A cross sectional study knowledge and attitude towards participation in the covid 19 vaccination program among medical students

by Hasni Syahida

A CROSS-SECTIONAL STUDY: KNOWLEDGE AND ATTITUDE TOWARD PARTICIPATION IN THE COVID-19 VACCINATION PROGRAM AMONG MEDICAL STUDENTS

Husnul Fatimah[1], Diauddin[2], Yusef Dwi Jayadi[3], Iwan Aflanie[4], Mohammad Bakhriansyah[4], Istiana[4], Fauzie Rahman[5], Vina Yulia Anhar[5]

[1] Association of the Faculty of Medicine, Universitas Lambung Mangkurat, Indonesia
[2] Dinas Kesehatan Kabupaten Banjar, Martapura, Indonesia
[3] Badan Penyelenggara Jaminan Sosial Ketenagakerjaan, Kalimantan Tengah, Indonesia
[4] Medical Study Program, Faculty of Medicine, Universitas Lambung Mangkurat, Indonesia
[5] Public Health Study Program, Faculty of Medicine, Universitas Lambung Mangkurat, Indonesia
husnulfatimah6498@gmail.com

ARTICLE INFO

ABSTRACT

Background: COVID-19 pandemic in Indonesia has increased. Therefore, some efforts are needed including the COVID-19 Vaccination Program to overcome this issue. Until June 29th, 2021, 28.304.774 Indonesians have received the first dose of the vaccine, and 13.329.738 for the second dose of vaccine, out of the national target of 181.554.465. It indicates that the coverage is still far from the target. The knowledge and attitude of the individual are one of the key factors for a person to participate in the program. **Purpose:** To analyze the correlation between the level of knowledge and attitudes toward their participation in the COVID-19 Vaccination Program among medical students. **Methods:** This is descriptive analytic with cross-sectional approach. The samples were 339 Medical Students Universitas Lambung Mangkurat. Sampling technique was collected using stratified random sampling technique. Data was retrieved online using Google Forms. Data were then analyzed using statistical software the IBM SPSS version 23. The fisher exact test was used to test the significance of the relationship. **Results:** We included 339 medical students, in which 264 students (77.9%) participated in the vaccination program but 75 students (22.1%) didn't. The statistical test showed that p-value of the relationship between knowledge and attitudes with participation of medical student in the COVID-19 vaccination program with p-value= 0.055 and p-value= 0.025. **Conclusion:** There is no correlation between knowledge and participation of medical students in the COVID-19 Vaccination Program, but there is a correlation between attitudes toward the participation of medical students in the COVID-19 Vaccination Program.
 Keywords: knowledge, attitude, vaccination, covid-19, medical students

INTRODUCTION

In the world, the disease caused by the coronavirus is a health problem that is currently the focus and very important to get people's attention. Coronavirus Disease 19 (COVID-19) is an infectious disease, the cause of which is Sars-Cov 2 which is a new type of coronavirus that was discovered in 2019 (Han Y, 2020).

The World Health Organization (WHO) has declared COVID-19 a global pandemic, and the Government of Indonesia has designated COVID-19 as a national disaster (non-natural disaster) (Keliat et al, 2020). It is necessary to immediately intervene in terms of implementing health protocols as well as efforts to provide COVID-19 vaccines. Various countries, including Indonesia, have developed ideal vaccines with various platforms, including attenuated virus, protein subunit, viral vector, nucleic acid, virus-like, and inactivated vaccines. The Indonesian government officially announced seven types of COVID-19 vaccines. This is stated in the Decree of the Minister of Health Number HK.01.07/Menkes/12758/2020 concerning the Determination of Vaccine Types for the Implementation of COVID-19 Vaccination (Kemenkes, 2020).

In South Kalimantan, most vaccines used were vaccines made by Sinovac (China) in the form of injections. The provision of the COVID-19 Vaccine aims to reduce morbidity and mortality due to COVID-19, reduce transmission of COVID-19, achieve group immunity in the community, and protect the community from COVID-19 infection to remain socially and economically productive. Vaccination coverage was high and evenly distributed throughout the region, resulting in herd immunity. From an economic perspective, vaccination is much more cost-effective than treatment. The policy regarding the procurement and implementation of vaccinations in the context of the COVID-19 pandemic is contained in Presidential Regulation Number 99 of 2020 (Presiden RI, 2020).

Vaccines are useful for actively forming specific immunity against certain diseases due to the increasing number of COVID-19 cases in Indonesia, which has reached 2.14 million. Therefore, efforts are needed to overcome this problem, one of which is through the COVID-19 vaccination program through participation in the COVID-19 vaccination program. The latest data showed that the COVID-19 vaccination was recorded on June 29, 2021; the population who received the first dose of vaccination was 28.304.774, the second dose was 13.329.738 and the national target was 181.554.465 (COVID-19 Task Force, 2021). These data show that COVID-19 vaccination coverage in Indonesia is still much lower than the national target.

