technique sampling. This study used a cross-sectional design using structured interviews. The analysis in this study uses the Multivariate Logistics Regression test using STATA version 16.

Results: As many as 78.3% of married women have experienced domestic violence both emotionally, physically and sexually. The most common forms of mild emotional violence are husbands not allowing their wives to meet their friends (25.7%), moderately emotional, namely husbands who always try to find out where their wives are when they are out of the house (58.0%), and violence high emotional ie husband left the house for days or weeks without giving money (6.7%). The most physical violence experienced was twisting the arm/pulling the wife's hair (3%), the most sexual violence was forcible sexual intercourse when the wife was not interested (11%). Factors causing domestic violence are family income and husbands who have a habit of consuming alcohol. Families who have an income of less than 2 million per month have a higher risk of experiencing domestic violence (p-value: 0.004; OR:0.38), in addition, households with husbands who consume alcohol have a higher risk of experiencing domestic violence (p-value:0.050;OR:0.13).

Conclusion: Significant relationship were found between the incidence of domestic violence with low incomes and husbands who drink alcohol. Violence can have a negative impact on women's physical, mental, sexual and reproductive health. The health sector has an important role to play in providing comprehensive health care to women victims of violence.

The Implementation of Geriatric Mobile Screening Apps During Pandemic Covid-19 in Rampal Celaket Primary Health Care

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Background: During Pandemic Covid-19 geriatric should be given more attention because of their potential condition to comorbid. Nevertheless, data of geriatric in Primary Health Care (PHC) still not well recorded. The collecting and reporting geriatric data was still using manual system.

Aim: the aim of this study was to implement Geriatric Mobile Screening Apps in collecting and reporting data of Geriatric in Rampal Celaket PHC

Method: this study used quantitative study design. Population of this study was geriatric cadre in Rampal Celaket district. The sample were 50 cadres (due to pandemic Covid-19 situation), who trained in using application (the apps has already developed and tested using TAM test in previous research). Then, they were responsible to distribute the knowledge to other geriatrics within 6 weeks. There was questionnaire which spreaded to the respondent as an instrument of this study. Several question was given in the questionnaire to measure respondent's knowledge about the application. Data of geriatric coverage was also collected after 6 weeks since the implementation of the apps. Quantitative data was analyzed univariate and presented in descriptive result.

Results: There were 100% (50 cadres) respondents attend the training and already trained geriatrics in their district. About 60% of respondents had good knowledge (score ? 80) and the other 40% had fair knowledge about the apps. The geriatric data coverage was evaluated within 6 weeks. There were 58% of geriatric data collected after 6 weeks.

Conclusion: lansia dapat menggunakan aplikasi ini untuk mengumpulkan dan melaporkan kesehatannya secara mandiri. Aplikasi ini sangat membantu PHC and health district to obtain accurate and timely report. However, the apps need to be improved further and sustainable socialization to geriatric was needed.

The Psychological Impact Among Health Workers in Effort to Facing The Corona Virus Pandemic (Covid-19) in Indonesia

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Background: The corona virus pandemic in Indonesia has a psychological impact among health workers who are working in hospital and caring for patients with positive Covid 19.

Method: This study samples were health workers uses snowball sampling. They were responded to the DASS-42 questionnaire, with the total of 644 respondents.

Result: The results of this study showed that about 65.8% of respondents experienced anxiety due to covid 19 outbreak, There were 3.3% experienced extremely severe anxiety and 33.1% experienced mild anxiety. Whereas those experienced stress due to covid 19 outbreak were 55%, extremely severe stress levels were 0.8% and mild stress were 34.5%. Health workers who experienced depression were 23.5%. There were 0,5% with very severe depression and mild depression were 11.2%. There is a closed correlation between anxiety ($r = 0.152$ $p = 0.000$), stress ($r = 0.086$ $p = 0.029$), and depression ($r = 0.111$ $p = 0.005$), to the worried of being alienated if infected corona virus (covid 19).

Conclusion: The Indonesian government must handle is that occurs in health workers in particular and can provide protection to medical personnel so that they do not feel alienated by those around them.

Public Acceptance of the COVID-19 Vaccination Program in the Central Lombok Region, NTB Province

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Background: Currently, the government's effort to tackle the spread of COVID-19 nationally is by implementing a COVID-19 vaccination program in stages throughout Indonesia. However, the community has been faced with various dilemmas, this can be seen from the perception of the community that is faced with various kinds of information that are developing regarding the COVID-19 vaccination program.

Aim: This study aims to describe the public's acceptance and perception of the COVID-19 vaccination program in the Pringgarata sub-district, Central Lombok Regency, West Nusa Tenggara (NTB) Province.

Method: This research is a survey research with a quantitative descriptive design. This research was conducted in the Pringgarata sub-district, Central Lombok Regency, West Nusa Tenggara Province (NTB). The sample in this study amounted to 50 respondents with a purposive sampling technique.

Results: Based on the results of research in the Central Lombok district, West Nusa Tenggara Province, it shows that most respondents have a fairly good perception of the COVID-vaccination program (86%), then as many (92%) of respondents already have good knowledge of the types of vaccines currently circulating in Indonesia, and as many as (62%) of respondents said they agreed with the COVID-19 vaccination program being implemented by the government at this time, while around (38%) respondents did not agree with the COVID-19 vaccination program.

Conclusion: Most respondents have a fairly good perception of the COVID-19 vaccination program currently being carried out by the government, but this needs to be maximized so that acceptance of the COVID-19 vaccination program is more widely accepted by involving the community as partners, then promotion strategies maximized health through various media.

Keywords: COVID-19; Community Acceptance; Vaccine.

The Spatial Determinant of Maternal Mortality in East Java Province During The Covid 19 Pandemic

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Background: Maternal mortality as the most important health problem in Indonesian. In 2018-2019, the maternal mortality of East Java Province had second rank in Indonesia. The Covid 19 pandemic affected all aspects of life and almost all groups of society, including pregnant, childbirth and postpartum woman. Physiological adaptation affects the vulnerability of mothers to Covid 19 infection. In addition, the high birth rate with limited access of health resources due to the pandemic has led to an increase of maternal mortality. Health services accessibility that are limited by the government for the transmission of Covid 19 prevention and social restrictions in each region increase the risk of maternal death due to undetected pregnancy complications, which were actually still very large in the pre-pandemic period.

Aim: This study aimed to analyze the effect of spatial determinants that consist of antenatal care, childbirth services, post-partum services and demographic factors on maternal mortality in East Java Province before and during the Pandemic Era.

Method: This study was an unobstrusive measure research with the unit of analysis in this study were all pregnant, childbirth and postpartum women that spread accross 38 districts in East Java Province during 2020. Data were analyzed using Geographically Weighted Regression.

Result: The results showed that maternal mortality in the province of East Java had a spreading pattern, thus indicating a spatial influence. The variables of childbirth services by health personnel and antenatal care had a significant effect on maternal mortality. There are 5 groups of districts that show a similarity of significant factors. This result showed that the diversity of health service accessibility in each region affects maternal mortality during the Covid 19 pandemic in East Java province.

Conclusion: Childbirth assistance by health personnel and accessibility of antenatal services during the Covid 19 Pandemic affected maternal mortality. The diversity of accessibility influenced by local government policies and community perceptions in each region about Covid 19 pandemic will affect the accessibility of antenatal services and childbirth so it can be dangerous for the safety of pregnant, childbirth and postpartum woman.

Effect of Leadership Management and Organizational Work Culture on Electronic Medical Records During the COVID-19 Pandemic in Indonesia

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Background: The use of information technology especially Electronic Medical Record (EMR) in the health sector has become a trend in health services globally. The incompleteness of filling in electronic medical records, which is increasingly not showing the implementation according to standards. Meanwhile, every month there are more pandemic sufferers. Become an important thing to research. Electronic Medical Records are expected to increase the effectiveness and efficiency of health administration services in Indonesia.

Aim: Analyzing the role of health service organizations, human resources, infrastructure, leadership governance, and organizational work culture that have an important role in implementing electronic medical records, especially when faced with the COVID-19 pandemic.

Method: The study population consisted of 232 officers in charge of directly filling out EMR in the outpatient unit. Meanwhile using the stratified random sampling technique, 105 officers were selected as samples for this study. A cross-sectional study was used to assess the significance of latent constructs with indicators using Partial Least Square through cross-loading testing, convergent validity, average variance extracted correlation, Cronbach's alpha, composite reliability, outer loading, and bootstrapping significantly at 95% CI > 1.96 and P-value < 0.05.

Results: The results showed that positive EMR readiness was predominantly indicated in male officers aged 36-42 years, with university education, and had worked for > 5 years. Organizational work culture and leadership management have a T-statistic value of 3.077 and 2.218, respectively, with means > 1.96. Meanwhile, infrastructure and human resources have a value of 0.942 and 0.448, respectively, with means <1.96.

Conclusion: Based on the result, organizational work culture and leadership management have significant effect on EMR readiness during the COVID-19 pandemic in hospitals compared to human resources and infrastructure with opposite results. Therefore, further research is needed in relation to constructs that showed no significant effect as there might be other mediating variables that needs to be added. Furthermore, it is necessary to improve standard procedures and implement Electronic Medical Record instructions as well as leadership support in providing rewards and punishments to improve administrative services during the COVID19 pandemic in Indonesia.

The Risk of medical Record Officer During Pandemic Covid-19 in Primary Health care in Indonesia

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Background: As the frontliner in providing healthcare to patient in Primary Health Care (PHC), Medical record officers especially registration officers facing risk of Covid-19 transmission. Their direct interaction were risky since most of PHC still using manual registration system in their services.

Aim: purpose of this study was to describe the correlation between risk of Covid-19 transmission and age, gender, position occupation and result of Covid-19 laboratory test among medical record officer in PHC in East Java dan East Kalimantan within 2020.

Method: this study used quantitative study design. The data was collected prospectively using online by G oogle form. Subject of this study was medical record officer who comes from East Java and East Kalimantan. Google form was spreaded within 3 weeks and there were 175 respondents participate in this study. Dependent variable was Risk of Covid-19 and independent variabel were age, gender, position occupation and result of Covid-19 laboratory test (PCR test). Data was analyzed using 2 (two) steps. First, to calculate the risk of Covid-19 using formula (knowledge + use of self protection equipment) - (interaction + activity). Second, to analyzed the correlation between dependent and independent variable using Chi square test.

Result: From 175 respondent, there were 56 officers (32%) were in very high risk, then there were 45 officers (25,7%) in high risk, about 43 officers (24,6%) in average risk, about 28 officers (16%) in low risk and the rest 3 officers (1,7%) in very low risk. Nevertheless, there were no correlation between the risk of Covid-19 and the age (P value = 0,075), Gender (P value = 0,604), Occupation position (P value = 0,322) and Covid-19 laboratory test (P value = 0,475).

Conclusion: There was more medical officers in very high risk to transmission of Covid-19. Since there were 3 (three) medical officers confirm positive to Covid-19 case base on their swab test result, it's difficult to ignore the result of calculation risk to the medical record officers as the frontliner in PHC . The medical record officers were suggested to increase their protection base on their risk to decrease the risk of transmission.

Utilization of The Healthy Indonesia Program with a Family Approach Data during the Covid-19 pandemic

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Background: The Healthy Indonesia Program with a Family Approach (PISPK) is a family visit activity carried out by puskesmas to determine the condition of twelve health indicators, and record them in the Family Health Profile (Prokesga). Elderly, toddlers, pregnant women, comorbid individuals are a vulnerable group during the Covid-19 pandemic. PISPK contains data on individual characteristics, hypertension, tuberculosis, people with severe mental disorders per region/village that can use as priority targets for efforts to cut the Covid-19 transmission chain.

Aim: To describe the use of PISPK data in mapping the vulnerable groups and monitoring cases during the Covid-19 pandemic and the obstacles faced.

Method: Secondary data analysis of PISPK and patient visits at Puskesmas Kalibawang Kulonprogo using SPSS v.21 (IBM, New York, Chicago).

Results: PISPK data can be used to map vulnerable age groups (elderly, toddlers), pregnant women, comorbidity. Age group 55 years was 27.6%, toddlers 5.4%, pregnant women 1.3%, comorbid (hypertension diagnosed 7.8%, hypertension taking regular medication 49.7%; measuring hypertension 33.8%), Pulmonary tuberculosis 89 people (0.4%) with 65% seeking treatment according to standards, people with severe mental disorders (ODGJ) 197 (0.7%). The data can identify the priority targets for preventing the spread of Covid-19 included vaccination targets, and it can also present by RW/village area. The output of combining PIS PK data and data from patients confirmed by Covid-19 (4 people) show that there are household members who have children under five and hypertension. Data can use as a basis for case management for self-isolation or hospitalization in an emergency/referral hospital. Obstacles experienced in the analysis like: The Healthy Family application has not shown updating data longitudinally, the use of Identity Number (NIK) is not uniform in program reporting, making it difficult when combining PISPK data, and programs, limited human resources.

Conclusions: PISPK data is useful in mapping the vulnerable groups in the prevention of transmission, and monitoring of Covid-19 cases. User-friendly applications are required, using a single identity number in reporting, as well as the personnel who are competent in conducting data analysis.

Keywords: PISPK; vulnerable groups; comorbid; Covid-19

Hand Hygiene Compliance among Health Worker in Hospital during Covid-19 Pandemic

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Background: The COVID-19 pandemic raises awareness of the importance of hand hygiene. The practice of hand hygiene is an important part of preventing the transmission of the COVID-19 virus. According to the CDC's recommendations, hand hygiene using a hand sanitizer for 20 seconds is the best defense in preventing the viral infection of health workers after having interaction with patients in a health service environment. Hospital being healthcare facility who prepared for critical respond must be increasing the awareness during this pandemic

Aim: This study aims to find out the changes in hand hygiene compliance among health workers in Hospital before and during the SARS COV-2 pandemic.

Method: This study used a prospective cohort design. Hand hygiene practice was measured from January 2019 to December 2020 in a private hospital which non-referral hospital for COVID-19. The study population was 67 health workers. All of them were audited randomly by being numbered according to the order of employment. We measured the compliance based on moment and step of hand hygiene of healthworker. The analysis was conducted using a chi-square with an odd value ratio that was utilized to compare the hand hygiene compliance of health workers before and during the pandemic.

Results: Based on the observation, hand hygiene practice among health workers before the pandemic was lower than during the pandemic (87% vs 94%). OR value of 0.439, 95% CI, 0.354-0.544, $p < 0.00001$ indicates that the pandemic causes the increase in hand hygiene compliance by 0.439. an OR value < 1 shows that pandemic is a protective factor that increases hand hygiene compliance among health workers.

Conclusion: COVID-19 has a role in improving hand hygiene habits among health workers in hospitals. Awareness of preventing the transmission in hospitals has increased during the COVID-19 pandemic even though the risk of hospital infectious diseases has always been a part of the "Infectious Disease Prevention and Control" program.

Keywords: hand hygiene, healthcare workers, compliance, unit covid-19

Safety evaluation performing colorectal cancer surgery during COVID-19 pandemic : a Systematic review and Meta-analysis

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Background: Many studies with limited subjects declared that surgery for colorectal cancer (CRC) patients was safe. There is no evidence to support the safety of CRC surgery during COVID-19 pandemic.

Aim: To search evidence about safety performing colorectal cancer surgery during COVID-19 pandemic by assessing occurrence of postoperative complications, incidence of nosocomial Covid-19 infection.

Method: We search publications in PubMed, Google Scholar, CINAHL, ProQuest and Oxford Journals Database up to May, 26th, 2021 with keywords: “colorectal cancer surgery”, ”CRC surgery”, “colorectal neoplasms surgery”, “COVID-19”, ”SARS-CoV-2”, ”postoperative complications”, ”postoperative morbidity”. Inclusion criteria were over 18 years old adult who underwent CRC surgery during pandemic COVID-19 from cohort studies, written in English, published from January 2020 – April 2021. Incomplete data, duplication journals, editorial and commentary article, were excluded. Risk of bias was assessed by ROBIN-I assessment tool. Rev-Man 5.4 and STATA 16 were used to perform data analysis.

Results: Ten articles (n=16,579) met eligibility criteria. Male dominantly with mean age 60 years old. During pandemic COVID-19, 3 studies (n=307) reported risk of major complication was 0-7.7% and risk of minor complication was 22.4-43.4%. The cumulative incidence of nosocomial COVID-19 among CRC patients was 0-4%. From meta-analysis, we found the risk of having postoperative major complications (2 studies, n= 4,439) during Covid19 pandemic was 0.9 (95% CI 0.7-1.15) times lower than before pandemic. Cumulative incidence of nosocomial COVID-19 infection among CRC patients (4 studies, n=2,860) was 2% (95% CI 0.01 – 0.04).

Conclusion: Performing CRC surgery during COVID-19 pandemic were safe, assessed by lower risk of major complications and low incidence of nosocomial COVID-19 infection among patients. Small number of publication included in our meta-analysis become limitation of the study. PROSPERO registration number CRD42021241907

Keywords: colorectal cancer surgery, COVID-19, nosocomial infection, postoperative complications, systemic review

The Readiness of Online Registration Implementation in Response to Pandemic Covid-19 in Malang Primary Health Care

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Background: Most of Primary Health Care (PHC) in Malang was still use manual registration system. The length time of waiting was lead to risk of transmission of disease especially during Covid19 pandemic.

Aim: The aim of this study was to analyze readiness (5M : Man, Method/Policy, Material/Software and Machine/ Hardware, Money) of online registration implementation at PHC in Malang.

Method: Design of this study was quantitative descriptive and qualitative method. Population of this study was doctors, medical record officers and patient in 16 PHC in Malang. There were 400 respondents which consist of 16 doctors, 32 medical record officers and 352 patient/accompaniant coming for medication from 16 PHC. For quantitative research, there were questionnaire as an instrument of reaserch which spreaded to the repondents. Then, there also indepth interview guidance used for qualitative study. Quantitative data was analyzed univariate and presented in descriptive result, while qualitative data was transcribed then presented base on theme.

Result: 78% Head of PHC agree that implementation of online registration was needed, 85% registration officcers agree to use online registration in PHC. about 92% of patient agree that registration officer can provide faster services. About 80% of patients have readiness to implement online registration. From the side of PHC, the study showed that 60% PHC in Malang have sufficent human resource and ready (Man), about 25% PHC already have online registration policy (Method/Policy), about 25% PHC have supporting operation system and application (Material/Software), about 50% PHC still don't have supporting computer and (Machine/ Hardware), about 25% PHC having supporting budget (Money).

Conclusion: this study showed that PHC (head of PHC and registration officers) and user (patients) were ready to implement online registration. Nevertheless, method/policy, material/software, machine/hardware and money still insufficient to support.

Do Adolescent Students Need Vaccination for Preparing Offline School? : A Systematic Review Study

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Background: Study of COVID-19's vaccination to adolescent still limited. Although the morbidity and mortality number in adolescent less than adults and another vulnerable group, vaccination still needed to prevent the spreading of COVID-19 in their school and community. In many country, school will be held by offline as far as the decrease number of active case was reported.

Aim: To elaborate efficacy COVID-19's vaccination on adolescent and older during COVID-19 pandemic.

Method: We searched only original article in pubmed about COVID-19's vaccination and its complexity during pandemic COVID-19. We used purposive sampling to find relevant article and develop PICOS' (Population, Intervention, Compare, Outcome, Study Design) structure. By using MeSH (Medical Subject Heading) to choose relevant keywords and its synonym. After all, PRISMA (Preferred Reporting Items for Systematic Review and Meta Analysis) found the transparency literature. Data were summarized descriptively. For minimizing bias' effects, we collected all article by selected systematic, transparent, and explicit terms.

Result: We looking for article by filtering with free full text, associated data, research field only on human, adolescent, one year after WHO declared the pandemic COVID-19 in the world. There are 47 article which analyzed. And the result only 3 relevant article with our study. From them we knew that vaccination efficacy more than 95% (2 studies) and 81,3% (a study) with no significant side effect reported. 46.885 adolescent and older had injection with several kind vaccination by Randomized Control Trial study. United State, China, United Kingdom, Brazil, and South Africa conducted those massal vaccination. Excluded factors are the respondent's age, the title and subject are different with our study, a retrospective study, and confirmed COVID-19 respondents.

Conclusion: COVID-19 vaccination's efficacy is high on adolescent and older with no significant side effect reported.

Keyword: adolescent, side effect, school, COVID-19's vaccination

The Psychological Experience of Frontline Nurses Amid the COVID-19 Pandemic

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Background: The severe acute respiratory syndrome coronavirus 2 (COVID-19) is spreading rapidly, bringing pressure and challenges to frontline nurses, especially at the beginning of the pandemic. In addition, frontline nurses who treat COVID-19 patients have a high risk of infection because they were often exposed to infected patients. As the virus continues to spread, frontline nurses were faced with situations that can affect psychological readiness.

Aim: The purpose of this study was to explore the psychological aspects of frontline nurses caring for COVID-19 patients.

Method: In-depth interviews were conducted with 16 frontline nurses providing care for COVID-19 patients at a referral hospital in Surabaya from August to October 2020. Interviews were conducted face-to-face or by telephone and analyzed with Colaizzi.

Results: The results showed that the psychological experience of frontline nurses caring for COVID-19 patients can be summarized into 4 themes. First, the emotions that appear in the early stages consisting of fear and anxiety about being infected COVID-19 which was a new thing that still needs further understanding regarding the disease, as well as concern for patients and family members. Second, selfadapting includes psychological and life adjustments, team and family support. Third, we find a journey to explore the role of nurses in the midst of a pandemic, which includes increasing compassion and gratitude, developing professional responsibility, and self-reflection. Finally, we show that positive emotions occur simultaneously with adaptation to situations.

Conclusion: We conclude during an epidemic outbreak, positive and negative emotions of frontline nurses happened to be one. Frontline nurses were able to take lessons and interpret their main roles. Self-coping styles and psychological adaptations play an important role in maintaining the mental health of nurses.

Keywords: COVID-19, PPE, health worker, health services, good health

Fisherman's Quality of Life: The Decline Due to Covid-19 Pandemic

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Background: The COVID-19 pandemic has made a big change on fishermen;s lives. Fishermen, as informal workers, are vulnerable to a decline in the quality of life. Fishermen's quality of life is lower than other professions before the pandemic. Then, it becomes even lower during the pandemic.

Aim: The objectives of this study was to assess the differences in fishermen's quality of life before and during the COVID-19 pandemic.

Method: The sample in this study were fishermen in the Kenjeran area, as many as 70 people, who were obtained using a simple random sampling technique. The variables in this study are individual characteristics, job characteristics and quality of life. The data obtained by using a questionnaire. Quality of life was measured using the Quality of Life BREF (WHOQOL-BREF) questionnaire. Furthermore, quality of life is measured based on physical, psychological, social, and environmental dimensions. Data were analysed using the Wilcoxon Signed Rank test.

Results: The results showed that the mean score of quality of life before the pandemic was 70.83 then it decreased to 42.71 during the pandemic. There was a significant difference in the quality of life of fishermen ($p = 0.000$) between before and during the COVID-19 pandemic.

Conclusion: Then, from the data obtained, it stated that the fishermen experienced a decline in all dimensions of quality of life. The results of this study can be used to determine adaptation strategies for fishermen to improve their quality of life.

Keywords: Quality of life, fisherman, COVID-19

Transfer of Function of The Community Health Center as An Emergency Covid-19 Hospital as An Alternative Solution to Overcome The Problem ff Limited Places for Covid-19 Patient Services

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Background: The Covid-19 pandemic is an extraordinary global catastrophe. The fluctuation of the case often makes the stakeholders confused, wherein this case one of them is the Health Office that is not followed by a good emergency plan. Tulungagung Regency is also a district that is affected by the extraordinary Covid-19 Pandemic, indicated by its fluctuating zoning status. The number of cases that have occurred to date is 3,087 cumulatively, with a case death rate of 2.1% and a fertility rate of 94% (Data Release May 10, 2021).

Result: One of the efforts to deal with Covid-19 is the provision of health service facilities. The capacity of the Dr. Iskak Hospital, which has been appointed as the Covid-19 Referral Hospital, is only able to accommodate 180 patients. The Covid-19 emergency hospital must be able to fulfill the elements of functioning as a quarantine place and to handle mild and moderate cases. It is decided that patients with no symptoms are quarantined at the UIN (State Islamic University) Tulungagung student dormitory that is not in use, while patients with mild symptoms will be brought to several Community Health Center (Puskesmas) which were converted to Covid-19 Emergency Hospital. The transfer of the Community Health Center's function as a Covid-19 Emergency Hospital is proven faster in the manufacturing process, more cost-efficient, not violating existing regulations, and able to overcome the shortage of Covid-19 service places, the proximity of service access, claim costs, with the function of UKM Puskesmas still running.

Conclusion: amid the confusion in finding a solution for the construction of a Covid19 emergency hospital, the Community Health Centers which change their function to the Covid-19 emergency hospital proved to be the answer to the lack of Covid-19 patient service facilities with the advantage of faster in the manufacturing processes, more cost-efficient, not violating existing regulations, and being able to overcome the shortage of Covid-19 service places, the proximity of service access, claim costs and the function of UKM Puskesmas still running.

Keywords: Covid-19, Covid-19 Emergency Hospital, effective solution

The Impact of Covid-19 Pandemic on Emotional and Behavior of Elementary School Children

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Background: Many studies with limited subjects declared that surgery for colorectal cancer (CRC) patients was safe. There is no evidence to support the safety of CRC surgery during COVID-19 pandemic.

Aim: To search evidence about safety performing colorectal cancer surgery during COVID-19 pandemic by assessing occurrence of postoperative complications, incidence of nosocomial Covid-19 infection.

Method: We search publications in PubMed, Google Scholar, CINAHL, ProQuest and Oxford Journals Database up to May, 26th, 2021 with keywords: “colorectal cancer surgery”, “CRC surgery”, “colorectal neoplasms surgery”, “COVID-19”, “SARS-CoV-2”, “postoperative complications”, “postoperative morbidity”. Inclusion criteria were over 18 years old adult who underwent CRC surgery during pandemic COVID-19 from cohort studies, written in English,

published from January 2020 – April 2021. Incomplete data, duplication journals, editorial and commentary article, were excluded. Risk of bias was assessed by ROBIN-I assessment tool. Rev-Man 5.4 and STATA 16 were used to perform data analysis.

Results: Ten articles (n=16,579) met eligibility criteria. Male dominantly with mean age 60 years old. During pandemic COVID-19, 3 studies (n=307) reported risk of major complication was 0-7.7% and risk of minor complication was 22.4-43.4%. The cumulative incidence of nosocomial COVID-19 among CRC patients was 0-4%. From meta-analysis, we found the risk of having postoperative major complications (2 studies, n= 4,439) during Covid-19 pandemic was 0.9 (95% CI 0.7-1.15) times lower than before pandemic. Cumulative incidence of nosocomial COVID-19 infection among CRC patients (4 studies, n=2,860) was 2% (95% CI 0.01 – 0.04).

Conclusion: Performing CRC surgery during COVID-19 pandemic were safe, assessed by lower risk of major complications and low incidence of nosocomial COVID-19 infection among patients. Small number of publication included in our meta-analysis become limitation of the study.

PROSPERO registration number CRD42021241907

Keywords: colorectal cancer surgery, COVID-19, nosocomial infection, postoperative complications, systemic review

Development of Preconceptions Health Modules in Adolescents Based on Information and Communication Technology

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Background: Preconception health is a behavioral and social health intervention for women and couples before conception occurs. Intervention starts from adolescence to improved health and readiness in pregnancy.

Aim: This research is aimed to the development of preconception health modules for adolescents based on Information and Communication Technology (ICT).

Method: Qualitative study of exploration conducted on adolescents in the working area of Sidemen Health Center data collection was conducted in August 2020 against 4 informants consisting of 2 adolescents, 1 head of Public Health Center, and 1 obstetrician specialist. Data is collected by in-depth interview method through online. The data of the results of the study is analyzed thematically.

Result: The results of the interview is obtained 4 (four) themes that are preconception health problems in adolescents, the content of the material of modules, methods of dissemination of information and the place of preconception health services. The teen had never heard of preconception health. Suitable materials presented in the preconception health module in adolescents are the introduction of reproductive devices, menstrual cycles, pregnancy cycles, premarital screening preparations, and preconception health interventions. Preconception health services are provided in private health service, hospitals and public health centers. Nevertheless, preconception health services in adolescents have not been optimally provided. Precisely the media chosen in the dissemination of knowledge about preconception health is face-to-face, lectures, video and book.

Conclusion: Based on this, it can be concluded that this module it is expected to improve the teen's knowledge of preconception health.

Implementing Rapid Antibody Test to Identify Asymptomatic Sars-Cov-2 Infection as Initial Screening in Admitting Pregnant Women, Yes or No?

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Background: Single assessing a patient's history is not adequate to identify asymptomatic Covid-19 pregnant cases, particularly those who require hospitalization services. Therefore, it has to be considered in using regular laboratory examination to find the actual case, but this strategy will be more challenging for the area with limited resources facilitations. Finding the most effective laboratory screening would be helpful advice to solve it.

Aim: To analyze the effectiveness between rapid antibody and universal RT-PCR tests in identifying asymptomatic Covid-19 pregnant cases in low resources settings.

Methods: Case-control study using retrospective data on Covid-19 pregnant women cases over one year, conducted with the paired rapid antibody test and nasopharyngeal RT-PCR SARS-CoV-2 result.

Results: 125 Covid-19 positive cases were identified in admitted pregnant women with most asymptomatic cases (92 cases; 73.6%). Of 265 pregnant cases included in the study, 217 cases had a reactive rapid antibody test (81.89%). There was a significant association between rapid antibody test and RT-PCR SARS-CoV-2 ($p=0.026$) with sensitivity, specificity, PPV, and NPV of 89%, 22%, 38%, and 79%. A rapid antibody test can identify 82 cases more compared to identification through patients' history and symptoms only. Also, this test showed higher significant efficient cost ($p<0.001$) by reducing the overall expense up to 36,180,000 IDR (2,514 USD) or 15% lower than the universal RTPCR SARS-CoV-2 testing strategy.

Conclusions: The implementation of rapid antibody tests in low support circumstances has more advantages than RTPCR SARS-CoV-2 in identifying higher asymptomatic Covid-19 pregnant cases. The test can indicate a higher number of infected patients and it is more effective in cost compared to universal PCR testing.

Keywords: Rapid Antibody Test, Covid-19, Pregnant women

The impact of social support, capacity to receive support, and concerns about child's development on maternal mental health during COVID-19

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Background: The previous study revealed that changes in circumstances due to the COVID-19 outbreak were related to the development of depressive and anxiety symptoms among mothers of young children in Japan. However, how child's condition and external/internal resources related to maternal mental health during the outbreak has not yet been reported and comparable pre-COVID-19 baseline data was lacking.

Aim: This follow-up study aimed to examine the relationships between the development of severe mental distress (Psychological Distress Scale: K6?10) during the COVID-19 and concerns about child's development, capacity to receive support, and available social support resources among mothers of infants/young children in Japan.

Method: In February 2020, a baseline survey was conducted and obtained responses from 4,700 mothers of infants/ young children. In June 2020, a follow-up survey was conducted and obtained responses from 2,489 participants of the original group. Since 521 participants were severe mental distress at the baseline, these were excluded and 1,968 participants were included in poison regression analysis.

Results: At the follow-up survey, 333 (16.9%) of mothers developed severe mental distress and they were more likely to have had concerns about child's development, lower levels of positive attitudes toward receiving support (capacity to receive support), and lower level of available social support resources, adjusted for sociodemographic characteristics, presence of moderate mental distress (K6?5) at baseline, and changes in circumstances due to the COVID-19 outbreak.

Conclusions: The development of severe mental distress among mothers of infants/young children during the outbreak was related to having concerns about child's development, lower levels of positive attitudes toward receiving support, lower level of available social support resources. Providing parenting support, consultation, and rehabilitation via the internet, and exploring approaches to enhance capacity to receive support are expected.

Social Support, Sense of Coherence, Social Capital and Psychological Well-being among Mothers of Young Children during COVID-19 pandemic

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Background: Previously, we reported that existing resources (e.g. availability of social support and social capital), and appraisal of the stressor (e.g. sense of coherence: SOC) could be considered as important factors for maternal well-being.

Aim: This study aimed to investigate how social support, social capital and SOC related to maintaining/increasing happiness among mothers of young children during COVID-19 in Japan.

Methods: The baseline survey was conducted in February 2020, and the follow-up survey was conducted in June 2020. Throughout all 47 prefectures in Japan, 4,700 (100 respondents/prefecture) mothers of infants and/or preschoolers (0-6 years) participated in the baseline online survey; 2,489 of these also participated in the follow-up survey. Poisson regression analysis was performed with happiness as the dependent variable, and its relations to the possible stressors, social support, social capital and SOC were examined adjusted by demographics.

Results: We found that although having difficulty in raising children and changes due to COVID-19 were negatively related to maintaining/increasing happiness, social support, social capital and SOC mitigated such relationships and positively related to maintaining/increasing happiness.

Conclusions: Social support, social capital and SOC may play important roles for maternal well-being during COVID-19. Thus, providing adequate social support, building social capital and strengthening SOC may be effective approaches to get through difficult times such as COVID-19. This study was supported by JSPS KAKENHI Grant Number JP 17H02612

Antiretroviral Therapy Compliance with PLHIV in The Middle of The COVID-19 Pandemic

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Background: In the midst of the HIV pandemic, we are also faced with a new pandemic, namely COVID-19 which started in Wuhan. The presence of the HIV virus makes PLWHA vulnerable to various diseases including COVID-19 because HIV is a virus that attacks the human immune system, so it needs to be balanced with the adherence of PLWHA to antiretroviral therapy as an effort to maintain immunity and reduce mortality and morbidity.

Aim: This study aims to analyze the factors related to the adherence of PLWHA to antiretroviral therapy during the COVID-19 pandemic.

Method: This type of quantitative research is correlational analytic by using a cross sectional design. This study involved 275 PLWHA. Analysis of the relationship between variables was carried out using Spearman Rho to determine the close relationship between research variables.

Result: The results of the statistical test showed that there was a significant relationship between knowledge and risk perception ($p=0.015$), risk perception and behavioral intention ($p=0.000$), outcome expectancies and action selfefficacy with behavioral intention ($p=0.000$). It is known that behavioral intention of adherence to PLWHA in ARV therapy has the closest relationship with outcome expectancies with a correlation coefficient of ($r=0.486$).

Conclusion: The conclusion of this study is that the high and low expectations of individuals have a major role in determining the strength or weakness of the individual's intention to start the early stages of behavior change from risky behavior to healthy behavior, this is also inseparable from the motivation and positive beliefs of individuals in maintaining ARV therapy adherence. in the midst of the COVID-19 pandemic.

Keywords: adherence, ARV, behavior, COVID-19, HIV / AIDS

Adaptation of Maternal Service System in Hospitals In The Pandemic Covid19

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Background: The case of COVID-19 in Indonesia has shown a significantly increasing curve. This condition affected the regulation of maternal health services in Indonesia, especially in East Java Province. The health services structure was a challenge in itself, where hospitals must be adaptive during the COVID-19 pandemic. This situation also caused changes in several components of maternal health services.

Aim: Develop guidelines or standards as a new adaptation for maternal services in the era of the COVID-19 pandemic.

Method: The study used an observational descriptively. The report described COVID-19 maternal health services in two hospitals in Surabaya, East Java, Dr. Soetomo (tertiary hospital), and Universitas Airlangga Academic Hospital (secondary hospital). The situation report is based on maternal health service conditions from March to September 2020.

Result: The report focused on maternal services in two hospitals at East Java, Indonesia (Soetomo General Hospital and Universitas Airlangga Academic Hospital) that described five main components, including patient screening, hospital visit policies, intrapartum management, postpartum management, protection and safety for health workers, and funding issues. EWS (Early Warning System) screening recommended by Indonesian Gynecological Obstetrics Association (POGI), by adding some modifications. Maternal service standards must comply with referral system guidelines.

Conclusion: The maternal health service system in East Java Province, Indonesia, especially at Dr. Soetomo General Hospital and Universitas Airlangga Academic Hospitals, showed better adaptive changes. This encouraged the maternal service system can remain stable and consistent with providing quality care services during the COVID-19 pandemic. These changes have been adapted to existing national regulations, the latest evidence, and hospital resource conditions.

Keyword: Covid19, Maternal Service System, Hospital

What Adolescent Health Information Need in The Pandemic Era?

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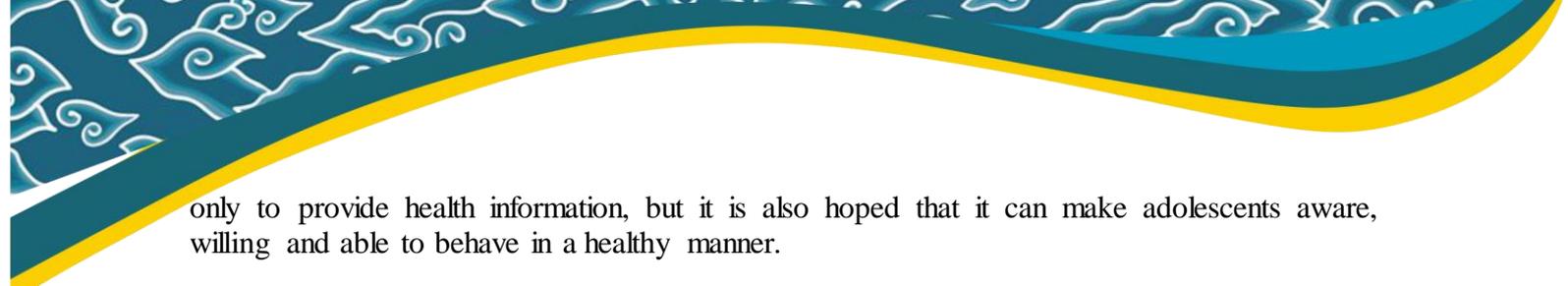
Background: The COVID-19 pandemic entered Indonesia in early March 2020 and it's been a year. This also affects aspects of life in all circles, one of which is adolescent who do all activities in the house. According to WHO, adolescents are the population in the age range of 10-24 years. This pandemic era allows adolescents to do all their activities at home, so that it has a positive to negative impact on adolescents. The Triad of Adolescent Reproductive Health (3 Basic Threats of Adolescent Reproductive Health), namely free sex, drugs, and HIV-AIDS) in the pandemic era, it also needs special attention according to the needs of adolescents in the pandemic era. In the situation of the Covid-19 Pandemic, an analysis of the needs of adolescents regarding the right program to increase the knowledge, attitudes and behavior of adolescents so as to create healthy adolescents who are responsible for their reproductive health independently.

Aim: Therefore, this study aims to identify the needs of adolescents in efforts to prevent Triad of Adolescent Reproductive Health problems in the pandemic era.

Method: This research method is quantitative with cross sectional study design. Data collection was carried out online through a survey monkey. The result was that 251 adolescents filled out the questionnaire. The variables in this study were demographic characteristics (age, gender, status of living with parents, family socioeconomic status), reasons for accessing health information, frequency of accessing health information on different health topics, interest in knowing more about various health topics, benefits access to health information, and satisfaction with the amount of health information received. All variables are presented in the form of a frequency distribution table.

Result: The results showed that the median age of the respondents was 19 (17-22) years, most of them were female (72.9%), lived with their parents (47.8%), the socioeconomic status of the family was 'Quite well-off' category (73.3%). The results of this study also show that the majority of respondents strongly agree that reasons for accessing health information are to improve their health (49%), the most frequently accessed health topic and they are eager to know more about "Nutrition and healthy eating" (20.7% and 41%), they strongly agree that accessing health information can provide benefits to better understand healthy behavior (41.2%), the majority of respondents agreed that they received enough health information (66.5%), they wanted receive more health information (50.6%), and they will use online sources to access health information (57.4%).

Conclusion: Adolescent health information in the pandemic era should match the needs of adolescents in each region. Before there are adolescent health education activities, there is a need for a assessment step. The goal of adolescent health promotion programs is not



only to provide health information, but it is also hoped that it can make adolescents aware, willing and able to behave in a healthy manner.

Keyword: adolescent, health information, pandemic, healthy lifestyle



Evaluation Of The Covid-19 Surveillance System, Gianyar District Health Service

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Background: The implementation of Covid-19 surveillance includes recording, reporting, processing, to the distribution of data and information based on national and regional needs as material for policy making for the prevention and control. The total number of confirmed Covid-19 cases in Gianyar Regency starting in 2021 is 5.405 with a case fatality rate of 2.60% where this figure exceeds the World Health Organization target (2%). This requires a good surveillance system in order to capture suspects and find undiagnosed or unreported cases.

Aim: The purpose is to evaluate the Covid-19 surveillance system. So can be used as input in planning interventions and improving the existing Covid-19 surveillance system.

Methods: Qualitative research conducted at the Health Office and 13 Community Health Centre in Gianyar Regency from February to May 2021. The respondents were surveillance officers. Data were collected by observation and interview techniques. The components evaluated include the stages of input, process and output as well as attributes of the surveillance system. The instrument uses a structured questionnaire with googleform. Data were analyzed descriptively.

Results: The types of reporting forms for epidemiological investigations are not uniform, some health facilities dont have them and only record the chronology of cases by manually. Several methods were used in recording Covid-19 cases, namely 13 out of 15 (86.7%) surveillance officers had used the epidemiological form but the format was not uniform, while the other 2 officers still used manual notes when conducting epidemiological investigations.

Conclusion: The Covid-19 surveillance system in Gianyar Regency has been running but is not optimal due to several obstacles from the registration aspect. So it is necessary to have a similar format for epidemiological investigation reports so that the information collected and reported is the same. And officers only need to fill in the provided variables without writing the chronology manually.

Factors Related to Online Gender Based Violence Among Young People in 10 Provinces in Indonesia During COVID-19

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Background: Data from Komnas Perempuan shows an increase in reports of online gender-based violence in Indonesia during the COVID-19 pandemic.

Aim: This study aim to identify the factors related to the online gender-based violence among young people in 10 provinces in Indonesia.

Method: This study is a cross-sectional study using primary data collected through online surveys. Data collection was conducted in September-October 2020 in 10 Provinces, namely: Jambi, Bengkulu, Lampung, DKI Jakarta, Central Java, DI Yogyakarta, East Java, Bali, NTT and Papua. The research sample was 831 young people aged 18 to 24 years. The variables measured in this study were age, gender, marital status, resident, education level, and online gender-based violence. Online gender-based violence consists of online bullying, online sexual violence, and sharing of photos / videos. Data is presented descriptively and analytically with the Chi-square test to see the factors associated with online gender-based violence among young people in 10 provinces in Indonesia.

Results: The results showed that out of 831 young peoples, most (73.2%) were women. The age group of young people respondents is 21-24 years. Most of the respondents' education level is ? Senior high school . As many as 38 young people (5%) admitted to having experienced gender-based and sexual violence during COVID-19. Among 38 young peoples, 37% experienced bullying, 18% received online sexual violence, and 13% respondent's personal photos/videos was shared without consent. Most of the time, online gender based violence was experienced by young women ($p = 0.000$). Statistically, educational level was the only factor that related to the online gender based violence, particularly sharing personal photos/videos without concern ($p = 0.041$).

Conclusion: The research results in 10 Provinces inform that Gender Based Violence is experienced more by female respondents and particularly in context of the personal photos/videos sharing without consent . The violence that occurs is related to the level of education, therefore it is important to provide additional education to young peoples, both for girls and boys, to prevent the online gender based violence during the COVID-19 pandemic.

Keywords: Covid; violence; young peoples

Maternal Health Care in the New Normal Adaptation

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Background: The impact of Covid-19 on maternal health requires adaptation in providing services. Adaptation is needed to protect health workers and service recipients from the transmission of Covid-19. There has been a decrease in the frequency of antenatal care visits and there has been a change in the pattern of choosing a place of delivery from the hospital to the midwife's independent practice.

Aim: The purpose of this study is to explore the process of adaptation of maternal health services to the basic service order and identify changes in the pattern of choosing maternal service places.

Method: Qualitative research using in-depth interview methods of 20 informants consisting of 10 midwives who served in rural and urban health centres, and independent practice of midwives, 5 pregnant women living in rural areas and 5 pregnant women living in urban areas. Data obtained from in-depth interviews are transcribed, coded, categorized and themed.

Results: During the Covid-19 pandemic period there was a decrease in the frequency of antenatal visits from an average of 6 times to 4 times during the gestation period. There has been an increase in childbirth in midwife selfpractice. The reasons stated by pregnant women are fear of transmission, restrictions on outdoor activities, fear of Covid-19 screening, and worry that there is no companion allowed during childbirth. Adaptation of maternal services is a change in operational standards of Covid-19 risk screening procedures, providing health protocol facilities such as standard personal protective equipment, masks for patients and families, hand washing facilities, distance arrangements in the waiting room, queuing applications, education through WhatsApp and mobile phones. Adaptation and innovation of maternal services in rural areas make use of messaging through mobile fish sellers because not all pregnant women have mobile phones and signal barriers.

Conclusion: Pandemics have the effect of decreasing frequency of antenatal care visits, but childbirth in basic service facilities has increased. Efforts to prevent the transmission of Covid-19 are carried out by adopting and adapting the operational standards of procedures. In rural areas, media innovation is needed to deliver messages to pregnant women.

Keywords: Maternal, Health Care, Covid-19, adaptation

Socio-demographic and Institutional Policy Factors towards Attitude and Behavioural Prevention to COVID- 19 among Worker in East Java Province

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Background: The world is still experiencing the COVID-19 pandemic. In Indonesia, confirmed positive cases are still increasing day by day.

Aims: The purpose of this study was to analyze the relationship between social demographics and company policies with the behavior of preventing COVID-19 workers in East Java Province.

Method: This research is a survey research with a cross-sectional design. The sample of this research was 248 people. Collecting data using instruments, namely in the form of a questionnaire through the google form application which is distributed via WhatsApp group, Facebook and email. The variables studied were age, gender, level of education, type of work, company policy, level of knowledge, attitudes and behavior of respondents.

Result: The results showed that most of the respondents were female, aged 29 to 39 years, with a bachelor's level education. Most of the respondents in this study have good knowledge and attitudes towards COVID19 prevention efforts. While all respondents have a good attitude towards COVID-19 prevention. There was a relationship between age, gender, level of education and attitudes with the COVID-19 prevention behavior of workers in East Java Province ($p < 0.005$). There is no relationship between variables of work types and company policies related to COVID-19 prevention and COVID-19 prevention behavior.

Conclusion: There is a need for a supervisory role and support from fellow workers to remind each other in efforts to prevent COVID-19 for older workers with a lower level of education.

Social Stigma toward COVID-19 Patients in Indonesia (An Online Survey in the Early Pandemic)

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Background: The first case of COVID-19 in Indonesia officially announced by the President in early March 2020, and the numbers of confirmed cases have been increasing until now. As of April 27, 2020, there were 8882 (275 new) confirmed cases of COVID-19, 743 (23 new) deaths. In Indonesia, there are very limited publications that measure COVID-19 stigma using standardized instruments. This is one of the pioneering studies measuring stigma in Indonesian society using a social stigma questionnaire.

Aim: This study aims to explore the social stigma of COVID-19 patients during the pandemic.

Method: This is a cross-sectional study using an online survey, which was conducted in June 2020 or three months after the first case confirmed by the government. The questionnaire contains of social stigma (15 items) and sociodemographic information (9 items). A total of 457 respondents aged over 18 years old throughout 34 provinces in Indonesia were participated. All data analyses were performed using STATA software. Chi-Square was done to observe the significance between variables.

Results: Contextually, a number of false and misleading information has spread widely, especially on social media, which has led to stigmatization of COVID-19 patients. We found that age and gender were significantly correlated ($p < 0.05$). About 48.58% respondents had a high stigma score towards COVID-19 patients (Mean > 15.52). A higher percentage of respondents who had high stigma scores were found more frequently in the younger age group (18-30 years) (60,17%); female (72.69%), and lower educational level (57,65%).

Conclusion: The emergence of COVID-19 as a new disease has resulted stigma in Indonesian society. Health promotion efforts to strengthen literacy are very important, especially in increasing the critical attitude in selecting and processing COVID-19 information from credible sources.