One of the factors that can influence behavior is knowledge; in this case, behavior is community participation in the COVID-19 vaccination program. Furthermore, according to the theory of Newcomb in Notoatmodjo, attitude is a person's readiness or willingness to act (not yet an action) so that a person's attitude will affect the behavior or actions he will take, including participating in the COVID-19 vaccination program (Notoatmodjo, 2014). Therefore, this study aimed to analyze the correlation between the level of knowledge and attitudes toward their participation in The COVID-19 Vaccination Program among students in the Medical Faculty, Universitas Lambung Mangkurat (ULM). The uniqueness of this study is that it discusses the knowledge and attitudes of students with a medical background, where they certainly understand health issues, but what about their participation in the Covid-19 vaccination with the knowledge and attitude of a medical student. The novelty of this study stems from the focus of research targeting a sample of medical students, whereas previous studies have mostly targeted samples of the public with various characteristics.

METHOD

An analytical descriptive design was used in this study with a cross-sectional approach. The researchers agreed to use a stratified random sampling technique. The total population in this study was 2,195, namely the total number of undergraduate students at the Medical Faculty, Universitas Lambung Mangkurat, with a total sample of 339 people, calculated using the slovin formula. The reason for choosing the research target is that it is in accordance with the researcher's goal of analyzing the knowledge and attitudes of medical students as the target of academics who generally know more about health than the public. The research instrument was a questionnaire on the general characteristics of

2

respondents, knowledge, attitudes, and participation in the COVID-19 vaccination, which was distributed online via Google form. Knowledge related to COVID-19 was assessed from the answers of the research subjects to eight questions in the questionnaire, while the attitude statement was given as many as 10 statements with the lowest score of 1 per question and the highest score of 4 per question. Knowledge and attitude were categorized as good or bad. Knowledge is categorized as good if the score is 5-8, and poor if it is 1-4. Meanwhile, the attitude category is said to be good if the score is 26 - 40 and poor if it is 10-25. Subjects were declared to have participated in the COVID-19 vaccination if they had received at least one dose of the COVID-19 vaccine and were declared ineligible if the respondent had not received the vaccine at all. Data were tested by chi-square statistical analysis at the 95% confidence level using IBM SPSS statistical software version 26.

Ethical clearance was issued by the ethical commission of the Faculty of Medicine, Universitas Lambung Mangkurat, and informed consent was obtained from each research respondent via Google Forms before entering the question stage of the research questionnaire.

RESULT

From the results of data collection, data on the characteristics of the research subjects were obtained, which are listed in Table 1 below.

Table 1. Characteristics of Research Respondents on the Relationship between Knowledge and Attitudes Regarding COVID-19 and Participation in the COVID-19 Vaccination Program

Variable	
Age, mean age (year ± sd)	20 ± 1,20
Gender, n (%)	
Male	66 (19.47 %)
Female	273 (80.53%)
Study Program, n (%)	
Medical Education	140 (41.3%)
Public Health	109 (58.7%)
Nursing	62 (18.29%)
Psychology	28 (8.26%)
Knowledge, n (%)	
Good	319 (94.10%)
Poor	20 (5.90%)
Attitude, n (%)	
Good	324 (95.68%)
Poor	15 (4.42%)
Participation in COVID-19 vaccination, n (%)	
Yes	264 (77.88%)
No	75 (22.12%)

This study involved 339 undergraduate students from the Faculty of Medicine ULM, with an average age of 20 years: 66 males (19.47%) and 273 (80.53%) females. Medical education and public health study programs were more involved in research, with 140 people (41.3%) and 109 people (58.7%), respectively.

Table 2. The relationship between knowledge and participation in COVID-19 vaccination among Faculty of Medicine ULM students

Participation in COVID-19 Vaccination	Knowledge				Total		p-value
	Poor		Good				
	n	%	n	%	n	%	
No	8	2.38	67	19.76	75	22.12	0.055
Yes	12	3.54	252	74.34	264	77.88	

Source: Primary Data for 2021

The test used was Fisher's exact test, based on table 2 the research results showed p-value = 0.055, from the p-value in the statistical test results, Ho's decision was accepted which means there was no correlation between knowledge and participation in COVID-19 vaccination. Respondents who had less knowledge and did not participate in the COVID-19 vaccination program, whereas 8 people (2.38%) had less knowledge and participated in the COVID-19 vaccination program were 12 people (3.54%). Furthermore, respondents who had good knowledge but did not participate in the COVID-19 vaccination program, whereas 67 people (19.76%) had good knowledge and participated in the COVID-19 vaccination program were 252 (74.34%).