Analysis of Nurses Work Satisfaction in Handling of Covid-19 Patients in Menur Mental Hospital East Java

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Background: During the Covid-19 pandemic, it can cause stress at work, including nurse paramedics. Nurses who treat Covid-19 positive patients have much lower job satisfaction than other paramedics

Aim: Describe the job satisfaction of nurses in handling Covid-19 patients in the Covid-19 Isolation Room, Menur Mental Hospital, East Java Province

Methods: This research is a descriptive study with a cross-sectional design. The sample in the study was nurses in the Covid 19 isolation room at Menur Mental Hospital as many as 78 people. Samples were taken by total sampling. Research variables include demographics and nurse satisfaction in handling Covid-19 patients. Collecting data using the Minnesota Satisfaction Questionnaire (MSQ). The research was conducted in April 2021.

Results: Male nurses are more satisfied than female nurses. The percentage of nurses who said they were satisfied was mostly those who were over 40 years old, which was 23.1%. Nurse education level one is more satisfied than nursing education diploma three. Volunteer nurses who expressed satisfaction were the most compared to contract employees and civil servants, namely 25%. Nurses who worked more than 12 years who expressed satisfaction were the most, namely 19.0%. The unmarried nurses who stated that they were most satisfied were 13.3%.

Conclusion: Nurses in the COVID-19 isolation room are mostly moderate in their job satisfaction.

Keywords: Nurse job satisfaction, Covid 19

Trend Factors of Food Insecurity during COVID-19 Pandemic among Postpartum in West Java

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Background: The COVID-19 pandemic has caused major changes in various aspects of life. The impact has occurred on family life in fulfilling their basic needs, including food needs. Restrictions on activities outside the house resulted in the layoff of a number of employees, which in turn led to changes in household habits. Since workers are now mostly at home, it may change the food consumption patterns. Additional burdens are thought to occur on families who give birth during the pandemic.

Aim: This study aims to answer whether there is a difference in food security (food availability and food accessibility) before and during COVID-19 pandemic. Which trend factors (age at first marriage, contraceptive use, respondent's education, wife's work status, husband's work status, and family income) associated with the change in food consumption pattern (amount of food and quality of food).

Method: This study used a cross-sectional design. The area of the study was purposively chosen in a high level of fertility and low contraceptive use, covered 3 districts / cities in West Java. Subject was not randomly chosen using proportional sampling method. It consists of 280 mothers who gave birth in the last 6 months prior to the survey. The Wilcoxon Signed Ranks Test was applied to analyze the difference of food security before and during COVID-19, and Chi-square test to know which trend factors associated with the change in food consumption pattern.

Result: The results indicate that there is a significant difference (p value 0.000) in food security before and during pandemic. Among the characteristics of the postpartum women, the level of education is significantly (p value 0.002) associated with the change in food consumption pattern.

Conclusion: It is concluded that all families experienced food insecurity during the COVID-19 pandemic. The food security declined into insecurity especially the availability and the accessibility. The women's education level associated with changes in food consumption patterns. It is important for policy makers to provide an education program for the families in order to maintain a good food consumption pattern. Future field study could explore more intervening variables related to food insecurity.

Keywords: food, insecurity, consumption, pattern

The Readiness of Districts/Cities to Controlling Covid-19 in East Java Province, Indonesia

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Background: Local governments need to evaluate transmission rates, the readiness of health facilities, and surveillance capabilities regularly to control Covid 19 morbidity and mortality.

Aim: The study aims to analyze districts/cities readinees relate to epidemiology, surveillance systems, and health facilities to controlling Covid-19.

Methods: The study uses secondary data on Covid-19 control at the Healt Offices of eight districts/cities in East Java. The study analyzed aspects of epidemiology, surveillance system, and health facilities. The study examined Covid-19 cases from March to November 2020. The study interpreted result based on a composite of three aspects (epidemology, surveillance, and healht facilities).

Results: The results show that the epidemiological aspect of most areas are not ready, especially for the subindicator of a decrease in probable case, surveillance of suspected cases, the tracked proportion of close contacts and swab tested, a continuous reduction in the number of hospitalizations, confrimed cases, changes in the number probable cases monitored/treated in the hospital, and decrease in the number of deaths. surveillance system assessment in most areas should provide surveillance if 90% of suspected cases are followed up whitin 48 hours and at least 80% of contacts of new cases are tracted and quarentined. Assessment of health facilities found most regioal health facilities almost ready of cantrolling Covid-19. Subindicators that need attention in several areas are the presence of special care place and ICU beds for Covid19 patients, the adequacy of ventilators, and the availability of facilities fo examining Covid-19 specimens.

Conclusion: The study concluded that the regencies/cities in terms of epidemiology were not ready. There has not been a decrease in cases, increased patient recovery, and reduction in mortality. Based on the aspect of the surveillance system, districts/cities were considered unprepared due to the lack of surviellance personnel or the unavailability of edequate Covid-19 specimen inspection facilities. Regarding health facilities, the study considered district/cities less prepared because the number of beds in the ICU for Covid19 is still lacking.

Keywords: Covid-19, epidemiology, surveillance systems, health facilities.

Effects of Quarantine on Depression of The People Who Quarantined Due to Covid- 19 in Jaffna District, Sri Lanka

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Background: Covid- 19 pandemic is still continuing challenging. Quarantine is a public health measure which is widely used to treat Covid- 19 in Sri Lanka. However, quarantine measures are having its own varies and also there is associated effects on physical, and mental health of the people who undergone to this measure. Jaffna population of Sri Lanka country had ever such exposure to quarantine. So, this study aimed to study the effects of quarantine.

Aim: To assess the association of socio- demographic, economic factors and co-morbidities on depressive issues faced by quarantined people due to COVID- 19 in Jaffna district.

Method: A community based descriptive cross sectional study was carried out among 136 people who were the suspected contacts of a single cluster during the first wave of Covid- 19, and quarantined for 14 days since 21st, March 2020, in Jaffna district of Sri Lanka. Patient Health Questionnaire (PHQ- 9) was used to assess depression. Ethics approval was obtained from the Ethics Review Committee of the Sri Lanka Medical Association.

Result: Majority of the quarantined people (56.6%) were found to be depressed at some level. Among those who were depressed, majority of them had mild depression (83.2%) where as a considerable proportion (15.5%) had moderate depression and a small fraction had severe depression (1.3%). The highest frequency of depressive issues experienced as feeling down, depressed, or hopeless (23.5%), poor appetite or overeating (21.3%), and trouble falling or staying asleep, or sleeping too much (19.9%). Depression slightly high among females, aged below 50 years, and married people. Issue with employment and household income, number of family members, and loss of job due to quarantine were found to be significant associated predictors ($p < 0.050$) of the psychological impact of quarantine. Diabetes Mellitus, and Chronic Obstructive Pulmonary disease were mostly reported co morbidities by the quarantined people.

Conclusion: The economic issues of the people during quarantined period should be considered by the government to reduce the mental health effects as there is still pandemic situation in Jaffna district of Sri Lanka.

Keywords: Quarantine, depression, socio- cultural factors, co- morbidities, Sri Lanka

The Effectiveness of Social Media Use for Digital Marketing Plan During the COVID-19 pandemic in Taiwan

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Background: Social media, one of digital marketing methods, has changed the communication landscape over the last 15 years. Enhanced healthcare providers and public's communication becoming updated with all the trends and news, and marketing promotion are only some of the reasons why most people use social media.

Aim: This article aimed to evaluate the effectiveness of digital marketing plan for getting public to contact a medical university affiliated hospital's social media platform since 2019 COVID pandemic.

Method: We set up the official account of a medical university affiliated hospital in Facebook in December 2019. Posts were classified into COVID-19 related and planned digital marketing pages. We examined both post-level and page-level analytic data from Facebook from the campaign's launch from January to December 2020. For post-level data, we conducted one outcome measure, also conducted time series analyses to examine associations between pagelevel outcomes (new page likes or "fans" and number of engaged users) and different measures of exposure to the page (number of unique users reached and total count of impressions). Two independent sample t test was used to compare the effectiveness of two types of posts by using SAS 9.4 software.

Results: 209 post pages were evaluated, 48.9% posts were COVID-19 related. The counts of impression, reach, engagement and fans were no statistically significant difference between planned digital marketing and COVID-19 related posts when no domestic SARS-CoV-2 cases. When one or over SARS-CoV-2 cases was reported, the counts of four indicators of COVID-19 related posts were significantly higher than planned marketing posts, such as the average counts of impression of COVID-19 related post was 5,119 (n=65, 95% of CI was 3,350-6,086) higher than planned marketing page (2,296, n=31, 95% of CI was 987-2,849).

Conclusion: Facebook proved to be a quick, effective, and cost-efficient tool for distributing the COVID-19 related news during pandemic than planned digital marketing posts. Future research will be required to understand the synergies among users, social media and evidence-based practice, as well as develop healthcare providers' policies that benefit public, healthcare providers, and industry alike.

Keywords: digital marketing, social media, healthcare provider, Facebook

Relationship Between Gender, Smoking Habits, and Pregnancy Status and the Risk of COVID-19 Transmission in the Workplace for Workers in Surabaya

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Background: Workers are at higher risk of contracting COVID-19. The risk of COVID-19 transmission is affected by a number of factors, one of them is individual characteristics.

Aim: This study aims to analyze the relationship between gender, smoking habits, and pregnancy status and the risk of COVID-19 transmission in the workplace for workers in Surabaya.

Method: As an observational study, this study used cross-sectional design. The population in the study was all workers living in Surabaya who use the internet. This study used purposive sampling technique with a total sample of 542 people. Data were obtained through questionnaires distributed online. Relationships between variables were analyzed using the chi-square or Spearman test.

Result: Most of the study respondents were female (62.5%), did not have a smoking habit (87.6%), were not pregnant or breastfeeding (85.6%), and had a moderate risk of transmitting COVID-19 in the workplace (58.1%). No relationship was found between gender ($p = 0.859$) and pregnancy status ($p = 0.063$) with the risk of COVID-19 transmission in the workplace. However, there was a slight relationship between smoking habits with the risk of COVID-19 transmission ($p=0.028$, $r_s = -0.096$), where workers with a smoking habit showed a higher risk of COVID-19 transmission in the workplace.

Conclusion: Smoking habits are a factor related to the risk of COVID-19 transmission in the workplace for workers in Surabaya. Implementing control strategies for COVID-19 is important for workers in Surabaya, especially for those with a smoking habit to reduce the risk of COVID-19 transmission in the workplace.

Keywords: COVID-19 transmission, gender, pregnancy status, smoking habits, workers

Social Determinants of Antenatal Care and Labor of Pregnant Women in Primary Care Center during the Covid-19 Pandemic in Blitar City (Quantitative Study)

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Background: One of the priority health problems is the Maternal Mortality Rate (MMR). Nationally, MMR (Maternal Mortality Rate). AKI nationally Indonesia is at 305/100,000 births. Sustainable Development Goals (SDGs) are the MMR target in Indonesia of <70/100,000 births on in 2030. The magnitude of the problem of maternal mortality is also experienced by several cities in East Java, Blitar City has the second highest maternal mortality rate after Pasuruan City in 2018. In order to anticipate the increase in MMR, it is necessary to trace it through social determinants of childbirth in mothers. Referring to Dahlgren and Whitehead (1991) who put forward the "Rainbow Model", which talks about several layers of influence on health conditions in the community.

Aim: Analyzing the social determinants of ANC and childbirth at the health center during the Covid 19 pandemic in the city of Blitar.

Method: This research is a cross sectional observational study. The research was conducted in Blitar City in the 3 working areas of the Puskesmas, namely the Sukorejo Health Center, the Sanan Wetan Health Center and the Kepanjen Kidul Health Center. The population is all mothers who have babies aged 0-6 months at the time of the study. Using simple random sampling technique and obtained 195 respondents. Data collection using an online questionnaire. The variables studied included the social factors of pregnant women. Data analysis was performed using the Ordinal Regression test.

Results: There is an influence between knowledge about ANC behavior and mother's perception of health workers. From the results of the analysis there is no influence between attitudes towards ANC behavior. There is no effect of family perception on mother's behavior during ANC. There is no effect of information on maternal behavior during ANC. There is an influence between attitudes towards childbirth behavior. There is an influence between the family's perception of childbirth behavior. There is a significant influence between the availability of information on ANC behavior.

Conclusion: There are several factors that influence or have no effect in this study, but the most significant factor is the availability of information about ANC behavior and childbirth during the COVID-19 pandemic.

Community Readiness of COVID-19 Vaccination in Indonesia

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Background: Vaccine is a key component prevention and protection, whereas the immunity gained by vaccination. In regard to the coronavirus disease (COVID-19) control, vaccination willingness and vaccine hesitancy are the key factors for vaccination coverage to achieve herd immunity. The assessment of community readiness on COVID-19 vaccine is important as the health promotion strategy consideration.

Aim: This study was aimed to assess the community readiness of adult Indonesian community.

Method: This was a cross-sectional study that had been done in across big island of Indonesia. A total 724 adult Indonesian (aged 18 – 59 year olds) voluntarily fulfilled the online questionnaire in February 2021. Data analysis was carried out by using chi square and logistic regression (p value = 0.005).

Results: Most of the Indonesian adult citizen (60%) was ready for COVID-19 vaccination in consideration of various variables (age, marital status, occupation, knowledge level of COVID-19 vaccine, and willingness to vaccinate). Moreover, respondents with older group age (OR = 1.436; p = 0.001), occupation in medical fields (OR = 0.414; p = 0.000), willingness to accept COVID-19 vaccine (OR = 7.277; p < 0.001) had higher readiness for COVID-19 vaccine.

Conclusion: The willingness to accept COVID-19 vaccine was the most significant determinant of community readiness of COVID-19 vaccination.

Keyword: community readiness; COVID-19 vaccination; prevention; health promotion

Simulation of Multiserver Queueing System with Non Poisson Distribution in The Antigen Testing on Terminal I Area of Juanda Airport Surabaya

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Background: As one of the service providers, the antigen testing in the Terminal I area of Juanda Airport Surabaya has a multiserver queueing system with three serial servers and one parallel server. Misperceptions of determining service delivery in the queueing system cause inefficient service management.

Aim: This study aims to analyze the queueing system of antigen testing to help management achieve service efficiency.

Methods: The study used an observational design. The research was carried out in the Terminal I area of Juanda Airport Surabaya for three days in the end and at the beginning of the week following the service opening hours. Research respondents are customers of antigen testing. The data source is obtained from the difference between the arrival time and the length of service time. The variables studied consisted of an arrival rate average, an service rate average, an service time average, estimated customers in the queue, a service waiting time average, probabilities for idle services, and probabilities of queues in each service.

Results: Antigen testing used First In First Out (FIFO) as the queueing discipline. The customer arrival rate per hour is 30 (registration), 22 (cashier), 30 (testing), and 19 (result). The customer service rate per hour is 17 (registration), 33 (cashier), 30 (testing), and 4 (result). The service time average in minutes is 3.58 (registration), 2.05 (cashier), 1.89 (testing), and 18.01 (result). The estimated customers queuing per hour is 51 (registration), 19 (cashier), 29 (testing), and 167 (result). The waiting time average for services in minutes is 2.01 (registration), 0.03 (cashier), 0.05 (testing), and 18.24 (result). Probabilities for idle service in one hour are 0.76% (registration), 0.35% (cashier), 0.01% (testing), and 0.04% (result). Probabilities that one customer will queue in one hour is 20.53% (registration), 0.95% (cashier), 0.01% (testing), 57.18% (result). The customer's overall waiting time is 19.85 minutes.

Conclusion: The queueing system simulation of the antigen testing on Terminal I area of Juanda Airport Surabaya was obtained according to the real conditions. The management should add one service channel in the result service to minimize customer waiting time.

Keywords: Queueing system, Antigen Testing, Service Management

Perceived Threat With Covid-19 Prevention Behavior In The Community In Sukoharjo District

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Background: Currently, almost all countries in the world have experienced the Covid-19 pandemic. The Covid-19 disease was declared a pandemic by WHO after nearly all countries in the world had contracted Covid-19. One of the behaviors to prevent Covid-19 is determined by the perception of threats to Covid-19 that occur in society.

Aim: This study aims to determine the relationship between perceived threats and Covid-19 prevention behavior in Sukoharjo Regency.

Method: This type of research is analytic observational with a cross-sectional approach. The population is all population aged 15-65 years in Sukoharjo Regency of 618,992 in 2018 with a sample size of 246 people using simple random sampling technique. The research instrument used was a questionnaire which was filled in directly by the respondents via google form. The research variables were the threat perception and Covid-19 prevention behavior. The bivariate statistical test used the chi square.

Results: The results showed that most of the respondents were older adults (72.8%), women (71.5%), undergraduate education (42.7%) with the work of the civil service of the state (24.4%) and other employees (24.4%). Threat perceptions influenced mask wearing behavior (OR = 2.68; $p = 0.031$), hand washing behavior (OR = 3.39; $p < 0.001$) and distance keeping behavior (OR = 3.39; $p < 0.001$). There is a relationship between perceived threats and COVID-19 prevention behavior in Sukoharjo Regency (p value 0,000).

Conclusion: There needs to be a regional government policy in maintaining Covid-19 prevention behavior in order to reduce the number of Covid-19 cases in Indonesia.

Keywords: threat perception, preventive behavior, covid-19

Impact Of The Covid-19 Pandemic On Antenatal Care : Qualitative Study

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Background: During the COVID-19 pandemic, the Indonesian government policy regarding social restrictions applies to almost all routine services. Health services for pregnant women and newborns are one of the services affected both in terms of access and quality. It is feared that this will cause an increase in morbidity and mortality of mothers and newborns.

Aim: This study aims to determine the impact of covid-19 on examinations of pregnant women.

Methods: Collecting data through interviews, observation, and documentation study conducted by using a purposive. Data analysis techniques in research are in the form of data reduction, data presentation, and data conclusion. For the validity of the data using the Triangulation Technique with the source.

Results: The results showed that during the Covid-19 pandemic there was no change in the quantity and quality of antenatal care, but there were adjustments in visiting techniques to adjust to social restriction policies. Pregnant women are asked to actively consult by telephone with health workers. At the beginning of antenatal care, screening was carried out, then antenatal care was carried out. During the pandemic, strict health protocols were implemented.

Conclusion: There are no specific health service restrictions for pregnant women. Health services can be done by telecommunication and can carry out examinations at the regional midwife. To reduce the gathering of pregnant women in queues, pregnant women should be advised to register with the online system the day before their visit and be given a schedule of visiting hours.

The influence of Social Stigmatization and Coping Stress on the Resilience Level of Nurses in Handling Covid-19 in dr. Soedjono Military Hospital of Magelang

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Background: The emergence of stigmatization received by nurses or Covid-19 patients can have an impact on Covid-19 patients and nurses who are prone to suffering from both physical and mental health problems.

Aim: This study was to analyze the effect of social stigma and stress coping with nurses on the resilience of nurses in dealing with Covid-19.

Method: 101 respondents were nurses who involved in Covid-19. Proportional cluster random sampling technique. By using google form data was analyzed with multiple regression.

Results: The results can be formulated if the social stigma and nurse resilience have a significant negative correlation ($t\text{-test} = -2.622 > 1.98422$. From the significance value where $\text{sig} = 0.010$ $p = 0.05$).

Conclusion: The higher the negative stigma that nurses receive, the lower their level of resilience at work. They will automatically form a good coping of stress from them.

Risk Factors Due to The Changes in Work Schedule of Regular Pertamina Hulu Energi 5 West Madura Offshore (Phe 5 Wmo) Employees in The Covid-19 Pandemic Situation

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Background: 8 out of 10 employees of Pertamina Hulu Energi 5 West Madura Offshore (PHE 5 WMO) have complaints about difficulty in concentration. These complaints began to be felt by employees since there was a change in work schedule in the Covid-19 pandemic situation. Changes in work rotation which was originally 2 weeks of work and 2 weeks off to 4 weeks of work and 4 weeks off.

Aim: The objectives of this study was to analyse the mental work fatigue risk factors due to changes in work schedule in the Covid-19 pandemic situation of regular PHE 5 employees.

Method: This research is an analytic study with a cross sectional approach. The sample in this study were all regular employee of PHE 5 WMO, as many as 83 people. The variables in this study are individual characteristics (age, nutritional status, and quality of sleep) and job characteristics (work shift and duration of works). Individual data, work shift, and duration of works were obtained by using a questionnaire. Quality of sleep was measured using the Pittsburg Sleep Quality Index (PSQI) questionnaire. Mental work fatigue was measured using Industrial Fatigue Research Committee of Japanese Association of Industrial Health (IFRC Japan) questionnaire. Data were analysed by Spearman Correlation Test.

Result: Most of employees (53%) were aged 20-25 years; 44,6% were in normal nutritional status; 62% were working with shift systems; 85% have working with period <10 years; 72,3% have poor sleep quality; and 67,5% were occurred low mental fatigue. The results showed that there was significant negative correlation between sleep quality with the occurrence of mental work fatigue, which means that the lower the quality of sleep the higher mental fatigue that occurs (Correlation Coefficient = - 0,317). While other variables were showed no significant result.

Conclusion: There was significant correlation between sleep quality of employees with the occurrence of mental work fatigue, and employees have a one and a half times greater risk of occurred mental fatigue than before the pandemic due to changes in work schedule.

Keywords: mental work fatigue, quality of sleep, change in work schedule, Covid-19.

Implementing Health Promotion Through Virtual Communities During Covid-19 Pandemic in Indonesia

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Background: The COVID-19 pandemic forces everyone to adapt to new habits and do more various kinds of activities from home. Since all activities must be carried out online, innovation is needed to maintain health promotion activities during the pandemic. A virtual community is a way to stay in touch and socialize during a pandemic.

Aim: This research aimed to explore virtual community organizations in Indonesia as an innovation for conducting health promotion during the COVID-19 pandemic.

Method: Information was collected from three founders, two heads, and five managers of virtual communities in Indonesia using the digital storytelling method. Virtual communities' managers were asked to tell about the organization of virtual communities to conduct health promotion activities during the COVID-19 pandemic.

Result: In carrying out community organizing in virtual communities, good social planning, comprehensive social action, and local development are needed to optimize the potential of community members. With these three factors, a virtual community can continue to grow and maintain its existence. The important thing about maintaining the sustainability of a virtual community is the principle of volunteering, good coordination between the leader/founder/chairman and the daily executors, and activities for regular community socialization and promotion through well-managed social media. Online health promotion activities are made as attractive as possible by applying themes currently being discussed a lot or the latest trending health issues in society. Citizens will be eager to participate in health promotion activities organized by virtual communities, to become members, and to participate following the development of information disseminated there.

Conclusion: Virtual communities are great for being used as an effective health promotion media during a pandemic. It needs good organization and continuous innovation to make it one of the reliable health promotion media.

Keywords: community organizing, virtual community, health promotion.

The Culture of Hygiene in Dealing with COVID-19 Pandemic in Indonesia

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Background: COVID-19 pandemic in Indonesia has been already a year. Confirmed cases reached 1.8 millions with 50.000 cases of deaths. The COVID-19 health's protocol has been socialized but still many people who didn't comply. How it didn't effect in community could be seen from the culture of hygiene on ethnics in Indonesia. There were gaps between the clean and healthy behavior's program, COVID-19 health's protocol, and what had been cultural constructed in the community.

Aim: The aims were to explain the gap between the culture of hygiene on many ethnics in Indonesia related to clean and healthy behavior and the COVID-19 health's protocols.

Method: This study used a literature's review analysis. Based on 45's books of Ethnographic's Health Research that discussed about the culture of hygiene in 45 districts in Indonesia, which were categorized on 7 regions and 37 ethnics. By synthesized the culture of hygiene on washing hands properly with soap , availability of clean water and healthy toilets in each ethnics, which were matter on issue of COVID-19.

Results: The result showed that each ethnics had different concept of cleanliness. Concept of cleanliness wasn't washing hand properly with soap, but no dirt s or smell, not associated with viruses, bacterias or germs. The existence of clean water had been constructed the culture of how communities seen the attachment to the source of water in their environment. They also constructed their believe in taboo to ruin the purity of water or healing rivers and believe the water could avoiding diseases.

Conclusion: It concluded that culture matter on acceptance of the concept of hygiene. The health's concept of washing hands properly with soap didn't exist on ethnic's concept. They had their own concepts about hygiene. It compounded with the lack of clean water's availability and accessability. The culture could adjusted and adapted with the environment. Recommendation to dealing with COVID-19, must took into account about the ethnic's cultural construction. How the new concept of hygiene could be appropriate with the culture concept.

Keywords: COVID-19, Health's Protocol, Culture of Hygiene, Ethnic.

Working Situations of Japanese Nurses under the COVID-19 Pandemic

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Background: The stress of the nursing profession is affected by quantitative and qualitative burden of their work. By the COVID-19 pandemic, serious effects such as the burnout are reported in the medical person who is directly engaged in the care. However, it is not substantially grasped that the working situation including the nursing profession which does not involved directly to COVID-19.

Aim: To describe the working situations of Japanese nurses under the COVID-19 pandemic.

Method: We distributed an internet survey on 324 Japanese nurses registered as monitors with an internet company between March 25 and 29, 2021. The survey included participants' characteristics, working situations, and nursing services during the last one month.

Results: The mean age of the participants was 40.9 ± 9.2 years, and 90.4% were women. Nurses accounted for 95.4% and staff for 85.2%. Fifty-four percent of the participants were currently working on the hospital, and 42.9% were shift workers including night shift full-time. 19.8% of them worked in the COVID19 infection rapid increase or explosive expansion area, and 3.1% were engaged in the COVID-19 relation work. In the last one month, 62.3% worked less than 40 hours per week of statutory time and less than 4 hours per week of overtime. Meantime, we clarified participants' characteristics related to the length of the working hours as follows: unmarried, hospital work, number of sickbeds over 500 beds, shift workers and had been working in the outbreak area with over stage 3 or higher. Moreover, the following nursing services were associated with working hours: specimen collection except for the blood collection, coordination with medical institution or family members of patients.

Conclusion: Approximately 60% of the participants in the present study had been working within the statutory time. However, our results indicated that being unmarried, large-scale hospital, shift worker, and working in the COVID-19 infection expanded area were related to the quantitative burden of their work.

Keywords: Nurse, Working situations, COVID-19

Risk Analysis Of Stunting Events In Children In The Covid 19 Pandemic Time In Sidenreng Rappang District

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Background: Stunting is stunted growth and development of children during the first 1000 days of life. COVID-19 is an infectious disease caused by a new type of virus SARS-COV-2 which spreads under the name coronavirus disease 2019 (COVID-19). In the COVID-19 pandemic situation, restrictions on community social activities have an impact on socio-economics. Restrictions on the economic and health service aspects have an impact on the nutritional status of children. UNICEF data (2017) globally 22.9% or 154.8 million children under 5 are categorized as stunting, in ASIA alone 87 million children are categorized as stunting. Indonesia still occupies the fifth largest prevalence of stunting in the world, approximately 9 million children are categorized as stunting in 2018. Data from the South Sulawesi Health Office states that the prevalence of stunting is 34.55%, which is still above the national prevalence. The proportion of incidents in Sidenreng Rappang District is also above the national proportion target of 20-30%. Stunting in children is the main indicator in assessing the quality of future generations.

Aim: The research objective was to determine the risk of stunting in children under five after controlling for other stunting incidence variables during the pandemic in Sidenreng Rappang District.

Method: The research method used is an observational study with an epidemiological design, namely a case control study. A case-control study by comparing cases (stunting toddlers) with controls (normal / non-stunting toddlers) by matching the place and age of the children. The independent variables in this study are household income, exclusive breastfeeding and complete basic immunization.

Results: household income variable obtained OR value 4,800 (95% CI: 2,077-11,093), exclusive breastfeeding variable obtained OR value 33,455 (95% CI: 10,711-104,488), basic immunization variable OR 9,610 (95% CI: 3,878-23,815).

Conclusion: children who were not exclusively breastfed 33,455 were at risk for the incidence of stunting and this was statistically associated

Keyword: Complete basic immunization, Exclusive breastfeeding, Household income, Stunting

Factors Correlated with Attitudes Health Sciences Cluster Students University of Indonesia Class of 2017 – 2019 towards COVID-19 Vaccination

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Introduction : College student is included as important target for COVID-19 vaccination program in Indonesia. Understanding the factors related to the attitude towards COVID-19 vaccination can help Government to increase the acceptance of the vaccines.

Aim: The purpose of this study was to determine the factors related to the attitude of student in Health Science Cluster University of Indonesia class of 2017 – 2019 towards the COVID-19 vaccination.

Method : A cross-sectional study was conducted by recruiting 443 students obtained through purposive sampling. Hypothesis testing used in the bivariate analysis was the chi-square test. The data was collected between April – Mei 2021 by online questionnaire.

Result : A total of 443 respondent with the proportion of female respondent is 88,7% and male respondent is 11,7%.

Result : The result show that most of the college students have an attitude to support COVID-19 Vaccination (53,5%). There was a significant relationship between perceived susceptibility (PR: 1,231, 95% CI: 1.029-1.473, p=0.027), perceived severity (PR: 1,381, 95% CI: 1.163-1.638, p=0.000), perceived benefits (PR: 1.762, 95% CI: 1.484-2.091, p=0.000), perceived barriers (PR: 2.158, 95% CI: 1.777-2.620, p=0.000), information obtained (PR: 1.800, 95% CI: 1.484-2.183, p=0.000), and social environment support (PR: 1.985, 95% CI: 1.651-2.385, p=0.000) with attitudes towards COVID-19 vaccination. There was no significant relationship between age (PR: 1.066, 95% CI: 0.835-1.363, p=0.69), gender (PR: 0.878, 95% CI: 0.687-1.112, p=0.878), history of COVID-19 (PR: 0.937, 95% CI: 0.757-1.175, p=0.677), knowledge (PR 1.186, 95% CI: 0.744-1.891, p=0.578), and self-efficacy (PR: 1.197, 95% CI: 1.004-1.427, p=0.054) with attitude towards COVID-19 vaccination.

Conclusion :By increasing perceived benefits and decreasing perceived barriers related to COVID-19 vaccination, the attitude of college students towards COVID-19 vaccination will also increase.

Keywords: COVID-19, Vaccine, College Student, Attitude

Analysis Factors Related to Work Stress among Public High School Teachers in Jakarta Pusat during COVID-19 Pandemic in 2021

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Background: Occupational stress is a situation where there is an imbalance between job demands and workers ability to manage those demands, then it can causing various negative impacts. Teachers are one of the professions that are prone to work stress. Especially in this pandemic situation, teachers are more likely to experience job stress because they face more sources of stress.

Aim: The purpose of this study is to explain factors related to work stress among public high school teachers in Jakarta Pusat during COVID-19 pandemic.

Method: This study design is cross sectional and data collection was carried out by distributing online questionnaires, we used NIOSH Generic Job Stress Questionnaire (GJSQ). Observed factors are individual characteristics (sex, age, marriage status, work period, education level, personality type, number of children) and psychosocial factors (workload, work schedule, social support, control over work, role ambiguity, role conflict, home-work interface). Data were collected from 113 public high school teachers in April, 2021 during the second wave of COVID-19. Data analysis was accomplished by chi-square test.

Results: Findings showed that 47,8% of teachers experience occupational stress. Moreover, the result also found a relationship between marriage status (P value = 0,037) and work stress, number of children (P value = 0,016) and work stress, role ambiguity (P value = 0,015) and work stress, and home-work interface (P value = 0,048) and work stress.

Conclusions: The current study concluded that individual factors (such as marriage status and number of children) and psychosocial factors (such as role ambiguity and home-work interface) were related to work stress among public high school teachers in Jakarta Pusat during COVID-19 pandemic.

Keywords: Occupational Stress, Public High School Teachers, Individual Characteristic Factors, Psychosocial Factors

Ante Natal Care for Pregnant Workers served by Midwives during the Covid 19 Pandemic in Indonesia

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Introduction: The 3rd SDGs achievement target “Ensure healthy lives and promote well-being

for ages” is to reduce the maternal mortality rate to 70 per 100,000 live births. Complete antenatal care (ANC) is important as an effort to detect early health problems during pregnancy. One group of pregnant women are pregnant workers. Antenatal care studies of pregnant workers during the Covid-19 pandemic are important to do to see the causes and impacts on pregnancy health problems.

Aim: The purpose of the research was to analyse the Antenatal Care (ANC) service provided by midwives to pregnant workers during the COVID-19 pandemic in Indonesia.

Method: This research is descriptive research. The research was conducted in collaboration with the Indonesian Midwives Association for the East Java Region. Data collection was carried out using an online survey method to midwives throughout Indonesia using a googleform.

Results: 2675 respondents came from 34 provinces in Indonesia. Respondents of midwives with complete ANC coverage were 16%. The problem of pregnant workers not being able to fulfill a complete ANC for reasons of work (32.5%), time (16.85%) and due to the Covid pandemic (15.43%). The most health problems of pregnant workers are anemia (60.8%) and hyperemesis gravidarum (43.4%). Most pregnancy problems were abortion (42.7%), preeclampsia (34.1%), bleeding (27.8%), low birth weight (20.7%), preterm (16.6%), preterm rupture of membranes (13,7%).

Conclusion: Midwives who provided ANC services to pregnant workers found many cases of pregnancies with incomplete ANC, mostly due to work reasons. Most of the health problems

experienced by pregnant workers are anemia and hyperemesis gravidarum. For 3 pregnancy

problems that can cause death are abortion, preeclampsia, and bleeding. It is recommended that

workplaces provide health care facilities for pregnant women or give permission for 1 day leave

to get ANC services at the clinic

Keywords: SDGs, ANC, Covid-19, Pregnant Workers

Source of transmission COVID-19 in Situbondo District, East Java Province, Indonesia, March -December 2020

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Background: SARS-CoV-2 was identified as a public health risk by the World Health Organisation, and on 11 March 2020 it was labeled a pandemic of concern. There have been 1528 confirmed Covid 19 cases in Indonesia, and 136 disease deaths by 31 March 2020, the high capability of Coronavirus to spread and transmit across countries and people, and increased Covid19 incidents in Situbondo have necessitated that this study should be conducted in view of the community's coronavirus epidemic.

Aim: An epidemiological study aims to identify and explain the contributing factors that increase the rate of infection and transmission of Covid-19 in the Situbondo and to reveal more about the current epidemiological situation and how the infection spreads through the community. The result of the study will help in minimizing the rate of infection and mortality caused by Covid-19.

Method: In this study, we used a descriptive analysis study approach to examine the variables that influence the transmission of Covid-19 in the Situbondo district.

Results: The results of the study showed that the highest transmission form of Covid-19 among a family member 27% follows it in the community 22.4%, 18.4% from health facilities, 11% from the workplaces, 9.5% infected person from places of worship, 7.3% infected was travelers or migrants, also 3.1% from social activities and celebrations, also from the schools 1.3%, shopping centers 0.7%.

Conclusion: The findings of this study provide insight into the elements that contribute to the spread of COVID-19 infection in the Situbondo community. This study paves the way for additional research, which will be necessary to gain a better understanding of the epidemiological condition of the Covid-19 pandemic in the general population.

Keywords: Covid-19, Infection, Source of transmission, Situbondo

Determinants of work related fatigue among onshore oil and gas installation workers during the Covid-19 pandemic

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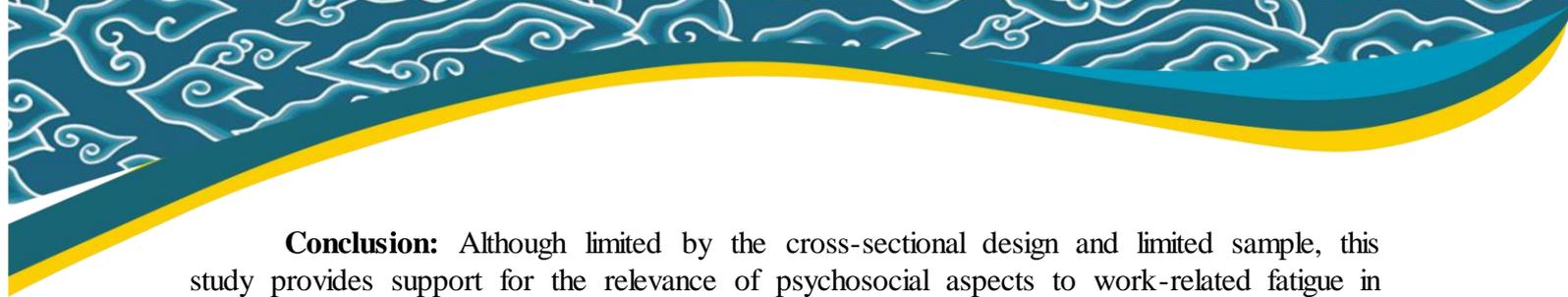
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Background: Fatigue in upstream oil and gas workers is one of the risks of injury and work accidents with serious consequences. Fatigue as a single risk factor has been thoroughly investigated in various literatures, but its relationship with a group of psychosocial aspects in the upstream oil and gas industry is still relatively not widely studied, especially for those who work in onshore upstream oil and gas in developing countries. Since the end of 2019, there have been several policies related to the COVID-19 pandemic, one of which has an impact on the psychological aspects of workers.

Aim: Therefore, the aim of this study was to determine the relationship of various psychosocial aspects to fatigue due to work in upstream oil and gas onshore installations during the COVID-19 pandemic.

Methods: This research is a quantitative analytic study with a cross sectional study design. The research was conducted at one of the upstream oil and gas onshore installations in East Kalimantan, Indonesia on 203 respondents. Psychosocial aspects were measured using the 3rd Version of Copenhagen Psychosocial Questionnaire (COPSOQ III) questionnaire, while work-related fatigue was measured using the Multidimensional Fatigue Inventory-20 (MFI-20). The relationship of each psychosocial aspect with work-related fatigue was analyzed using multivariable linear regression analysis with work shift variables and activity duration per week as confounding variables.

Results: All positive psychosocial aspects (rewards, leadership qualities, supervisor's social support and job satisfaction) dimensions are perceived as good (high level) by workers. Meanwhile, negative psychosocial aspects (quantitative demands and emotional demands of work, job security and work family conflicts) were at an intermediate level during the Covid-19 pandemic, while work-related fatigue tended to be at a low level. After controlling for confounding, rewards, job satisfaction, and family and work conflicts were found to be associated with of total fatigue. Further, family conflict with work was the most influencing factor for total fatigue at work after controlling for work shifts and exercise duration per week (p value < 0.01, Adj. R: 0.24, Adj. R Square 5.8%).



Conclusion: Although limited by the cross-sectional design and limited sample, this study provides support for the relevance of psychosocial aspects to work-related fatigue in upstream oil and gas onshore installations during the COVID-19 pandemic. The results from this study have implications for worker health and safety, including measures to monitor and reduce work-related fatigue. Companies can be encouraged to focus on future fatigue prevention programs related to reducing work and family conflicts. Adjustment of shift scheduling to reduce work pressure, providing support and rewards to workers is a positive psychosocial aspect that needs to be improved in reducing fatigue in the workplace.

Keywords: fatigue, psychosocial, shiftwork, work-related stressors, COPSOQ



Opinions about Learning Methods and Environments Experienced by Students During the Covid-19 Pandemic that Can Prevent Fatigue in High School Students in 4 Regencies in East Java Province

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Background: Fatigue is characterized by a state of weakness in activity, mental weakness and physical weakness. The fatigue experienced by students results in lack of concentration in learning.

Aim: The purpose of this study is to analyze the opinions of learning methods and environments received by students that can prevent fatigue

Method: Design of this research was cross-sectional. Population were senior high school. The sample were taken by multistage random sampling. The sample size is 662 students. The research variables were the opinion of the learning method, environment experienced and fatigue. The research analysis was analyzing with chi-square's test with significance 5%.

Results: Environment that received students that prevent fatigue is good parenting ($p=0,000$), parents give stationary supplies ($p=0,002$), parents ask about learning difficulties ($p=0,000$), parents ask about test scores ($p=0,000$), friendly teacher attitude ($p=0,009$), peaceful friend attitude ($p=0,000$), clean study room ($p=0,04$), quiet study situation ($p=0,011$), cozy study room ($p=0,000$). Learning methods that can prevent fatigue are learning techniques ($p=0,000$), feeling bored with learning techniques ($p=0,000$), always doing assignments ($p=0,003$), difficulty doing assignments ($p=0,005$), time needs in doing assignments ($p=0,000$), lack of understanding of teacher explanations ($p=0,000$), studying during exam ($p=0,18$).

Conclusion: The response of parents and teachers is a social environment that can prevent student fatigue during the Covid 19 pandemic. Learning methods are learning techniques that are not boring are things that can prevent fatigue.

Factors affecting Willingness to Vaccinate Children against COVID-19 among Malaysian Parents

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Background: As the COVID-19 pandemic has become more rampant with new variants forming, current vaccination plan are only administered for individuals above 18 years old. However, children are also susceptible to being infected with COVID-19.

Aim: This study sets out to investigate factors affecting willingness to vaccinate children against COVID-19 among Malaysian caregivers assuming vaccine effectiveness at 50%, 75% and 95%.

Method: A nationwide cross sectional survey of 1245 parents (799 females, 446 males, Mage = 41.48) was administered online. Snowballing sampling was utilized through distributing the survey through social media from 11 January 2021 and 10 February 2021, prior to the vaccine roll-out in Malaysia.

Results: Findings showed that the frequency of which parents are mostly willing to vaccinate their children when vaccine when it has 95% effectiveness (85.1%), followed by 75% effectiveness (30.8%) and lastly 50% effectiveness (23.2%). Generally, parents aged between 18 to 29 years old were more willing to vaccinate their children when vaccine is 50% (aOR 2.31) and 75% (aOR 2.22) effective. Parents with chronic illnesses (aOR 1.68) and from rural area (aOR 0.54) were more willing to vaccinate their children when vaccine has an effectiveness of 50%. Parents who were working from home were less likely willing to vaccinate their children at 75% effectiveness (aOR 0.68). Families with larger household occupancy were more willing to vaccinate their children when vaccine effectiveness is 95% (aOR 1.10). We found that knowledge and importance of taking the vaccine to protect others in the community were robust factors in influencing one's willingness to vaccinate children when vaccine effectiveness was 50%, 75% and 95%.

Conclusion: From our findings, factors such as knowledge and the importance of vaccine uptake ought to be considered in the implementation of vaccination among children in the Malaysian context.

The Psychosocial Impact of Covid-19 Pandemic on Malaysian Adults

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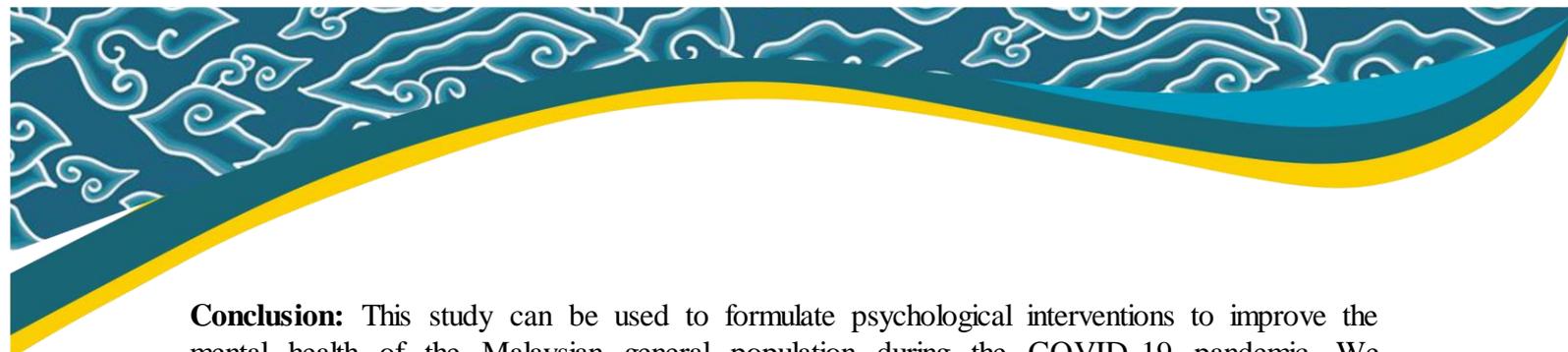
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Background: As a response to the COVID-19 pandemic, like most countries, Malaysia has implemented a Movement Control Order (MCO) to prevent the spread of the disease. The MCO has affected many aspects of people's lives and livelihoods. It also triggers a wide range of psychological distress such as anxiety, stress and depression and adverse psychological health effects which include low mood, insomnia, boredom, and loneliness.

Aim: This study aimed to examine the psychosocial impact of the COVID-19 (such as anxiety, stress, and depression, well-being, boredom, loneliness, quality of life, health, infection and financial concern) on Malaysian adults in general population.

Method: This cross-sectional study was conducted through an online survey between June 2020 and October 2020, the study involved 425 Malaysian participants (male = 113, female = 312). The instruments: (1) Generalized Anxiety Disorder-7; (2) Short Boredom Proneness Scale; (3) Short Scale for Measuring Loneliness in Large Surveys; (4) The World Health Organization (WHO) Well-Being Index; and (5). Information on the quality of life, health status and financial concern were also gathered.

Results: During the first phase of MCO, more than 95% of the participants reported themselves and the people around them were not infected by the COVID-19 virus or died because of the virus. However, they were extremely concerned about their health and the health of their family members related to the pandemic. More than 50% of the participants were concerned about the supporting of their family financially during the MCO. Some 28.3% reported their life changed much worse since the COVID-19 crisis started. During MCO, the participants spent more time on the internet (not for work), on social media (not for work), working from home, performing household chores and resting/relaxing but less time spent on the sport. Findings also revealed that the well-being level of the participants was significantly lower during (mean = MCO compared to before. About half of the respondents (43.7%) reported a low level of well-being during the pandemic and only 29.4% of them reported a low level of well-being before COVID-19 pandemic. The participants' level of anxiety was significantly higher during the pandemic. There were 93 (17.3%) respondents reported severe anxiety before pandemic and there were 106 (19.8%) reported severe anxiety during COVID-19. However, the participants perceived no significant difference in loneliness and boredom before and during MCO.



Conclusion: This study can be used to formulate psychological interventions to improve the mental health of the Malaysian general population during the COVID-19 pandemic. We suggested a longitudinal study design to track the changes in the participants' psychosocial impact concerning the development of the COVID-19 pandemic.

Mediating effect of chronic illnesses in the relationship between psychological distress and COVID-19 vaccine acceptance

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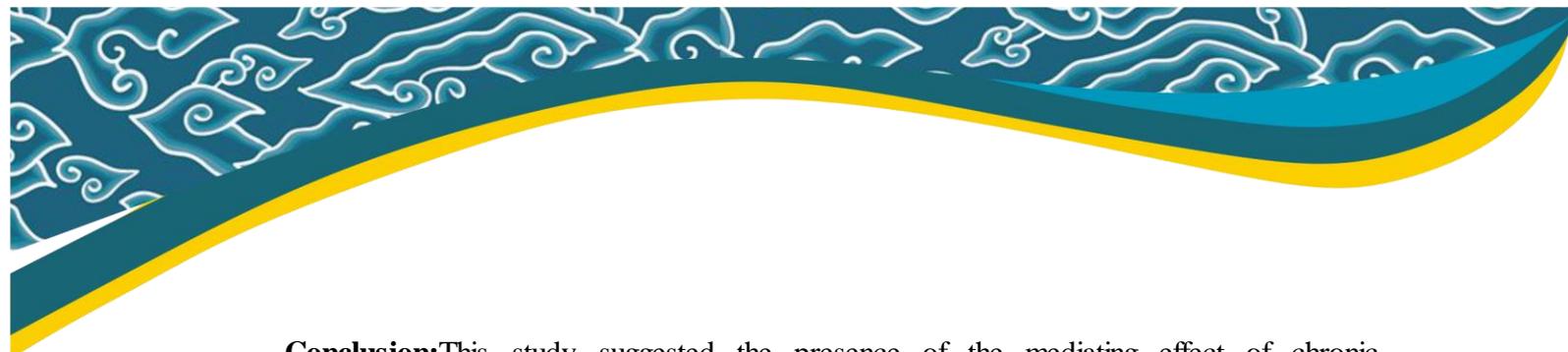
Background: The effect of the COVID-19 pandemic on the psychological health is likely to last for a longer period of time. Furthermore, chronic illnesses are long lasting conditions that could lead to persistent effects. Therefore, consequences due to the chronic illnesses can impact individual's overall quality of life.

Aim: This study aimed to examine the mediating effect of chronic illnesses in the relationship of psychological health and the acceptance of the vaccine, prior to the national rollout of the COVID-19 vaccination programme in Malaysia.

Method: An online cross-sectional study was conducted in Malaysia during the period of 10

December 2020 and 9 February 2021. Adult Malaysians were invited to complete a questionnaire consisted of questions related to demographics, health status, psychological distress using the Patient Health Questionnaire (PHQ-4), and their willingness to accept the vaccine with at least 95% effectiveness level. Bivariate correlations were conducted to assess the association between the willingness to have the vaccine and demographic factors. The mediation analysis was performed to examine the mediating effect of chronic illnesses in the relationship between psychological distress and the willingness to accept the vaccine.

Results: A total of 1738 participants completed the survey. The psychological distress levels were found to be significantly different across demographic factors such as age, gender and social economic status. Additionally, statistically significant association was found between the willingness to accept the vaccine and psychological distress levels as well as chronic illnesses. This study demonstrated a partial mediation effect of chronic illnesses in the relationship between psychological distress and vaccine uptake. After adjusted for the significant demographic factors, participants with chronic illnesses were found to be in favour of the COVID-19 vaccine.



Conclusion: This study suggested the presence of the mediating effect of chronic illnesses in the relationship between psychological distress and the willingness to accept the vaccine. In order to promote the vaccine uptake, more compelling content especially in relation to the chronic illnesses should be included in the targeted health campaigns. With accurate information, these campaigns are likely to reduce the psychological distress and subsequently increase the positive attitudes toward the COVID-19 vaccine.

Keywords: COVID-19 vaccine uptake; Psychological distress; Chronic illnesses; Mediating effect.



Risk Factors Analysis of COVID-19 Transmission in Health Worker: Systematic Review

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Background: Healthcare professionals serve as front liners in the battle against COVID-19. They are often expected to be in constant contact with infected patients, posing higher risk of transmission.

Aim: We conducted this systematic review to identify the risk factors for SARS-CoV-2 virus transmission among healthcare workers.

Methods: We conducted a systematic review using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses protocol. Four internet databases were searched using predefined search terms.

Results: Out of initial 636 studies found using the predefined search terms, 18 studies fulfilled the inclusion criteria and were subsequently analyzed. We found that risk factors for COVID-19 could be divided into 5 categories: (1) use of personal protective equipment; (2) infection control procedures; (3) unsafe workplace practices; (4) provision of institutional support; and (5) presence of individual risk factors in healthcare workers. None of the analyzed papers reported the exact prevalence COVID-19 infection among HCWs.

Conclusion: Proper use of PPE, compliance to proper infection control procedures, establishment of safe workplace practices, provision of institutional support for prevention measures, and lack of individual risk factors may reduce the transmission risk of SARS-CoV-2 virus among healthcare workers.

Keywords: COVID-19, transmission, healthcare workers, risk factors

Factors Associated with COVID-19 Vaccine Readiness among Residents of 6th Hamlet Cipinang Cempedak Urban Village East Jakarta

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Background: Vaccine unreadiness is a major challenge in global health (Adebisi et al., 2020). Disinformation and negative news related to COVID-19 vaccine have already spread and reached the residents of 6th Hamlet Cipinang Cempedak Urban Village which causes vaccine hesitancy.

Aim: This study aims to determine the factors associated with COVID-19 vaccine readiness among residents of 6th Hamlet Cipinang Cempedak Urban Village East Jakarta in 2021.

Method: We conduct a cross sectional survey using primary data obtained through an online questionnaire. Univariate and bivariate analyses were performed at 95% confidence level. Sample in this study was residents aged ≥ 18 years old ($n = 100$).

Result: The results shows that the percentage of COVID-19 vaccine readiness respondent is 55%. We conduct correlation test (p value = 0,0005) between COVID-19 vaccine readiness and show the variable of vaccine knowledge, perceived vaccine benefits, perceived vaccine barriers, trust in vaccine, and trust in source of information have significant correlation. A multiple regression test has been conducted and show R Square on 0.492 for the variable of knowledge of covid 19, perceived vaccine benefits, and perceived vaccine barriers to the readiness to be vaccinated about 49.2% and the rest is explain by other variables.

Conclusion: the level of readiness to be vaccinated by covid 19 is still low and it related to the variable of knowledge of covid 19, perceived vaccine benefits, and perceived vaccine barriers. We recommend to improve and raise alertness, highlighting the benefits of vaccine, and providing transparent and truthful information are needed to increase the COVID-19 vaccine readiness among responders/residents.

Key words: COVID-19, vaccine readiness, COVID-19 vaccination

Evaluation Of Covid-19 Surveillance System (Input, Process And Output) In Palu City Health Office 2021

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Background: Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by a new type of coronavirus. The disease began with the emergence of unknown cases of pneumonia in Wuhan, China at the end of December 2019, In central Sulawesi province the highest cases were in palu city with an estimated number of COVID-19 2846 cases and the Cured amounted to 2502 people while the case fatality rate was 2.84% (84 cases).

Aim: This activity aims to evaluate the ongoing Covid-19 surveillance system and provide input on improvements and improvements to the Covid-19 suveilans system at the Palu City Health Office.

Method: The design and type of evaluation of Covid-19 surveillance uses qualitative type with the aim of digging up in-depth information related to the Covid-19 surveillance system at the Palu City Health Office.

Result: Research Results In terms of human resources surveillance officers have mostly never received training on covid-19 surveillance and covid-19 surveillance officers have a lot of double workload, so surveillance officers have difficulty in carrying out surveillance covid-19 especially when some programs take place at the same time, and the lack of efforts to increase the capacity and capability of surveillance personnel. In terms of punctuality, the COVID-19 surveillance system is less timely in web-based system reporting, the reason for the delay is because the all record report closes at 13.00 wita as well as the results of lab tests are slow to receive and the delay in data entry for ditracing and delay of epidemiological investigation team in the field. In terms of recording and reporting, the number of systems used in recording confirmed cases of COVID-19 makes officers overwhelmed in recording data and making reports often slow to enter the city health office palu.

Conclusion: In terms of data analysis, analysis and interpretation of data that should be done every day has not been optimally done by each surveillance officer, this weakness is caused by limited knowledge of both ways of processing data, and most surveillance officers do not yet know how to create maps for the spread of covid-19 in each of their work areas.
Keywords: Covid-19, Surveillance System, Dinkes Palu.

Keywords: Covid-19, Surveillance System, Dinkes Palu.

The Relationship between Knowledge and Attitudes Against Covid-19 Prevention Behavior at the Pancasila Islamic Boarding School in Bengkulu City

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Background: Bengkulu Province is one of the provinces that has also been affected by the Covid-19 pandemic case with 135 deaths. This pandemic threatens everyone including teenagers and school children. Many people do not understand how to deal with this virus.

Aim: This study aims to determine the relationship between knowledge and attitudes towards Covid-19 prevention behavior at the Pancasila Islamic Boarding School in Bengkulu City.

Method: This research is a quantitative research with cross sectional method. The research population is the students of the Pancasila Islamic Boarding School in Bengkulu City, totaling 34 students using total sampling. Collecting data using a questionnaire using the Chi Square test research method.

Result: The results of the univariate analysis show that as many as (55.9%) students have good knowledge, have a supportive attitude towards preventing Covid-19 as many as (50.00%) students and have good behavior towards preventing Covid-19 (55.9%) student. The results of the chi-square test show that the p-value between knowledge and attitudes related to Covid-19 prevention is 0.539 and 1,000.

Conclusion: The conclusion is that there is no relationship between knowledge and attitudes with Covid-19 prevention behavior at the Pancasila Islamic Boarding School in Bengkulu City. It is recommended that schools continue to monitor student behavior and also be provided with accurate information and knowledge about Covid-19 as well as support and motivation to further improve in complying with health protocols related to Covid-19 prevention.

Keywords: Knowledge, Attitude, Prevention of Covid-19.

LITERATURE REVIEW: EFFECT OF TELENURSING SERVICE FOR PATIENTS WITH COVID-19

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Background: Coronavirus disease (COVID-19) is a great global public health concern, caused by SARS-COV2 and represents the causative agent of a potentially fatal disease. The WHO reports that technology has an expanding role in both education and practice of the nursing workforce. Telenursing well-defined as the application of telecommunications and information technology to deliver nursing practice at a distance.

Aim: This study aimed to examine the process of establishing a telenursing service for COVID-19.

Method: Research articles were obtained from three databases namely Pubmed, Google Scholar, and Research Gate. Literature search uses keywords (English), namely Telenursing OR Tele-nursing and Covid-19 with inclusion criteria for research articles from 2019-2021.

Results: From 936 research articles, five articles were reviewed that met all the inclusion criteria and objectives of this literature review. Five articles obtained were then made critical appraisals which were then analyzed using simplified thematic analysis. The theme that emerged from this literature review was the non-contact counseling service, education, nursing care.

Conclusion: Application of the telenursing program had a positive impact to improve information technology to deliver nursing practice at a distance. Other methods of distance self-care education be used along with telenursing service as a complementary solution in patients with COVID-19. Keywords: Telehealth, Telenursing, Covid-19, Nursing Care

Keywords: Telehealth, Telenursing, Covid-19, Nursing Care

Implementation of Health Belief Model in Efforts to Prevent COVID-19

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Background: WHO designated COVID-19 as a health problem with a global emergency status with the highest level of alertness. Coronaviruses are large family of viruses cause disease in humans and animals. The number COVID-19 cases progressing quite fast. At the start of the pandemic The total number COVID-19 cases in Indonesia was 248,852 confirmed. Therefore, the number infected with COVID-19 will continue to grow. Adherence to preventive health standards and behaviors in community very important better control disease and be able to know preventive health behaviors from COVID-19 based on the Health Belief Model component in the community.

Method: Design use observational analytic with cross sectional approach. The research use online due to the COVID-19 pandemic. Respondents were collected by accidental sampling by distributing questionnaires in the Sekarisidenan Kediri community. Multivariariate analysis using the Ordinal Regression Test.

Results: This research found that there is an effort of COVID-19 prevention with the Perceived Saverity value =0,00, the Perceived Benefits value =0,004 and the Cues To Action value = 0,000 where as those that have no effect in efforts to prevent COVID-19 are the Perceived Susceptibility value = 0,268, the Perceived Barries value =0,606 and the perception of Self Efficacy value = 0.0684.

Conclusion : Can concluded that there an effect of the theory health belief model on efforts to prevent COVID-19. From the results, there are 3 components that influence, Perceived Saverity, Perceived Benefits,Cues To Action. Meanwhile there are 3 components have no effect, Perceived Susceptibility,Perceived Barries, Self Efficacy.

Keywords : COVID-19, Health Belief Model, Preventive Behavior

STRESS MANAGEMENT IN TRADERS DURING COVID-19 PANDEMIC IN RINGINREJO HAMLET KEBONSARI VILLAGE KADEMANGAN DISTRICT BLITAR REGENCY

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Background: Everything changed drastically when covid-19 invaded the world. Starting from the economic order, state policies, from the largest to the smallest structures, are no exception with traders. The changes that occur both large and small, make it difficult for many people to re-adjust. If pulled in more depth, there will be emotional instability, the appearance of various anxiety disorders, to stress.

Aim: The purpose of this study is to find out the stress management of traders during the covid-19 pandemic in Ringinrejo Hamlet Kebonsari Village Kademangan district Blitar Regency.

Method: The research method used in this study is qualitative method. This study uses Snawball Sampling technique. The population in this study was the people of Ringinrejo Hamlet Kebonsari Village Kademangan district Blitar Regency with a sample count of 7 Respondents and 7 source triangulation. The Data collection process was conducted with in-depth interviews, observations and documentation on traders in Ringinrejo Hamlet. The research instruments are the researchers themselves, interview guidelines, recording tools and documentation tools. Data analysis techniques through data collection stages, data reduction, display data and conclusion verivication. Test the validity of data using source triangulation.

Result: The results showed that traders during this pandemic emerged symptoms of mild stress such as health and emotional problems. The main factors influencing the stress of traders in the pandemic are the difficulty of selling during the pandemic and the fear of contracting the virus from others.

Conclusion: Various ways are done by traders to overcome stress so as not to cause severe stress until there is depression such as exercising, telling stories with family, staying positive, praying, gathering with the surrounding environment, watching soap operas, watching football, eating healthy foods so that the immune system does not go down and limiting information related to covid-19.

Keywords : trader stress management, stress during the covid-19 pandemic

Survey on Nutritional Status of Children Under Five during the COVID-19 Pandemic

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Background: Stunting as a condition of failure to thrive in children is caused by various factors, one of which is the lack of nutritionally balanced food intake in the first two years of life. Optimal nutritional status can be achieved if children consume foods with nutritional content according to their needs. During the COVID-19 pandemic, the fulfillment of balanced nutrition for children must still be considered to maintain immunity to avoid COVID-19 infection.

Aim: This study was conducted to describe the nutritional status of children under five, knowledge, and attitudes of mothers regarding the practice of feeding children that are nutritionally balanced and based on local food during the COVID-19 pandemic.

Method: The design of this study was cross-sectional with 202 samples of children aged 23-59 months in Susut District, Bangli Regency, Bali Province. Data collection includes anthropometric measurements and interviews using questionnaires to determine sociodemographic characteristics, knowledge, and attitudes of mothers regarding the application of balanced nutrition practices based on local food.

Results: The nutritional status of children under five showed an average Weight for Height Z-score (WHZ) is 0.29 ± 1.37 , Height for Age Z-score (HAZ) is 0.56 ± 2.38 , and Weight for Age Z-score (WAZ) is -1.18 ± 2.03 . The average knowledge of mothers about balanced nutrition guidelines is 69.5 ± 15.3 with the most incorrect answers on questions related to the benefits of the importance of washing hands (65%), fulfillment of fat intake (60%), and the function of staple foods (59%). Regarding mothers' attitudes regarding the implementation of balanced nutrition guidelines based on local food, most (>90%) mothers agree that their children usually eat staple foods (rice/cassava/corn/bread), fish, meat (chicken/beef/pork), eggs, fruits, tempeh/tofu, and healthy snacks. However, the majority (52%) of mothers expressed their disapproval of their children being accustomed to consuming chicken liver.

Conclusion: Overall, children under five have good nutritional status, but the knowledge and attitudes of mothers need to be improved regarding the implementation of balanced nutrition guidelines based on local food, especially providing protein sources for children's growth and immunity during the COVID19 pandemic. Keywords: nutritional status, children under five, balanced nutrition, local food, COVID-19

Keywords: Nutritional status, Children under five, Balanced nutrition, Local food, Covid-19

Implementation of K3 Against the Prevention of Transmission of Covid-19 at Puskesmas Siliragung

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Background: In the face of the COVID-19 pandemic, occupational safety and health in the workplace is very important to implement. Occupational health and safety is one of the efforts to prevent the spread of COVID-19. Therefore it is important to implement occupational safety and health in the workplace. Corona virus disease (COVID-19) is an infectious disease caused by the newly discovered corona virus and is currently a worldwide pandemic.

Aim: This study aims to determine the application of K3 at the Siliragung Public Health Center during a pandemic in accordance with Covid-19 prevention guidelines.

Method: The research method used is descriptive qualitative, with purpose sampling and indeep interview of 5 main informants and 3 triangulation informants.

Result: The implementation of K3 at the Siliragung Health Center has been going well, but there are still inhibiting factors, namely the level of employee awareness of the importance of maintaining health protocols and special K3 and K3 personnel are still under the Quality Team, below which there is the PPI and risk management team.

Conclusion: The Siliragung Health Center needs to make improvements in the application of K3 and provide training and guidance on K3 and the management of SMK3 in order to always improve health protocols so as to avoid work accidents and contracting diseases as well as supervision of K3 work standards at the Siliragung Health Center and make K3 a work culture.

Keywords: Implementation, K3, Covid-19

The Effectiveness Audiovisual About Covid-19 Prevention As Health Education On The Knowledge And Behavior Of 3m Teenagers In The Village Of South Lemper Pademawu, Pamekasan

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Background: Health experts propose recommend 3M there are use of masks, keeping a distance, and diligently washing hands with soap and running clean water as the main key to breaking the chain of spreading covid-19 virus. Audiovisual can facilitate audiens and understand the health information presented. Previous research done by Wardhani, Susilorini, Angghita, dan Ismail (2020) show that through audiovisual can increase a person's knowledge and behavior. However, Alini dan Indrawati (2018) did not behavior research, just research his knowledge only.

Aim: Therefore, need to research and know the effectiveness audiovisual about covid-19 prevention as health education on the knowledge and behavior of 3M, teenagers in the village of South Lemper Pademawu, Pamekasan.

Method: Research design is Quasi Experimental. There were 43 teenagers as the samples of this research using proportionate stratified random sampling techniques. The data of the research were collected from questionnaires, then analyzed Wilcoxon Rank Test using SPSS program.

Result: The result of the Wilcoxon Rank Test showed $p (0,000) < \alpha (0,05)$ to the knowledge and behavior. $p (0.000) < \alpha (0.05)$ which means that there are differences in knowledge and behavior 3M before and after being given an educated.

Conclusion: Health education about covid-19 prevention through audiovisual can be said effective on the knowledge and behavior of 3M, teenagers in the village of South Lemper Pademawu, Pamekasan.

Keywords: audiovisual, health education, behavior of 3M

Mapping Models Risk of Comorbidity Covid-19 in East Kalimantan 2021

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Background: The emergence of Covid-19 has attracted worldwide attention. Since January 30, 2020, WHO has declared Covid-19 a public health emergency. The addition and spread of cases occurred quite quickly. Many risk factors influence the development of this disease, one of which is comorbidities.

Aim: Carried out a spatial analysis of the risk trends for comorbid COVID-19 based on data on hypertension, smokers, hyperlipidemia, and hyperglycemia in the province of East Kalimantan in 2020.

Method: This research uses descriptive analysis method. Spatially analyzed data is secondary data, taken from morbidity survey data reported to the East Kalimantan Provincial Health Office.

Results: Based on data, the risk of comorbid COVID-19 based on the highest hypertension rate is in the city of Balikpapan with 24062 cases, while the lowest cases are in PPU district, which is 590 cases. Data on smokers at the highest risk of comorbidity are in the city of Samarinda with 15,206 smokers, while the lowest is in the PPU district with 140 smokers. The highest hyperlipidemia data was found in Balikpapan City with 10468 cases, while the lowest cases were found in PPU district with 124 cases. The highest hyperglycemia data was found in Balikpapan City with a figure of 7,076, while the lowest was in PPU Regency with 86 cases.

Conclusion: Based on the spatial pattern, it shows that the high-risk area for each risk factor indicator is in the City of Balikpapan, while the controlled area or the lowest case is in the PPU district.

Keyword: Covid-19, Spatial analysis, Comorbidity.

Forecasting Analysis of Covid-19 Cases With the Arima (Autoregressive Integrated Moving Average) Method In Berau East Kalimantan 2021

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Background: At the beginning of 2020 the world was shocked by the corona virus pandemic or Covid-19 which could threaten public health in general. Until the end of 2020, Covid-19 cases in the world had reached 83,060,276 with 1,812,046 deaths and Indonesia was in fourth place with 735,124 cases and 21,944 deaths. In 2021, East Kalimantan, which is one of the provinces in Indonesia, occupies the fifth position with the most Covid-19 cases, which is 667 cases. One of the regions in East Kalimantan, precisely Berau Regency, occupies the third highest position of cases of Covid-19 cases with a total of 603 cases.

Aim: Analyze data on Covid-19 cases based on forecasting results in the Berau district for 1 month in April 2021.

Method: This study uses a reactive descriptive method. The forecasting method used is the ARIMA method with the help of statistical applications. The data used is data on confirmed cases of Covid-19 in November 2020 - March 2021 reported by the Berau District Health Office.

Results: The results of forecasting the highest number of cases, amounting to 118 cases in the third week of April with the most suitable data used are weekly data from November 2020 - March 2021. The ARIMA model that is most suitable for use in forecasting is the ARIMA model (1,0,0) with an MSE value of 4958.76.

Conclusion: There has been an increase in Covid-19 cases in the Berau area over the next 1 month with a total of 450 cases.

Keywords: Covid-19, Forecasting, ARIMA

Covid 19 in Breastfeeding Mother : A Riview

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Background: The outbreak of the Coronavirus disease 2019 (COVID-19) in China in December 2019 became a worldwide pandemic. The ongoing coronavirus disease (COVID-19) pandemic has raised serious concerns about the potential for vertical transmission of the virus from mother to fetus.

Aim: This literature review aims to explore the knowledge available from recent studies on the development of COVID-19 in breastfeeding women and their newborns.

Method: This is a literature study that takes from search databases, namely Google Scholar, Pubmed etc.

Result: WHO recommends suspect mother or confirmed COVID-19 to continue breastfeeding. The benefits of breastfeeding compared to the potential risk of COVID-19 infection in neonates are necessary known.

Conclusion: So that it can support the ongoing practice of breastfeeding during this pandemic. to health protocols to prevent transmission of Covid 19 so that children's development runs optimally.

Keyword : Infant, newborn; Breastfeeding; Coronavirus; COVID-19

Use Of Masks For Health Workers In Preventing Covid-19 Transmission

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Background: One way to break the chain of disease transmission is to increase compliance with the use of Personal Protective Equipment (PPE). PPE can be said to be the only tool of war that is needed by health workers in protecting themselves from disease transmission. Although some studies state that the behavior of health workers in the use of PPE is fairly good, but still need special attention because of the number of health workers who are victims due to Covid-19 as of December 30, 2020 a number of 507 people. This is thought to be due to poor self-protection so it is easily exposed.

Aim: This literature review aims to identify use of masks for health workers in preventing covid-19 transmission.

Method: The method used is literature review. The independent variable is the behavior of the mask usage and the dependent variable is the mask. Electronic databases used are Pubmed, Science Direct, Google Scholar with search strategies using PICO (Population/problem, Intervention, Comparison and Outcome) methods.

Results: All the literature that has been reviewed shows the importance of the use of personal protective equipment (PPE) for health workers. Many factors are the cause that affect the level of compliance. The types of masks that have good efficacy are N95 respirators and surgical masks made of polypropylene. Obedience of health workers in the use of PPE is influenced by age, length of employment, perception / knowledge, willingness, peer influence, supervision and availability of facilities, as well as reward and punishment.

Conclusion: The use of masks will not be effective in breaking the chain of transmission of the Covid-19 virus without the obedience, willingness and discipline of its users

The Effectiveness Of Health Education On Compliance With The Health Protocol Of The Covid19 Pandemic

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Background: Coronaviruses are a large family of viruses that cause disease in humans and animals. In humans, it usually causes respiratory tract infections, ranging from the common cold to serious diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).

Aim: The purpose of this study is to analyze The effect of health education on compliance with the COVID-19 pandemic health protocol in the community in Bulurejo Village, Benjeng District, Gresik Regency.

Method: The design of this research is an experimental quantitative study with a Quasy Pre Post Experimental approach with the focus of the research being directed at analyzing the effect of health education on compliance with the covid-19 pandemic health protocol in the community in Bulurejo Village, Benjeng District, Gresik Regency with a population of 74 respondents and a sample of 58 respondents taken by the Accidental Sampling technique.

Results: The findings show that shave not been given health education most of the respondents 42 respondents did not comply with health protocols (73.3%). After being given health education, most of the respondents complied with health protocols as many as 37 respondents (63.8%). Research results using Paired T-Test This shows that the p-value is $0.000 < 0.05$, then H_0 is rejected and H_1 is accepted, so it can be concluded that there is an effect of health education on compliance with the COVID-19 pandemic health protocol in the community in Bulurejo Village, Benjeng District, Gresik Regency

Conclusion: It is hoped that the public can comply with health protocols as they should where they must use standard masks, keep their distance and diligently wash their hands with soap. This will reduce the risk of spreading the Covid-19 virus.

Keywords: Covid-19, Health Education & Compliance

Development of a Web-based Hospital Preparedness Assessment Application in Facing the COVID-19 Pandemic

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Background: Trigger tools have been shown to be more sensitive and specific for adverse occurrences than traditional assessments of patient harm alone. The incorporation of trigger tools into an electronic health record (EHR) has the potential to increase the efficiency of adverse event detection.

Aim: The aim of this research is to develop the e-medical record with trigger tools.

Methods: This study's technique is a hybrid of WISDM and GTT. To accomplish the application project, we employed the PHP programming language, CSS, and JavaScript. To achieve technical design, we divided the I-EMR into two conceptual models: feature modeling and Unified Modelling Language. Feature modeling expressed the basic concept of the application, which is displayed by the feature of the application. Furthermore, we used Unified Modelling Language, which included Use Case Diagrams, Activity Diagrams, Class Diagrams, and Sequence Diagrams, to expound on the feature in depth.

Result: As a result, we created features such as patient registration (registration, visit history, and doctor schedule), payment management (payment verification and payment method), medical observation, global trigger tools (triggers data overview, review team, review process, and adverse events measurement), pharmacy service, data management (patient, doctor, clinics, health care facilities, etc.), and payment management (payment verification and payment method). In order to test the trigger tools, we used 600 data from four health facilities in Surabaya and found four patient safety triggers.

Conclusion: Patient safety triggers could be detected using an electronic medical record and trigger tools. More system development and enhancement are required to prevent incident.

Eating Habits and Lifestyle Changes during COVID-19 Pandemic among Indonesian Students: Results from Indonesia Dietary and Lifestyle Changes (IDLC) Study

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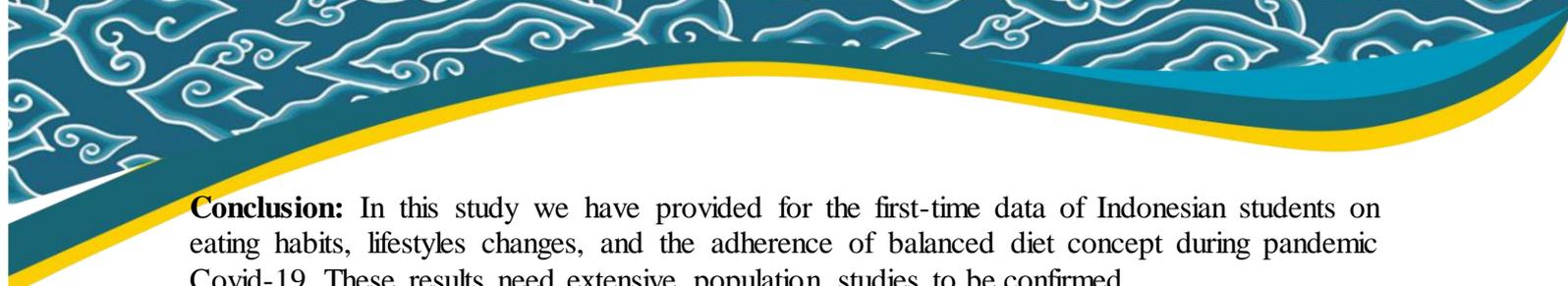
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Background: Pandemic COVID-19 in late December 2019 in Wuhan, China forced different countries to activate their quarantine policy. Three million total cases and more than eighty thousand deaths in less than two years. Adaptations must be done to prevent the transmission and sudden changes in people's lifestyle such as working remotely, work from home, study from home including their eating habits.

Aim: This study determined the impact of COVID-19 on lifestyle changes among higher education students in Indonesia during large scale social restriction and whether eating habits affected during pandemic and restriction period.

Method: The present cross-sectional study with online questionnaire from Qualtrics platform, conducted from March to June 2021, involving 1605 participants had conducted among Indonesian students. The students under diploma, bachelor, and post graduate program who currently living in Indonesia were the inclusion criteria. Data on socio-demography, anthropometry, physical activity using International Physical Activity Questionnaire (IPAQ), trend immune booster foods consumption, and the adherence to the balanced diet guideline among Indonesian. Bivariate analysis statistical tests using SPSS version 23.

Results: This study found 952 with aged between 18 and 53 years (71.60% female). Education level status were mostly from bachelor degree (67.40%). 64.40% participants were in normal nutritional status. Female students had significantly lower physical status than male students ($p=0.006$). This study showed that students increasingly did delivery order for grocery shopping during pandemic. Participants who currently lived in western Indonesia's site had significantly associated with moderate physical activity status ($p=0.016$). Male students had significantly increased their smoking frequent after covid-19 pandemic rather than before pandemic ($p<0.001$). Female students had higher number to be eating trend immune booster foods than male students during pandemic ($p=0.048$). Majority students having a higher adherence to follow balanced nutrition national guideline (64.50%).



Conclusion: In this study we have provided for the first-time data of Indonesian students on eating habits, lifestyles changes, and the adherence of balanced diet concept during pandemic Covid-19. These results need extensive population studies to be confirmed.

Keyword: Lifestyle, Covid-19, Eating Habits, Indonesia



Anxiety among Final-year Students: A Study on the Availability of Campus Facilities and Policies during the Covid-19 Pandemic

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Background: Coronavirus disease (Covid-19) is an infectious disease caused by a newly discovered coronavirus, most people infected with Covid-19 will experience respiratory illness in the absence of comorbidities. Describing the current Covid-19 situation as a pandemic has become a concern for all countries in the world as it not only affects the health aspect, but also other aspects of life. In Indonesia, the education aspect met some problems during the Covid-19 pandemic because all students had to switch to online learning from home. This policy raised pros and cons, especially among college students. Thus many students worry about their education continuity during the Covid-19 pandemic. The student anxiety was majority due to the delay of their undergraduate thesis or final project.

Aim: This study was aimed to determine the relationship between the availability of facilities and the campus policies enforcement during the Covid-19 pandemic with the level of anxiety among final-year students.

Method: This was an analytical observational research with cross-sectional study design. This study was carried out from August to November 2020 in cities and regencies across East Java, Indonesia. The population and sample of this study were final-year students who live in East Java. The availability of campus facilities and policies were the independent variable, meanwhile the dependent variable was the student level of anxiety. Data were analyzed using Spearman's Correlation test.

Result: The result showed that the availability of facilities ($p= 0.004$) and the campus policies enforcement ($p= 0.000$) had a significant correlation with the level of anxiety among final-year students. The availability of campus facilities (correlation coefficient= -0.146) had a negative correlation with the anxiety level, whilst the campus policies enforcement (correlation coefficient= 0.199) had a positive correlation.

Conclusion: Thus, the final-year students will be more anxious if the campus facilities being inadequately available and the campus policies enforcement are getting stricter. **Keywords:** Anxiety, College Student, Facility, Policy, Covid-19

Keyword: Anxiety, College Student, Facility, Policy, Covid-19

Quality Of Health Services in Pandemic Covid-19 Era

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Background: In recent times, Indonesia and other countries in the world have been shocked by the Covid-19 pandemic. Covid-19 is an infectious disease that can cause public emergency. The occurrence of the Covid-19 pandemic has had many impacts on several public services in several countries, especially in health services. Health services have undergone many changes from before to the time of the Covid-19 pandemic.

Aim: The purpose of this Literature Review is to find out how the Health Services of Indonesia and several other countries are in the Covid-19 Pandemic Era and to be a comparison in order to achieve good service implementation.

Method: The method used in this writing is Literature Review with sources taken from databases namely Google Scholar, PubMed, Doaj, Sage and ProQuest published from 2018-2020 using the keyword Quality of Health Services "OR" Health Services "AND" Covid-19

Result: the quality of health services in the Covid19 Pandemic Era has been said to be quite good, although there are some things that must be addressed in carrying out health service policies

Conclusion: The best quality of health services is New Zealand with maximum government policies. Then for the country with the least quality in health services, it is India because there is no Lockdown so that it frees up space for Covid19 to spread widely. In Indonesia itself, it has also been said to be quite good, but there are still many weaknesses in the country's strategy to eradicate Covid19

Covid-19 Situation Indonesia and Challenges in Vaccination Coverage

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The ongoing pandemic COVID-19 caused due to SARS-CoV-2 has affected more than 200 countries in the world including Indonesia. The pandemic has caused catastrophic damages to all aspects of life mainly social and economic aspects. Indonesia which contains the world's fifth-largest population is among the top fifteen countries in terms of the highest total COVID-19 cases and the highest case fatality rate among the Southeast Asian countries. By mid-September 2021, more than 4 million total cases and 140,000 deaths have been reported in Indonesia. Java Island which is the most developed island harbors nearly two-thirds of the country's population and has constantly been the leading region for COVID-19 morbidities. Intending to eradicate COVID-19 illness among its citizens, the Indonesian government increased the immunization campaign, reaching a milestone of 100 million doses on August 31, 2021, and is now working to improve coverage and reach individuals in rural regions. Indonesia has mainly relied on mRNA (manufactured by Moderna and BioNTech/Pfizer) vaccine, inactivated virus (Sinovac, Sinopharm), and viral vector (Oxford/AstraZeneca, Gamaleya, Janssen/Johnson&Johnson, CanSino) to vaccinate its people. Because of the vaccine's effectiveness and the time it took to reach the public, there has been an increase in hoaxes. People's attitudes on whether or not to get vaccinated have become split. If they need to be vaccinated, what sort of vaccination they prefer, and what adverse effects they may have as a result of the injection may be the possible reasons for this dilemma. As a whole, despite the prevailing challenges, the Indonesian government has succeeded to constantly control the COVID-19 epidemic in the country and the number of people participating in the vaccination campaign is quite satisfactory.

Keywords: COVID-19, pandemic, Indonesia, vaccine coverage

Change Of Burnout Status Among Health Personnel During COVID-19 Pandemic In Indonesia

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Background. COVID-19 pandemic causes an increase in health service workload. This can influence health personnel's wellbeing, posing a risk to suffering from burnout. In two periods of COVID-19 case spikes in Indonesia (with a 9-month interval), this study explores whether there was a change in burnout status among the health personnel.

Aim: To identify the prevalence of burnout experienced among health service personnel in two periods during the COVID-19 pandemic and the change between the two periods.

Method: The respondents were health workforce in health facilities in Indonesia who agreed to fill in the online questionnaire. Burnout was measured using the Freudenberger and Richelson scales. The questionnaire was shared twice, first in April 2020 and repeated in January 2021 with the same respondents. While in the baseline survey a total of 364 health staff completed the questionnaire, only 48 subjects (13%) filled in the same questionnaire in 2021. The statistical analysis employed paired T-test and MacNemar method to detect a change in burnout status.

Result. The baseline data shows that most respondents were females (70.9%), aged 30 to 44 years old (51.2%), worked in hospital settings (68.1%), half were medical professionals (54.1%), with work experience of more than 10 years (36.8%). Most respondents (64.6%) have been involved in treating COVID-19 patients for more than four weeks, were assigned to the outpatient ward (41.5%) and in the morning shift (96.2%). A great majority confessed to having received adequate nutritional support in the workplace (76.6%), supported by their family (83.5%), and reported having personnel protective equipment in their workplace (98.6%). The baseline survey revealed that, out of 364 respondents, 7.7% were detected experiencing burnout. Of 48 respondents responding to the second measurement, only one remained suffering from burnout, one staff changed to no burnout, while others were not experiencing burnout signs in either period. No significant results in the statistical tests were found using a 95% confidence level.

Conclusion. Burnout was detected in 7.7% of the health workforce. There was no change of burnout status analyzed between the two periods of case spikes during the COVID-19 pandemics.

Keywords: burnout, COVID-19, health personnel

Determinants of Health Worker IPC Covid-19 Compliance At Puskesmas of Bekasi District in 2020

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Background: The increasing number of covid 19 cases in health workers is increasingly worrying. COVID-19 infections in health workers who are acquired while providing services at the Puskesmas are HAIs. HAIs can be prevented by implementing infection prevention and control (IPC).

Aim: This study aims to determine the determinants associated with compliance of COVID-19 IPC among health workers at the Bekasi District Health Center in 2020.

Method: This study used a cross-sectional study design with a self-reported method by filling out a questionnaire via googleform. The population is all health workers in the Bekasi District Health Center. A sample of 190 people was calculated using the calculation of the difference in two proportions with the Quota sampling technique. The analysis used multivariate regression.

Result: This study found score of compliance of health worker to IPC is 93.17 (scale 100). According to 95% of compliance, there is 58% health worker who have good compliance. Variabel of risk perception and facilities have a significant relationship with compliance of COVID-19 IPC. The risk perception variable is the dominant variable related to compliance with COVID-19 IPC (p value < 0.0001, OR = 5.314, 95% CI = 2.669 – 10.578).

Weather Factors Associated with COVID-19 Cases (West Java, Indonesia)

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Background: COVID-19 cases in Indonesia experienced a fairly high increase in June 2020. This was caused by increased population mobilization and changes in weather that began to enter the rainy season.

Aim: The purpose of this study is to identify the relationship between weather factors and the incidence of COVID-19 in West Java Province (Indonesia).

Method: Using a cross-sectional study design. The data sources used are from the Indonesian Agency for Meteorology Climatology and Geophysics and the Indonesian Ministry of Health. Data were analyzed by the Spearman correlation test using IBM SPSS.

Results: The results of this study indicate that there is a relationship between daily COVID-19 cases and average temperature ($r = -0.208$; $p\text{-value} < 0.05$). In addition, factors that affect the cumulative cases of COVID-19 consist of minimum temperature ($r = -0.240$; $p\text{-value} < 0.05$), average temperature ($r = -0.246$; $p\text{-value} < 0.05$), humidity ($r = -0.313$; $p\text{-value} < 0.01$), and rainfall ($r = -0.254$; $p\text{-value} < 0.01$).

Conclusion: The rate of daily cases and cumulative cases of COVID-19 correlated with almost all the weather variables, except maximum temperature. It is confirmed that the increase in cases is more at risk during the rainy season or when the weather is low.

The Impact of COVID-19 Pandemic on Maternal and Family Planning Service: in North Jakarta, Indonesia

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Aim: This study aims to determine the impact of COVID-19 on maternal health services and family planning during the pandemic period in North Jakarta, Indonesia.

Method: This quantitative study used secondary data sourced from the Ministry of Health, and for the qualitative approach, this study used the Rapid Assessment Procedures (RAP) design. The informants were selected through a purposive sampling method. An in-depth interview guide and observation data analysis were utilized the instruments for data and collection.

Results: The analysis results show that the COVID-19 pandemic in North Jakarta has an impact on the implementation of maternal health services and family planning. All indicators and visits to health services experienced a decreasing trend of about 13% to 69%. Spearman correlation value First ANC ($r = -0.956$, $p 0.044$), Fourth ANC ($r = -0.996$, $p 0.004$), Delivery with Health professional ($r = -0.578$, $p 0.0422$) and delivery in health facilities ($r = -0.956$, $p 0.044$).

Keywords: Maternal Health, Family Planning Services, Contraception Used, during Pandemic COVID 19

The Effect of Indonesia's Restriction Policy to Changing Emotional, Behavioural, Psychological wellbeing, and The Coping Ability During Pandemic COVID-19

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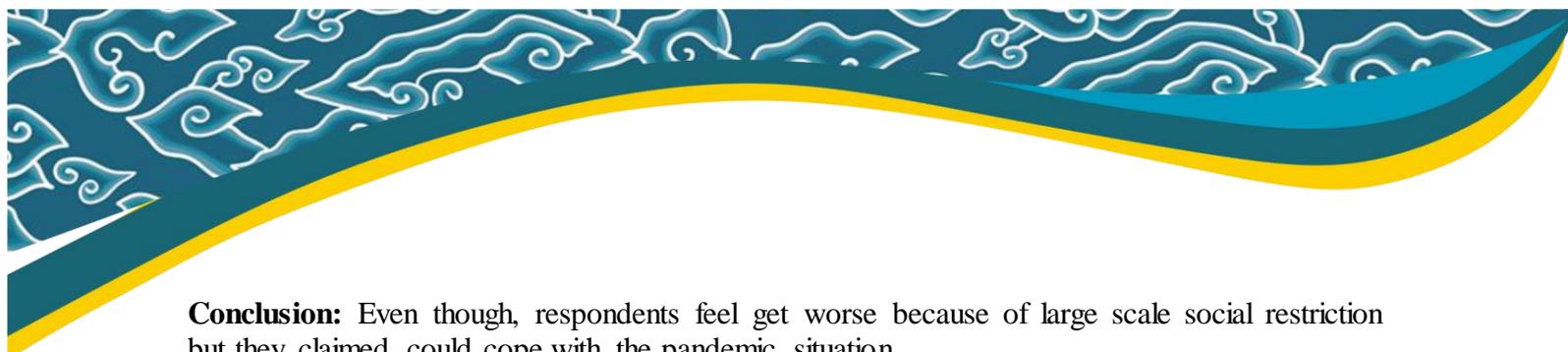
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Background: Because of pandemic COVID-19 many countries quarantine and confinement have been effective in slowing the spread of the virus. The Indonesian Government implemented large-scale social restrictions since March 2020. Schools closed, public events cancelled, travel restrictions imposed, and people encouraged to stay in their homes and avoid unnecessary gatherings. This policy is likely to affect the coping abilities of people who undergo confinement, as well as their wellbeing.

Aim: The aim of this study was explored the effect of changing emotional, behavioural and psychological wellbeing and how the strategies to cope deal with the large-scale social restriction.

Method: This study uses an online survey design with snowball technique. A web-based survey was conducted in July 2020 approximately 5 months after starting the COVID-19 pandemic in Indonesia. Targeted study population with aged 18-64 years old. The total sample was 1194 respondents. A questionnaire composed of socio-demography, the coping for COVID19, and WHO Well-Being Index. The questionnaire is composed of four sections: section one collects socio-demographic information, section two collects information regarding covid-19 and how participants cope with it, and section three will assess the overall wellbeing of individuals, comparing the before and after covid-19 situations.

Results: The result found majority the respondents is female (64.7%), 18 – 24 years old (35.5%), bachelor's degree (42.5%), 47,2% had married, and worked as government employee (25.5%). The respondent who infected COVID-19 only 0.5%, someone in household that infected also 0,7%, but someone close that infected was 8.4% and 2.1% of those were died. Mostly respondents (42.4%) said their life become worse and 26.6% cannot controlled their situation during pandemic. To cope this pandemic presented 53.7% more work with internet, 47.6% more used social media, 31.7% working from home, 28.1% more doing sport, 43% more praying, 53.5% more resting, and 40.5% more sleeping. 59.8% respondents stated can coping well the pandemic situation.



Conclusion: Even though, respondents feel get worse because of large scale social restriction but they claimed could cope with the pandemic situation.

Keywords: large scale social restriction, pandemic COVID-19, coping ability, wellbeing



The Role of ATENSI in Managing Self-Isolation of Mild Covid-19 Patient

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Background: In the Covid-19 Pandemic in Indonesia, the number of mild Covid-19 sufferers is unknown, but it is believed to be much larger than those treated in various treatment facilities provided by the government, be it in hospitals, Athlete's Guest Houses, or Sport's Arenas. Some of them do Self-Isolation, either because they follow the advice of clinicians or Puskesmas (Health centre) officers, or on their own initiative.

Aim: ATENSI, the Indonesian Telemedicine Alliance, which oversees various telemedicine platforms provides various forms of Self -Isolation benefit packages with telemedicine supervision. We believe this is a cheaper solution for mild patient, and yet relatively effective in preventing them to become more serious solution and must be admitted to hospitals.

Methods: this is prospective observation. The research was planned until the end to 2021 year, nested in services offered by various telemedicine platforms under ATENSI. The services provided include important information to know and do, teleconsultation about daily health developments, delivery of necessary medicines and medical equipment, and send them to available health facilities if the condition is worsening. There are various models available, both free and paid.

Result: This is ongoing observation. We hope by the end of September 2021 we have reached thousands of mild patients who choose to do Self-Isolation through telemedicine platforms. This paper describes interim results the experiences of various Telemedicine platforms in supervising some mild patients with COVID-19 who do SelfIsolation, the forms and models of services provided, the constraints and challenges, and their outputs/outcomes.

Conclusion: we do hope that the Indonesian Government acknowledges this alternative model of Self-Isolation through telemedicine, recognized its importance. We believe this is cheaper alternative than Self-Isolation in Hotel, and yet effective in reducing the burden in controlling Pandemic Covid-19.

Public narratives of COVID-19 risk: The problem of stigma related to health workers and patients in Indonesia

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Background: On 26 June 2021, Indonesia has the highest daily COVID-19 cases since the pandemic and the third highest in new cases globally, with 21,095 new cases. However, the stigma around health workers and COVID-19 patients remains a problem in the country. Stigma directed towards health workers and patients is an important COVID-19 public health issue in Indonesia. Such forms of stigma can impede pandemic responses.

Aim: This study aimed to understand the public narratives of risk and responsibility that underpin stigmatization.

Methods: Qualitative data was produced through a digital diary with 37 participants in the Greater Jakarta Area to form an indepth understanding of narratives at the individual and community level. Quantitative big data analysis of Twitter text deployed sentiment analysis to understand the trends in Indonesia-wide social media narratives of stigma against health workers.

Results: The combined findings indicated key narratives and misunderstandings that underpin the continued stigmatization of health workers and patients in relation to COVID-19 in Indonesia. A common finding across the data was the tendency to socially locate stigma in low-income communities and to see them as more likely to engage in stigma. Findings from the qualitative research demonstrated that narratives that lead to social exclusion are used across the social crosssection of the participants sample to rationalize stigmatizing processes. Rumours in relation the health workers were found in both data and underpin rationalisations of social exclusion.

Conclusions: While stigma tends to be seen as a problem of ‘other’, particularly in this case low-income communities, the study suggests that the rationalizing processes that underpin social exclusion are a society-wide phenomenon. While both health workers and patients are discussed with sympathy, there is a simultaneous presence of mistrusting rumours that magnify a sense of risk surrounding these groups.

Keywords: public narratives; COVID-19; stigma; Health workers; patients; Indonesia

Obesity and Severity COVID-19 : A Cross sectional Study in Depok Indonesia

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Background: Coronavirus disease (COVID-19) caused by SARS-CoV 2 (Severe Acute Respiratory Syndrome) has spread worldwide and infected more than 180 million confirmed cases and 3,9 million deaths. The clinical manifestations of COVID-19 range from asymptomatic or mild infection to severe. Previous reports identified that obesity is associated with the condition of a person infected with COVID-19 develop into severe.

Aim: This study aims at examining the risk of severity COVID-19 associated with obesity

Methods: A cross sectional study was conducted among COVID-19 patients admitted at the University of Indonesia Hospital in 2020. Patients whose aged 18 or below or pregnant were excluded. Data were obtained from medical records. Cases were selected for the analysis only if the information was completed. There were 725 COVID-19 included for the analysis. We used adjusted PRs (and 95% CI) to estimate the risk of severity of COVID-19 associated with obesity.

Results: Of 725 COVID-19 patients, 178 had severe symptoms. Patients with hypertension, diabetes, heart disease and respiratory diseases were more likely to suffer severe COVID-19 symptoms. After age, gender, diabetes and heart disease were taken into account, obesity was associated with severity of COVID-19 (PR 1.56 and 95% CI: 1.15-2.09). The severity risks COVID-19 associated with obesity were different based on gender (PRs were 1.52, 95% CI: 1.06-2.16 in men and 1.61, 95% CI: 0.94-2.74 in women) and age (PRs were 2.05, 95% CI: 1.09-3.84 among younger age and 1.37, 95% CI: 0.97-1.93 in older age group).

Conclusion: Obesity increase the risk for severity of COVID-19. Maintain healthy life style, including routine exercise, choice of healthy food and routine medical checkup may reduce the risk of severity of COVID-19

Keywords: Obesity, severity, COVID-19, Indonesia

Economic Burden of the Pandemic COVID-19: A Literature Review

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Background: The economic burden of a disease or sometimes referred to as the cost of illness is the cost of a disease and its comorbidities, which can include health care costs and lost productivity costs due to disability or premature death.

Aim: This study is a literature review to obtain an overview of the economic burden caused by the COVID-19 pandemic in various parts of the world.

Methods: Literature is obtained from several databases, namely PubMed, ScienceDirect, Cochrane Library, Proquest and Google Scholar.

Results: Of the 1,839 articles obtained at the start of the search, in the end only 8 articles met the inclusion and exclusion criteria of this study. Out of those 8 articles, only 1 article calculates the economic burden by estimating direct costs and indirect costs, while other articles only estimate direct costs, or indirect costs, or economic losses incurred in certain types of professions.

Conclusion: Even though the calculation of the economic burden of COVID-19 is still partial, its impact is quite large for a country. A study to calculate the economic burden is needed that includes more direct and indirect costs and costs of the government system in response to a pandemic.

Keywords: economic burden; COVID-19; literature review

Spatial-temporal analysis of microclimate factors and COVID-19 cases in the Special Capital Region of Jakarta 2020

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Background: Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2. COVID-19 is the third disease caused by transmission of coronavirus from animals to humans in the last two decades after Severe Acute Respiratory Syndrome Coronavirus and Middle East Respiratory Syndrome. Climatic conditions are considered the top predictors of COVID-19, as they can determine the survival and transmission of the coronavirus. As of September 30, 2020, a total of 34,874,744 confirmed cases were reported worldwide with 1,097,497 deaths (Case Fatality Rate 3.1%). In Indonesia, there have been 287,008 cases of COVID-19 with 10,740 deaths (Case Fatality Rate 3.7%) from all provinces in Indonesia, which are dominated by confirmed cases from the Special Capital Region of Jakarta.

Aim: This study aims to find correlation and spatial patterns of microclimate factors including temperature, humidity, rainfall, wind speed, and duration of solar radiation on the pattern of COVID-19 cases.

Method: This study uses an ecological study design based on time and place with the integration of geographic information systems and statistical techniques.

Results: Statistical test results show a significant relationship between humidity, rainfall, average wind speed, and duration of sunlight with COVID-19 cases ($p < 0.05$) with each r of -0.777, -0.561, 0.542, 0.666. There is no significant relationship between temperature (maximum, minimum, and average) and maximum wind speed with COVID-19 cases. Based on the spatial analysis, only the wind speed (maximum and average) showed the same pattern of relationship with the pattern of COVID-19 cases.

Conclusion: Differences in geographical and temporal conditions can be a concern for the Jakarta Capital Special Region Provincial Health Office as a consideration in strengthening more specific COVID-19 prevention and control programs according to the level of risk and characteristics of each region.

Keywords: spatial-temporal analysis, COVID-19, microclimate.

Analysis of The Readiness of RSKGM FKG UI Resource as A Teaching Hospital During The Covid-19 Pandemic

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Introduction : The COVID-19 pandemic has greatly affected health services, especially dental health services. RSKGM FKG UI as a teaching hospital that provides dental and oral health services must prepare its resources properly so that they can return to normal activities to carry out their functions as service providers as well as education providers.

Aim: To obtain information regarding the readiness of existing resources in dental and oral hospitals (education) to be able to provide safe dental services during the Covid-19 pandemic era.

Method: This research method is descriptive qualitative with a case study approach, analyzing the results of interviews with selected informants.

Results: RSKGM FKG UI modifies the flow of services and students and completes the need for space facilities, equipment and technology to obtain safe conditions according to the transmission risk control hierarchy in order to provide safe dental services for patients and health workers.

Conclusion: RSKGM FKG UI's resources are sufficient in dealing with the Covid-19 pandemic. Several policies are needed to obtain conducive, safe and disciplined conditions so that services can run in accordance with the new normal conditions during the Covid-19 pandemic.

Keywords: resources, infection, teaching hospital

Factors that Influence Households' Implementation of Food Coping Strategies during the COVID-19 Pandemic in DKI Jakarta (Secondary Data Analysis 2020)

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Background: The COVID-19 pandemic has disrupted various aspects of life, such as the economy, employment, and food security. When facing a situation that disrupts food security, households will apply one or more coping strategies that can describe their consumption behavior and their level of food security.

Aim: Aim of this study was to determine the dominant factors associated with implementation of food coping strategies during the COVID-19 pandemic in DKI Jakarta in 2020.

Method: This study used a secondary data from a study namely Situation of Family Food Security and Their Coping Mechanisms during the COVID-19 Pandemic which conducted in Jan-June 2021 with a total sample of 247 households. Analysis of the data used the McNemar test, chi-square test, and multiple logistic regression.

Results: 30.8% of households were classified as food secure, while 69.2% of households were food insecure. As many as 68.4% of households implemented coping strategies during the pandemic. The average frequency of coping strategies implementation was 5 to 6 coping strategies. There is significant relationship between the food coping strategies implementation and household food security status, family income, education level of the wife, and education level of the husband. Multivariate analysis showed that the dominant factor in implementing food coping strategies was the level of food security (OR=8.965; 95%CI=4.745 - 16.940) after being controlled by confounding variables, namely education level of the husband, number of working family members, and employment status of the husband.

Conclusion: Food-insecure households are at 8.9 times higher risk for implementing food coping strategies.

Keywords: Food coping strategies, food security, urban, the COVID-19 pandemic

Dominant Factors of Household Food Security During COVID-19 Pandemic in DKI Jakarta 2020 (Secondary Data Analysis in 2020)

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Background: Food security is a condition when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets food preferences and dietary needs for an active and healthy life. The emergence of the COVID-19 pandemic is a threat to household food security due to social restriction policies, declining in incomes and job losses that can affect purchasing power.

Aim: This study aimed to determine the dominant factors of household food security during the COVID-19 pandemic in DKI Jakarta in 2020.

Method: This cross-sectional study used secondary data from research entitled Situation of Family Food Security and Coping Mechanisms in COVID-19 Pandemic Situation in Urban and Semi-Urban Areas. The sample of this study was 258 households in DKI Jakarta. Data were analyzed using chi-square test and binary logistic regression.

Result: This research revealed that 68,2% of households experienced food insecure. The result of bivariate analysis revealed that husband's income, wife's income, husband's education, wife's education and number of high educated people had significant relationship to household food security during COVID-19 pandemic (p -value <0.05). Dominant factor of household food security during COVID-19 pandemic in DKI Jakarta in 2020 was husband's income (OR = 3,688; 95% CI= 1.685-8.069) after being controlled by wife's income during pandemic and wife's education as confounding variable.

Conclusion: The conclusion obtained from this study is that households with husband's income less than the UMP DKI Jakarta are at 3.7 times higher risk to be food-insecure.

Keywords: Household food security, COVID-19 pandemic, urban population

Dominant Factor of Household Food Security During COVID-19 Pandemic in Depok City in 2020 (Analysis of Secondary Data 2020)

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Background: Food security is a condition when people have sufficient physical and economic access at all times to obtain nutritious and safe food to lead an active and healthy life. The COVID-19 pandemic can cause food security disruptions. This is because several people have lost their jobs and income so that they are no longer able to meet their food needs.

Aim: This study aimed to determine the dominant factor related to household food security during COVID-19 pandemic in Depok in 2020.

Method: This quantitative research used cross-sectional study design. This study used secondary data from research entitled Situation of Family Food Security and Coping Mechanisms in COVID-19 Pandemic Situation in Urban and Semi-Urban Areas. The total of sample in this study was 259 households. Data were analyzed using chi-square test and binary logistic regression.

Results: This research revealed that 61,8% of households experienced food insecure. The result of bivariate analysis revealed that income, husband's education, wife's education and number of high educated people had significant relationship to household food security during COVID-19 pandemic. Dominant factor of household food security during COVID-19 pandemic in Depok in 2020 was wife's education (OR = 3,532) after being controlled by household income during pandemic and husband's education as confounding variable.

Conclusion: The conclusion obtained in this study is that households with wife's education less than equal to high school are at 3,5 times higher risk to be food insecure.

Keywords: Education, food security, household, income, pandemic COVID-19

Risk Factors Associated with COVID-19 Deaths in Dr. Moewardi General Hospital Surakarta

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Background: This study discusses about infectious disease that has become a new pandemic in the world, namely COVID-19. COVID-19 has caused many deaths in various countries, one of which is Indonesia. Central Java Province is often ranked in the top 3 with the most cases per day. One of the COVID-19 hospitals in Central Java is Dr. Moewardi General Hospital, Surakarta.

Aim: The propose this study is to determine the risk factors associated with COVID-19 deaths at the Dr. Moewardi General Hospital, Surakarta in 2020.

Method: This study used quantitative study design, cross-sectional study with univariate and bivariate analysis. This study used patient medical record data, the population is patients with confirmed COVID-19 at Dr. Moewardi General Hospital in 2020.

Results: The result of this study showed that there was a significant association between COVID-19 mortality and gender, age, comorbidity, d-dimer, and c-reactive protein with p-value < 0,005. Men had higher risk than women (PR 2,856 with 95% CI 1,659-4,917). Elderly patients (≥ 60 years) had higher risk than younger patients (PR 2,554 with 95% CI : 1,754-3,719). Patients with comorbidity had higher risk (PR 3,872 with 95% CI 1,938-7,734). Patients with d-dimer ≥ 500 had higher risk (PR 3,767 with 95% CI 1,505-9,427). Patients with CRP $\geq 8,9$ had greater risk (PR 2,780 with 95% CI 1,780-4,344).

Keywords: risk factors, COVID-19 death, COVID-19

Study on Posture among Universitas Student in Using Mobile Phone: Case Study of Learn from Home Policy because of COVID-19 Pandemic

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Background: The use of mobile phones among young people around the world is increasing. The current COVID-19 pandemic has prompted an increase in mobile phones due to policies to work from home in various sectors, including learning activities.

Aim: This study aims to determine the postures performed by university students in their activities during the pandemic and its implications for musculoskeletal complaints.

Method: A total of 702 students from the Universitas Indonesia volunteered to fill out online questionnaires regarding work posture, duration, and types of activities and complaints on muscles and skeletal through the Nordic Body Map Questionnaire while using mobile phone for e-learning activities. Bivariate analysis between body postures was performed to carry out perceived complaints using the chi-square method using the 25th version of the SPSS program.

Results: The results showed a significant relationship between posture standing at a table when using a cellphone (p-value: 0.013) and complaints of elbows, thighs, knees, and ankles. Most complaints are mild to moderate, such as stiffness, tingling, and aches/pains.

Keywords: Musculoskeletal, Mobilephone, Posture, Students, Symptoms

Gender as a Dominant Factor of Sugar-Sweetened Beverages (SSBs) Consumption Among High School Adolescents in Jakarta 2021 During COVID-19 Pandemic

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Background: Several studies state that excessive consumption of sugar-sweetened beverages (SSBs) can cause obesity, increase the risk of heart disease, stroke, diabetes, and non-communicable diseases.

Aim: By the increasing consumption of SSBs amongst adolescents in Indonesia, including Jakarta, this study aims to determine what factors are related to the consumption of SSBs in SMAN 99 Jakarta students.

Method: The independent variables to be studied include gender, physical activity, knowledge of SSBs, screen time, pocket money, frequency of online food ordering, and socioeconomic status as well as determining the dominant factor of the independent variable. This is a quantitative study with a cross-sectional design. This research was conducted in April 2021 with a total of 206 students in grades 10 and 11 of SMAN 99 Jakarta. The data was collected by filling out a self-administered online questionnaire. Data were then analyzed by univariate, bivariate using chi-square analysis, and multivariate using multiple logistic regression analysis.

Results: The results show that 65.5% of SMAN 99 Jakarta students consumed SSBs higher than that recommended by Pedoman Umum Gizi Seimbang, which is the consumption of added sugar more than 4 tablespoons or 190 kcal in a day. Respondents had a median frequency of consuming SSBs 1.5 times a day, the median amount consumed was 2.5 cups or 600 ml per day with the added energy of 284 kcal per day, and the type of SSBs most frequently consumed was packaged tea (68.4%). The results showed that gender, screen time, and knowledge of SSBs were significantly related to SSBs consumption in adolescents and the dominant factor was the male gender (OR 2,512).

Conclusion: Education for adolescents about healthy lifestyles is very much needed to reduce the excessive consumption of SSBs.

Keywords: sugar-sweetened beverages, adolescents, gender, screen time, knowledge of SSBs

Spatial Analysis about The Coverage of Covid-19 Medical Waste Management from Hospitals in DKI Jakarta Year in 2020

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Background: Since 2019, the SARS-CoV-2 has spread worldwide, causing a global pandemic. The rapid transmission of the virus has obliged several preventive actions, such as the usage of disposable protectors, isolation facilities, and research equipment. As a consequence, this led to a problem about escalation of medical waste generation.

Aim: The study focus is to use spatial analysis to find the coverage of Covid-19 medical waste management that are standardized by the Covid-19 Referral Hospital in DKI Jakarta in 2020 based on the relevant regulations. Researcher also analyzes the potential for optimizing available infrastructures in regard to accelerating the eradication of Covid-19 medical waste in DKI Jakarta.

Method: This research is an ecological study design that uses spatial analysis methods, including overlay, buffer, and vector analysis distance to nearest hub. The research is conducted in DKI Jakarta from April to July 2021 using the data from the Environmental Services and Ministry of Environment and Forestry.

Results: The finding of this research indicates that the coverage of Covid-19 medical waste management in DKI Jakarta based on the aspects studied was 75,3%. The potential of optimizing infrastructures includes burial of medical waste or collaboration with the nearest potential waste destructor.

Conclusion: The conclusion is the coverage of Covid-19 medical waste management in DKI Jakarta is 75,3% with East Jakarta with the highest risk of waste accumulation. The potential of optimizing infrastructures could be done by burial of waste for hospitals that have a safe location or collaboration with the nearest potential waste destructor.

Keywords: medical waste, management, Covid-19, spatial analysis, hospital

Modern Contraceptive Use in National Health Insurance Participants Before and During Covid 19 Pandemic in South Kalimantan

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Background: Modern contraception use is one of the ways to track progress in achieving universal access to reproductive and sexual health services, including for family planning. South Kalimantan is the province in Indonesia where the use of modern contraceptives declined in 2017.

Aim: The purpose of this study was to explore the use of modern contraception in national health insurance participants before and during the pandemic Covid 19 in South Kalimantan.

Method: This research is an ecological study using aggregated data, 13 districts/cities in South Kalimantan. This study used secondary data in 2018-2020 from the official website of National Population and Family Planning Agency. The analysis is also using spatial analysis.

Results: The study shows that there are 30,7% districts/cities in stagnation and 30,7% in decline of modern contraceptive use during the pandemic, 2019-2020. However, the mean of modern contraceptive use in national health insurance has increased in 2018-2020. The mean of modern contraceptive use of National Health Insurance Contribution Assistance Recipients tends to be higher than the non Assistance.

Conclusion: Based on the study, the Covid 19 pandemic affected the use of modern contraception in South Kalimantan so that special policies were needed in contraceptive services during the pandemic. Moreover, the existence of JKN, especially recipients of contribution assistance, can increase the use of modern contraception in South Kalimantan.

Keywords: Covid 19, modern contraceptive use, national Health insurance

Need Assessment On Maternal Mental Health Care For Perinatal Mothers During Covid 19 : a Qualitative Study In Five Community Health Center

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Background : In the Covid 19 pandemic, there is increased prevalence of maternal depression and anxiety in the perinatal period.

Aim : this study aimed to explore mother's needs on maternal mental health care in the perinatal period during Covid 19.

Method : Phenomenological approach is carried out in this qualitative study. The study was conduct at five community health center in Tangerang. Indepth interview were conduct with 11 mothers who were pregnant, in labor, during puerperium and two months after giving birth. Data was analysed using qualitative data matrix and thematic analysis.

Results : Finding indicated maternal anxiety increased during Covid 19. There were five theme related to mothers need for mental health care : psychological support from families and health workers, health education about maternal mental health in perinatal period, information about simple coping mechanism, how to managed perinatal problems and how to seek help from the support system.

Conclusion : need for developing structured and systematic interventions for health workers to integrate maternal mental health services to antenatal, intranatal and posnatal care in the community health center.

Keywords : anxiety, perinatal period, mothers needs, qualitative study, maternity care, Covid 19

Comparing Healthcare System and National Health Insurance in 6 countries in the Covid-19 Pandemic

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Background: The Covid pandemic has not shown any decline. The total number of cases until June 2021 is 182,000,000 confirmed positive worldwide, while in Indonesia at least 2,140,000 have been confirmed positive. The surge in Covid-19 cases has shaken healthcare services around the world. The health care system is required to be able to treat all patients but still has to protect health workers. Different countries show different results. Some countries can respond to Covid-19 quickly, but there are some countries that have difficulty even collapsing their health care system.

Aim: This article aims to compare and analyze national health care and health insurance systems from 6 countries (United State of America, Italy, United Kingdom, Taiwan, Australia, and South Korea).

Method: The research design used is a literature review. Articles collected using search engines such as PubMed, google scholar, Elsevier, and Springer. The articles used in the research are published in the year 2020-2021. Analysis of research articles obtained using a systematic review.

Results: The results of the review show that various health systems and national health insurance carried out by these countries can be a reference regarding the development of health policies in Indonesia in dealing with the Covid-19 pandemic.

Conclusion: Each system implemented by each country has its own weaknesses and strengths. Learning from the best practices of the health care system and national health insurance implemented by some of these countries can provide solutions for improving the Indonesian health system in dealing with the Covid-19 pandemic.

Keywords: healthcare system, national health insurance, covid-19, pandemic, coronavirus

Implementation Of Health Belief Models In Efforts To Prevent Covid-19

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Background: WHO Designated COVID-19 as a health problem with a global emergency status with the highest level of alertness. Coronaviruses are a large family of viruses that cause disease in humans and animals. At the start of the pandemic The total number of COVID-19 cases in Indonesia was 248,852 confirmed. Therefore, the number infected with COVID-19 will continue to grow.

Aim: Adherence to preventive health standards and behaviors in the community is very important to better control disease and be able to know preventive health behaviors from COVID-19 based on the Health Belief Model component in the community.

Method: This research design uses observational analytic with cross sectional approach. The study was conducted online due to the COVID-19 pandemic. Respondents were collected by accidental sampling by distributing questionnaires in the Kediri community. Multivariariate analysis using the Ordinal Regression Test.

Results: This research found that there is an effort of COVID-19 prevention with the Perceived Saverity value =0,00, the Perceived Benefits value =0,004 and the Cues To Action value = 0,000 where as those that have no effect in efforts to prevent COVID-19 are the Perceived Susceptibility value = 0,268, the Perceived Barries value =0,606 and the perception of Self Efficacy value = 0.0684.

Conclusion: Can concluded that there an effect of the theory health belief model on efforts to prevent COVID-19. From the results, there are 3 components that influence, Perceived Saverity, Perceived Benefits,Cues To Action. Meanwhile there are 3 components have no effect, Perceived Susceptibility,Perceived Barries, Self Efficacy.

Type of Personality with Compliance in Applying Health Protocol for Covid-19 in Tosaren Village Kediri City

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Background: During the current pandemic, the behavior of the Indonesian people is not ready to face the COVID-19 pandemic, this is marked by four types of behavior, one of which shows non-compliance with health protocols. The community's non-compliance in preventing Covid-19 needs serious handling, because this problem occurs most of the time. One of the factors that influence people's adherence to health protocols is personality type.

Aim: The purpose of this study was to identify the relationship between personality types and adherence to the Covid-19 prevention health protocol in Tosaren Village, Kediri.

Method: This research design uses observational analytic with cross sectional approach. The study was conducted online due to the COVID-19 pandemic. Respondents were collected by accidental sampling by distributing questionnaires in the Kediri city community. Bivariate analysis using the Chi Square Test.

Results: Most of the personality types in the people of Kediri City fall into the correlation category, as many as 18 respondents (36.0%). Most of the health protocols for the people of Tosaren Kediri Village are sufficient, as many as 36 respondents (72.0%). It can be concluded that there is a relationship between personality type and health protocol with p value = 0.005.

Conclusion: From the four personality types, it is found that the sanguinis and phlegmatic personality types have good obedience.

Body Weight and Body Mass Index Changes Are Not Associated with Sitting Time and Screen Time during COVID-19 Pandemic

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Background: The situation caused by COVID-19 pandemic has made significant changes in everyday life. Sedentary lifestyle, increased the usage of gadget as well as increased duration spent sitting for hours could lead to body weight and nutritional status changes.

Aim: To analyze whether weight changes (weight loss and weight gain) and body mass index are associated with sitting time and screen time during COVID-19 pandemic.

Method: An online cross-sectional survey was carried out among 401 individuals older than 18 years old in Surabaya, East Java in June 2020. The self-administered questionnaire included questions related to sedentary activities, namely duration spent for sitting and for using gadget in a day. Self-reported weight and height before and after pandemic were used to calculate body mass index (BMI) before and after COVID-19 pandemic.

Results: The study found that 47.9% of respondents did not experience significant changes in their body weight before and during the COVID-19 pandemic. People who experienced no change in their body weight spent less than 6 hours sitting (50.8%) and people who experienced weight loss spent more than six hours using their gadgets (59.3%). It was also found that as many as 44.6% of respondents had normal nutritional status where 45.3% used gadgets with a duration of more than 6 hours and 45.8% used the time to sit for less than 6 hours.

Conclusion: Body weight changes and body mass index are not significantly correlated with sitting time and screen time during COVID-19 pandemic.

Keywords: body weight changes, body mass index, sitting time, screen time, COVID-19 pandemic.

Mental Health of Indonesian People During Covid 19: An Overview in Online Mass Media

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Background: In October 2020, the number of people who filled in the website of the Indonesian Mental Medicine Specialist Association (PDSKJI) is 5661, from 31 provinces. As many as 32% experienced psychological problems and 67.4% had symptoms of anxiety, with most of the age group under 30 years. As many as 67.3% experienced depression during the pandemic in Indonesia. Of the total depressed people 48% thought of committing suicide, or wanted to harm themselves and others in any way. As many as 74.2% of the community experienced symptoms of psychological trauma. This data is a description of the mental health conditions of the Indonesian people during the Covid-19 pandemic.

Aim: The purpose of this study is to get an overview of mental health cases during the Covid19 pandemic in Indonesia through online mass media.

Method: List all of online media for 1 year, namely April 2020 to May 2021 which contains news related to mental health due to the Covid pandemic19. After that, it was separated between articles that reported cases and articles that reviewed the prevention and treatment of mental illness.

Results: For 1 year, from April 2020 to May 2021, there were 63 articles in online media reporting cases of increasing mental health problems during this pandemic. A total of 52 articles on advice on maintaining mental health. And only 1 article that reported the decline in mental health rates in Maluku on September 2020. Articles related to prevention and treatment provided enlightenment to the public on how to overcome problems in their mental health.

Conclusion: In the past 1 year, Indonesian online mass media have described an increase in mental health cases during the COVID 19 pandemic

Keywords: Covid19, mental health, online media

Consumption of Sugar Sweetened Beverage in Urban and Rural Adolescents in East Java during the Covid-19 Pandemic

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Background: The COVID-19 pandemic, with millions of people affected, especially those of adolescents, combined with the lockdown measures have impacted the lifestyle and health behavior of the population, including their beverage consumption behavior.

Aim: The purpose of this study was to analyze SSB consumption among adolescents in urban and rural areas during the COVID-19 pandemic.

Method: The research was conducted in September 2020 in Banyuwangi (Urban) and in Surabaya (Rural), East Java. This study was a cross sectional study involving 204 adolescents. The variables studied were the frequency of consumption of SSB, the portion of one drink, the time of drinking, where to buy and the reasons for liking SSB.

Results: Most of the adolescent in rural (59.59%) and urban (58.62) are women. The nutritional status of adolescents in both areas was normal (rural=66,44%; urban=79,31%). SSB that was most often consumed in both urban and rural areas was sweet iced tea, fruit juice with sugar and milk, syrup, powdered milk and full cream liquid milk. Iced tea was consumed all the time and they like it because of its good taste.

Conclusion: They consume juice during the day or evening and consume it to be healthy. Unlike milk, they drink it in the morning before eating or at night before going to bed because it tastes good. During the pandemic, it turned out to have an impact on the consumption of SSB in adolescents. Milk and juice are their choice but unfortunately both are high in sugar content. So that education about SSB is needed for adolescent.

Keywords: Sugar sweetened beverage, Adolescent, Health status, COVID-19

The Role Of Nutrition On The Body's Immunity During Pandemic

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Background: Nutrients are one of the factors that play an important role in maintaining the optimal work of the body's immune system, especially during the COVID-19 pandemic. These nutrients are protein, fat, vitamins and minerals.

Results: Of the three nutrients, protein is one of the nutrients that has the most influence on the body's immune system, because of the presence of antimicrobial proteins that can directly fight microorganisms and prevent them from multiplying. Protein, apart from being a source of energy, is also needed for the production of hormones, enzymes and antibodies in the body. BCAA (Branched Chain Amino Acid) consisting of Isoleucine, Leucine, and Valine, which are essential amino acids, plays a crucial role in stimulating lymphocyte proliferation and increasing NK (Natural Killer) cell activity. Lymphocytes then play a role in increasing the activity of neutrophil cells. This role will result in a smaller risk of bacterial and viral infection which is indicated by a decrease in CRP (C-Reactive Protein) levels. Fats, especially the essential one, linoleic acid also play an important role in the body's immune system. Omega-3 contained in linoleic acid is needed to activate IL2 (Interleukin-2) and gamma globulin. Both substances are imperative to activate cellular and humoral immunity. In addition, the function of vitamins C and E as antioxidants is also needed to prevent organ damage due to free radicals produced by microorganisms. Likewise, zinc is also required to activate the formation of gamma globulin.

Conclusion: Hence, it can be concluded that most nutrients, especially BCAAs, omega-3 fatty acids, vitamin C, vitamin E and zinc have a significant role in the body's immune system through the cellular system and humoral immunity (innate and adaptive immunity).

Healthcare student response to the intersectionality of gender and remote learning technology during COVID-19 pandemic in Indonesia

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Background: COVID-19 pandemic has lockdown people life and places internet connection as the primary needs in today's daily life. From early education to higher education is suddenly disrupted into online learning. Students in LMICs, moreover who living in the remote area, should deal both with the poor internet connection and the economic ability to pay for internet connection. Hence, the pandemic not only impacted the health system but also its education system in preparing future health workers. Healthcare students that commonly study in a laboratory or community must hold their activities and start to learn remotely.

Aim: This study explores how the intersectionality of gender and access to an internet connection may affect the life of healthcare students in Indonesia.

Method: Three months since the study from the home policy has been implemented in Indonesia, we surveyed healthcare students about their experience during this challenging time. There are 722 students from 28 healthcare schools in Indonesia who participated in the survey. We asked how this pandemic changes their daily life and what barriers they found in the remote study.

Results: We found that the quality of internet connection correlates with gender, living location remoteness, and how powerful this pandemic impacted students' life. We also found the existence of traditional gender roles during the COVID-19 pandemic. Male students tend to actively work in order to earn money during lockdown while female students mostly help their parents did housekeeping works.

Conclusion: While COVID-19 impacted both men and women students, they still fall into traditional gender roles.

Risk Analysis Of Stunting Events In Children In The Covid 19 Pandemic Time In Sidenreng Rappang District

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Background: Stunting is stunted growth and development of children during the first 1000 days of life. COVID-19 is an infectious disease caused by a new type of virus SARS-COV-2 which spreads under the name coronavirus disease 2019 (COVID-19). In the COVID-19 pandemic situation, restrictions on community social activities have an impact on socio-economics. Restrictions on the economic and health service aspects have an impact on the nutritional status of children. UNICEF data (2017) globally 22.9% or 154.8 million children under 5 are categorized as stunting, in ASIA alone 87 million children are categorized as stunting. Indonesia still occupies the fifth largest prevalence of stunting in the world, approximately 9 million children are categorized as stunting in 2018. Data from the South Sulawesi Health Office states that the prevalence of stunting is 34.55%, which is still above the national prevalence. The proportion of incidents in Sidenreng Rappang District is also above the national proportion target of 20-30%. Stunting in children is the main indicator in assessing the quality of future generations.

Aim: The research objective was to determine the risk of stunting in children under five after controlling for other stunting incidence variables during the pandemic in Sidenreng Rappang District.

Method: The research method used is an observational study with an epidemiological design, namely a case control study. A case-control study by comparing cases (stunting toddlers) with controls (normal / non-stunting toddlers) by matching the place and age of the children. The independent variables in this study are household income, exclusive breastfeeding and complete basic immunization.

Results: household income variable obtained OR value 4,800 (95% CI: 2,077-11,093), exclusive breastfeeding variable obtained OR value 33,455 (95% CI: 10,711-104,488), basic immunization variable OR 9,610 (95% CI: 3,878-23,815).

Conclusion: children who were not exclusively breastfed 33,455 were at risk for the incidence of stunting and this was statistically associated

Keyword: Complete basic immunization, Exclusive breastfeeding, Household income, Stunting.

Hidden Voices of COVID-19 Positive Patients Staying in the Newly Introduced Hotel Recuperation System in Japan: Discrimination and the Aftermath

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Background: In Japan, approximately 7 million people had been infected and 12 thousand people had died due to COVID-19 by 15th May, 2021. The government of Japan began the hotel recuperation system in 2019 due to the sudden outbreak of COVID-19, considering that about 80% of the infected individuals had mild symptoms.

Aim: This study aimed to (1) clarify the voices of COVID-19 patients staying in the newly introduced hotel recuperation system and (2) identify the factors associated with dissatisfaction.

Method: We collected data from COVID-19 positive patients through Twitter since the majority of patients with mild symptoms belonged to the younger generation and used Twitter through their smart phones. We searched Twitter from April to October 2020 in Japan and picked up words, such as COVID-19 positive and hotel recuperation, from Twitter messages.

Results: Finally, we analyzed 429 messages. From April to June 2020 (first period), 58.5% messages mentioned about mental health, such as anxiety, discrimination, and feelings of isolation. Moreover, 15.3% messages were about the state of facilities, 14.1% were about meals, and 9.4% were about symptoms. After July 2020 (second period), more than half the messages (50.6%) still mentioned mental health; however, the mention of the state of facilities increased to 22.5%. Additionally, positive comments about the healthcare staff drastically increased to 11.2% from 2.6% in the first period. Furthermore, the mention of symptoms decreased to 2.3% in the second period.

Conclusion: Reflecting the rapid increase of COVID-19 patients, the hotel recuperation system was communalized and improved. However, COVID-19 positive patients were persistently discriminated against, and many of them suffered from silent social criticism.

Keywords: COVID-19, hotel recuperation, infectious disease, discrimination, Japan

The relationship between benevolent childhood experiences and depression among Chinese university students: The chain mediating role of family relations and sleep quality

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Background: University students have been recognized as one of the populations with the highest incidence of depression. Previous studies have shown the importance of benevolent childhood experiences on multiple health effects. However, few studies have focused on the relationship between benevolent childhood experiences and depression and mediating mechanisms underlying this relationship.

Aim: This study constructed a chain mediating model to examine whether family relations and sleep quality mediated the relationship between benevolent childhood experiences (BCE) and depression among Chinese university students.

Method: A total of 1830 university students from 25 universities in three provinces of China were recruited to participate in this study. Sociodemographic characteristics, benevolent childhood experiences (BCEs), family relations, sleep quality, depression (CES-D10) was measured by an electronic questionnaire. The Software Process 3.4.1 version based on SPSS 25.0 were used to analysis the mediation effect.

Results: BCEs, family relations, sleep quality scores were negatively correlated with depression ($r=-0.46, -0.32, -0.47$, respectively, all $P<0.01$). Family relations, sleep quality scores were positively correlated with BCEs scores ($r=0.31, 0.27$, respectively, both $P<0.01$). There was a positive correlation between family relations score and sleep quality score ($r=0.22, P<0.01$). Mediating analysis indicate that BCEs had a direct effect on depression; (The direct effect was 71.73%). Depression was affected by BCEs partly through 3 different pathways: the mediating role of family relations (The mediation effect was 8.5%), the mediating role of sleep quality (The mediation effect was 16.27%), and the chain mediating role of both family relations and sleep quality (The chain mediation effect was 3.5%).

Conclusion: Findings of this study demonstrated that family relations and sleep quality partially mediate the association between BCEs and depression by chain mediating effects. Thus, improving sleep quality and family intervention may be the effective measures to protect Chinese university students from depression.

Keywords: Benevolent childhood experiences; Depression; Family relations; Sleep quality; Chain mediation

Review on Willingness to Receive Covid-19 Vaccine and Registration Rate of Vaccination in Malaysia

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Background: Malaysia began its Covid-19 vaccination drive on 24th February 2021. The government provided the vaccines for free to citizens and non-citizens and it's not compulsory. Although it is completely voluntary, vaccination is strongly encouraged for all. There are three phases in the timeline of the vaccination schedule. Phase 1 (February –April 2021) was for front liners, frontline personnel in essential and defence services. Phase 2 (April – August 2021) is for the people who will be the rest of the staff in healthcare, essential and defence services, the elderly, high-risk groups with chronic diseases, and people with disabilities. Phase 3 (May 2021 – February 2022) is for the people who are aged 18 and above. Registration for the vaccine started on the 1st of March 2020 through the My Sejahtera application, hotline, outreach programme for rural and interior areas, through the website vaksincovid.gov.my and registration at public and private healthcare facilities.

Aim: To encourage more people to register.

Method: Systematic search of data from December 2020 to May 2021 published on Malaysia government websites.

Results: Health Ministry's survey on Dec 21-28, 2020 found 67% of respondents were willing to receive Covid-19 vaccine, 17% were unsure and 16% would not take the vaccine. The poll ran between April 3 and 16, 2021 found 85% of respondents were willing to get vaccinated against Covid-19. The people who have registered to receive Covid vaccine were 99.43% in Putrajaya, 50.59% in Selangor, 41.22% in Johor, 43.50% in Sarawak, 15.85% in Sabah, 26.34% in Kelantan, 31.18% in Pahang, 32% in Terengganu, 35.48% in Perlis and 35.86% in Perak according the statistics on 3 May, 2021.

Conclusion: Although 85% of the respondents of the survey were willing to receive Covid19 vaccine, only one fourth to half of the population in most of the states registered to receive vaccination. Sabah was the state with lowest number of registration. Low rate of registration could be due to lack of knowledge and attitude about Covid vaccine or lack of knowledge on usage of MySejahtera App, which should be promoted.

Keywords: Covid-19 vaccine, Willingness to receive, Registration rate, Malaysia

Acceptability and attributes of the COVID-19 vaccine: an application of the diffusion of innovation theory in the Philippine setting

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Background: With the Philippines' experience on vaccine hesitancy due to the Dengvaxia controversy, recent measles outbreak, re-appearance of polio cases, and the surging cases of COVID-19 infection.

Aim: the study aimed to determine the potential acceptability of COVID-19 vaccination in the country and understand its attributes using the Diffusion of Innovation Theory.

Methods: The cross-sectional study included 327 respondents recruited for four weeks through various social media platforms. Participants were requested to answer a self-administered online questionnaire, and results were analyzed using SPSS ver. 20 software.

Results: The majority of respondents belong to age group 21-30 years old (46.2%), mostly female (65.4%), relatively healthy (86.2%), college graduate (37.6%), and currently unemployed (50.8%). While the majority have the intention to get vaccinated against COVID-19 (70.0%), only 16.8% are innovators and belong to the age group 21-30 years old (p value = 0.03), male (p value , and those who are employed (p value= 0.01). Pearson's Chi-Square association further revealed that there more females who agree to get vaccinated (p value . Relative advantage (p value , compatibility (p value , observability (p value , and perceived risk (p value are significantly associated with the intention for COVID-19 vaccination and adopter category.

Conclusion: Findings prove that the attributes of Diffusion of Innovation are predictors for the acceptability of COVID-19 vaccination and timing of adoption of the innovation. Strategies that promote trust in the government, information transparency, and better information dissemination on the benefits and safety of vaccination can motivate more Filipinos to adopt the innovation.

Changes in supporting environment for pregnant and lactating mothers in Japan during COVID-19 pandemic: Preliminary findings

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Background: Supporting environment is considered important for pregnant women and lactating mothers. However, the State of Emergency (SoE) due to COVID-19 pandemic might have influenced environment to support breastfeeding.

Aim: The present study aimed to investigate changes in a supporting environment for pregnant and lactating mothers before and after the SoE due to COVID-19 pandemic in Japan.

Method: A cross-sectional web-based survey was conducted. Mothers who were 1) 18 years and above at the time of delivery, 2) gave birth in Japan, and 3) have a child below 24 months were invited to participate. The questionnaire consists of items used by the surveys conducted in the UK and Malaysia, together with additional items. Participants were given information about the background of the study and obtained a consent prior to complete the questionnaire. All analysis was conducted using the SPSS package (version 27, Tokyo, Japan) with a significance level of 5%.

Results: Of 879 (32.5 ± 4.3 years old, 158.7 ± 5.4 cm, 55.1 ± 8.9 kg) mothers included in the analysis, 393 (44.7%) delivered their babies before the SoE. Mothers who delivered their babies either during or after the SoE expressed a significantly greater concern to visit hospital for their regular medical examination compared to those who delivered before the SoE (86.8% vs 28.7%, $p < 0.01$). Also a significantly greater proportion of mothers who delivered during or after the SoE have considered or changed the hospital to deliver their babies (14.2% vs 4.7%, $p < 0.01$). Although both groups reported supports in breastfeeding practices from medical professionals and COVID-19 did not influence on their breastfeeding practices, a significantly greater proportion of mothers who delivered during or after the SoE expressed no support from family and friends (73.9% vs 60.1%, $p < 0.01$) and considered insufficient amount of support to raise their babies (48.0% vs 38.9%, $p < 0.01$).

Conclusion: Although COVID-19 did not influence breastfeeding practices of mothers, a limited access with their family and friends by the SoE might have resulted in reduced

Influence of attitude on the perceived effectiveness of COVID-19 vaccines in Malaysia

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Background: A nationwide movement control order (MCO) due to the novel coronavirus 2019 (COVID-19) was implemented in Malaysia to restrict large-scale movements. Successfully vaccinating Malaysians against the disease is crucial to achieve herd immunity and bring an end to the pandemic locally.

Aim: This study aimed to investigate the influence of attitudes toward the COVID-19 vaccine, particularly in relation to general vaccine beliefs and attitudes (knowledge of, perceived importance, effectiveness, and safety of the COVID-19 vaccine) toward the willingness to accept the vaccine at 90% and 95% effectiveness levels, prior to the national rollout of the COVID-19 vaccination programme in Malaysia.

Method: An online cross-sectional study was conducted in Malaysia during the period of 10 December 2020 to 9 February 2021. Adult Malaysians were invited to complete a questionnaire related to health status, general beliefs about the COVID-19 vaccine, attitudes toward COVID-19 vaccine and their willingness to have the vaccine at 90% and 95% effectiveness levels. Bivariate correlations were conducted to assess the association between willingness to have the vaccine and demographic variables. Hierarchical regression models were constructed to identify significant predictors of willingness to accept vaccine at 90% and 95% effectiveness levels.

Results: A total of 1738 participants completed the survey. Demographic factors, such as age, number of self reported chronic diseases and highest level of education, were found to be significantly affecting the willingness to accept the vaccine at 90% and 95% effectiveness levels. Individuals with greater positive beliefs and attitudes toward vaccine, particularly in relation to the importance of vaccination and the perception of vaccine effectiveness or safety, were found to be more willing to accept COVID-19 vaccine at 90% and 95% effectiveness level.

Conclusion: This study revealed factors such as positive attitudes toward the vaccine as well as positive beliefs about the effectiveness and the safety of the vaccines were significant in predicting higher acceptance of the COVID-19 vaccine. A more comprehensive targeted health campaign can be developed to increase vaccine uptake in Malaysia.

Keywords: COVID-19 vaccine uptake; attitudes toward the vaccine; general vaccine beliefs; vaccine effectiveness; Malaysia;

Determinants that Affect the Menstrual Period of Young Women During the Covid-19 Pandemic: Empirical Evidence from Indonesia

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Background: The factors that influence the menstrual period of young women are external and internal factors in the adolescent's body, especially during the Covid-19 pandemic. Adolescents who are still studying during a pandemic condition can experience increased academic stress or psychological problems, coupled with an unhealthy lifestyle that can affect physical health, including menstrual periods from normal to abnormal (poliamenore or oligoamenorrhea).

Aim: The purpose of this study is to examine the determinants that affect the menstrual period of female adolescents during the Covid-19 pandemic through empirical evidence.

Result: The results were obtained through bivariate analysis (Spearman Correlation) and found a relationship between academic stress levels, instant food consumption patterns/MSG and adolescent body mass index on adolescent menstrual periods with a significance level (0.000, 0.001, 0.001) and with $p < 0.05$. Multivariate analysis (multiple logistic regression test) shows the factor that most influences the menstrual period of adolescents is body mass index/BMI with a significance level of 0.000 and the OR value of 2.524 is the largest compared to other variables.

Conclusion: Based on this result, adolescent should be able to maintain their health through a healthy lifestyle, such as maintain body mass index, consumption healthy food, and also manage emotional condition by carrying out a good coping mechanism or stress management in the situation of the Covid-19 pandemic.

Knowledge, Psychological Disorders, and Burnout on General Practitioners in The Era Of Covid-19 Pandemic

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Background: The COVID-19 pandemic forces health worker as the frontline to work harder against diseases they are not familiar with. Lack of knowledge may trigger anxiety, depression, stress and burnout while treating the patient that also can infect them.

Aim: The study aims are to determine the level of knowledge, psychological disorders (Depression, Anxiety, Stress score / DASS-21), and fatigue (Copenhagen Burnout Inventory / CBI) of general practitioners during this pandemic.

Method: The research is a cross-sectional pre-post test design in one group. Samples taken were 111 general practitioners in January 2021. The data collection technique was done using an online questionnaire before and after the online course about clinical, radiological and psychological aspects in COVID-19 patients. The data obtained were analyzed using the Wilcoxon test and Kendall's tau-c test.

Result: Most of the respondents (66.7%) are female, with an average age of 37 (11) years old. Almost all respondents (81.1%) are working in a primary health facility in Java. Nearly all respondents (87.4%) stated that SARS-CoV-2 has never infected them, and only 14.4% had received the COVID-19 vaccine. As much as 60.91% of the sample experienced an increase in knowledge after the course (p-value of 0.001). Respondents experienced anxiety 9.9%, depression 9%, stress 5.4%, moderate burnout (65.76%) and high burnout (14.41%). Respondents experienced burnout related to personal, work and client. No significant correlation between knowledge and DASS-21. We found the correlation between burnout and knowledge (pvalue=0.048), burnout and depression (p-value=0.002), burnout and anxiety (p-value=0.001), and burnout and stress (p-value=0.026).

Conclusion: The incidence of burnout occurs in general practitioners who experienced psychological disorders, although they had a good knowledge of COVID-19. Depression, anxiety and stress make it easier for general practitioners to experience burnout or vice versa, which need to be investigated further. There are associations between knowledge, stress, anxiety, and depression with burnout in general practitioners.

Keywords: Burnout, COVID-19, General Practitioners, Knowledge, Psychology

Rise Awareness Worn Facemask Using Facemask Detection to Prevent Spread Covid-19

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Background: Coronavirus causing a massive outbreak across the country. This incredibly infectious virus has been spreading across the world. The virus expanded at least into 25 countries, including Indonesia. The World Health Organization (WHO) announced The name of the disease is coronavirus disease 2019, abbreviated as COVID-19. Subsequently, the spread of COVID-19 has been getting worse and spreading around the world. WHO declared COVID-19 to be a pandemic on March 11, 2020, after becoming profoundly concerned by the alarming spread and severity levels ARS-CoV-2, the virus that caused COVID-19, can spread by person-to-person transmission of SARS-CoV-2 is supposed to occur primarily via respiratory droplets, formed when a patient coughs, sneezes, or even talks. Using face mask is solution to prevent the spread of Covid-19. Furthermore, there are currently low awareness using proper mask.

Aim: In this research, efficient recognition system are expecting to assessment people correctly worn or not mask.

Result: Artificial Intelligence has been witnessing a monumental growth in bridging the gap between the capabilities of humans and machines. Convolutional Neural Networks (CNN) is one variants of neural networks used heavily in the field of Computer Vision. CNN is a Deep Learning algorithm which can take in an input image, assign importance (learnable weights and biases) to various aspects/objects in the image and be able to differentiate one from the other. Using huge data sheet image from any ras and country, system will capture moment and assessment in real time will be effectives to warning people in Accuration 80%-90%.

Conclusion: The research hopefully rise awareness to use facemask properly and help the authorities in this great pandemic situation which had lagerly gained roots in the world

Analysis of Factors Influencing the Mental Health of Pertamina Workers in the East Java Balinus Region, Surabaya Regional Office during the Covid-19 Pandemic

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Background: The COVID-19 pandemic has a comprehensive impact on all aspects of human life during the COVID-19 pandemic. Work is one of the most impacted areas of life for adults as it forces many employees to work from home.

Aim: The present study aims to provide an overview of mental health status of workers during the pandemic and to determine the influencing factors on the mental health of Pertamina MOR V workers, Surabaya Regional Office.

Method: This is a descriptive analytical - cross-sectional study involving 112 employees of Pertamina MOR V, Surabaya office as respondents. It used 2 (two) questionnaires; the 25-item Self Reporting Questionnaire (SRQ-25) and the 9-item Maslach Burnout Inventory (MBI-9). The dependent variables included mental health status (stress, trauma related to pandemic and burnout) and the independent variables were age, length of work and level of work. The data were analysed using the Spearman correlation test.

Result: Screening was followed by 112 workers (82 males and 30 females) with response rate of 69.57%. In general, the sample mean scores for stress, trauma, and burnout were 1.98, 0.5, and 11.56, respectively. From the analysis, age and length of work had a significant effect on trauma related to pandemic. In addition, age affected burn out scores.

Conclusion: In conclusion, there was a correlation between the age of workers and length of work with the incidence of trauma and burn out. However, the direction of the relationship was negative.

Keywords: work stress, trauma, burn out, covid-19

Preschool Teachers' Mental Health during the COVID-19 Pandemic: A Qualitative Study in West Timor, Indonesia

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Background: The COVID-19 pandemic has impacted every stakeholder in education, including preschool teachers. During this troubled time, preschool teachers are prone to various mental health issues, including stress, anxiety, and personality disorders.

Aim: This study aimed to understand how preschool teachers see their mental health while teaching in the pandemic era.

Method: Values of community psychology and indigenous psychology were applied in the data collection and analysis process including empowerment, participation, and functions in social and cultural contexts. 10 teachers were involved in this slightly modified photovoice study.

Results: The thematic analysis resulted in three main themes, including miscommunication between parents and teachers, decrease in student participation, and coping stress methods. To be specific, preschool teachers tried adapting effective learning strategies during the pandemic and make visits to children's homes. Still, parents often rejected the preschool teacher since the parents were busy making a living to survive the economic hardships during the COVID-19 pandemic. Parents were indifferent about their children's participation in education, particularly ignoring their children's assignments. This also resulted in a decrease in student participation, specifically in attendance and proactive behaviors during the distance learning process. These two findings resulted in teachers' increase of anxiety and stress symptoms. In response, preschool teachers tried to cope by strolling around their house, reading motivational books, or relying on faith in religion.

Conclusion: This study has identified that preschool teachers need to be supported with mental health educations in order to help them to be more resilient in their struggles during the pandemic.

Keywords: COVID-19 Pandemic, Pre-school teacher, Mental health

The Effect of Social Restriction Policy on People Movement using Facebook Mobility Data

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Introduction : The study on social mobility is conducted in relation to COVID-19 pandemic as the disease is spread by humans thus people's mobility contributes to the case. Study shows that people's social mobility has a strong positive relationship with COVID-19 daily cases and daily deaths. In January 2020, there are 153 million or more than half of Indonesian are Facebook users, thus learning Facebook user's mobility can represent the Indonesian population movement as results of the social restriction policy implemented by the government.

Aim: The research aims at finding the effect of government social restriction policy on people's mobility using Facebook movement data. This research will answer whether different levels of policy strictness will have a different impact on mobility.

Method: The hypotheses are social restriction has positive effect in reducing people's movement represented by the negative percentage of people's movement compared to baseline data in February 2020 before COVID-19 case was announced in March, 2020. The study uses Facebook movement data from March 1st 2020 to June 15th 2021. The data consists of countries with Facebook users, daily updates on the percentage movement change from the baseline in a city, proportion of users stay in a single location and the city/municipal. The method used is an analysis of variance between the change in mobility two weeks before and two weeks after the intervention. The variable of intervention is the regional government social restriction policy.

Results: The results show that for DKI Jakarta, the province with the highest of number of cases and deaths, there is significant difference between the change in reduction of people's mobility before and after the policy implemented. In DKI Jakarta, the provincial government announced public room closures on March 14 th before the large-scale social restriction policy was announced on April 7th, 2020.

Conclusion: The results for South, Central, West, East and North Jakarta are all significant with p-value <0.001 which implies that the policy has significantly reduced people's movement. On the other hand, micro-scale community movement restriction seems not to work in reducing movement, insignificant with p-values more 0.32-0.97.

Keywords: Large-scale social restriction, micro-scale community movement restriction, Facebook movement data