Table 3. The relationship between attitudes and participation in COVID-19 vaccination in medical students

Participation in COVID-19 Vaccination	Attitude				Total		p-value
	Poor		Good				
	n	%	n	%	n	%	
No	7	2.06	68	20.06	75	22.12	0.025
Yes	8	2.36	256	75.52	264	77.88	

Source: Primary Data for 2021

The test used was the Fisher's Exact Test, based on table 3 the research results showed p-value = 0.025. According to the p-value in the statistical test results, Ho's decision was rejected, indicating that there was a relationship between attitude and participation in COVID-19 vaccination. Respondents have a bad attitude and did not participate in the COVID-19 vaccination program, namely 7 people (2.06%) had a bad attitude and participated in the COVID-19 vaccination program as many as 8 people (2.36%). Respondents with a good attitude but who did not participate in the

COVID-19 vaccination program were 68 people (20.06%), while 256 people (75.52%) had a good attitude and participated in the COVID-19 vaccination program.

DISCUSSION

Based on Table 2, the results show the p-value = 0.055, from the p-value in the statistical test results, the decision Ho is accepted, which means there is no correlation between knowledge and participation in COVID-19 vaccination. According to Green's theory of Lawrence Green (1980), one of the factors that can influence a person's behavior is knowledge. This is in line with the results of Hasibuan and Putri's research (2020) which showed knowledge and participation in the implementation of the MR vaccine.

However, this study did not show a significant relationship between knowledge and participation in COVID-19 vaccination because there are other factors that influence respondents not to against COVID-19 vaccination, not only seen from poor knowledge, but also because health facilities are far away. Thus, they have not received a vaccine schedule because of a history of comorbid diseases, and their age does not meet this requirement. In addition, when comparing the number of respondents who participated and those who did not participate in the COVID-19 vaccination program, both those with good knowledge and those with poor knowledge tended to be more likely to participate in the COVID-19 vaccination program. It was judged based on the respondents' reasons for complying with the program, such as parental recommendations, campus policies, or invitations from friends.

In line with Heardman's (1990) theory, family is a source of support because a trusting relationship is created in a family relationship. Individuals as family members make the family a collection of hopes, a place to tell stories, a place to ask questions, and a place to issue complaints when individuals have problems. In addition, it leads to Marzali's (2012) theory that policy is a blueprint for actions that lead to and influence the behavior of many people who are affected by the decision. Policies are deliberately formulated and designed to make the behavior of the targeted people in accordance with the sound and formulation of the policy.

The findings of Nickerson & Nagle (2005) stated that, in adolescence, communication and trust in parents are reduced, and they turn to peers to meet the need for attachment. Hence, a friend's invitation is very influential for someone to act, which in this case is a student's action to participate in the COVID-19 vaccination program.

Based on Table 3, the results show a p-value of 0.025; from the p-value in the statistical test results, the decision Ho is rejected, which means that there is a correlation between attitude toward participation in COVID-19 vaccination. According to Notoatmodjo (2010), socio-psychological factors are one of the factors that have a major influence on the occurrence of a person's behavior. These socio-psychological factors include attitudes, habits, desires, emotions, and beliefs. Attitude is a very important socio-psychological factor because it is a tendency to act and be perceived. Attitudes will also stay longer than emotions and thoughts (Notoatmodjo, 2010). This is in line with the results of Pramitasari's research (2017) which showed that there is a significant correlation between attitudes toward participation in the implementation of MR immunization.

The theory described by Newcomb in Notoatmodjo states that attitude is a person's readiness or willingness to act (not yet an action). Moreover, a person's attitude toward behaving is also influenced by the knowledge, where the higher the level of a person's knowledge of something, the better the attitude toward it (Notoatmodjo, 2014).

CONCLUSION

Based on these findings, it can be concluded that there is a relationship between knowledge and participation in COVID-19 vaccination among ULM Medical Faculty students with a p-value of 0.055. However, for the attitude variable, there was a significant correlation between attitude and participation in COVID-19 vaccination in the Faculty of Medicine ULM students with a p-value of 0.025.

SUGGESTIONS

We hope that these findings can be used as a basis for policymaking and educational program planning strategies to increase the coverage of COVID-19 vaccinations that are more persuasive for the community.

ACKNOWLEDGMENTS

REFERENCES

Han Y, Yang H. 2020. The Transmission and Diagnosis 0f 2019 novel coronavirus infection disease (COVID19). *Chinese perspective.J Med Virol, 92*(6), pp. 639-644. doi: 10.1002/jmv.25749

Hasibuan I, Putri YP. 2020. Hubungan Pengetahuan Dan Sikap Ibu Terhadap Kepatuhan Dalam Pelaksanaan Vaksin Mr (Measles-Rubella) Di Wilayah Kerja Puskesmas Mandala Medan Tahun 2019. *Jurnal Kesehatan Masyarakat & Gizi, 3*(1), pp. 22-28. doi: 10.35451/jkg.v3i1.438

Heardman, 1990. *Human Exceptionality Society School and Family Boston.* London: Allyn and Bacon.

Keliat B. A, dkk. 2020. *Dukungan Kesehatan Jiwa dan Psiko Sosial (Mental Health and Psychososial Support) Covid – 19: Keperawatan Jiwa.* Bogor: Fakultas Ilmu Keperawatan Universitas Indonesia.

Kementerian Kesehatan Republik Indonesia. 2021. Keputusan Direktur Jenderal Pencegahan dan Pengendalian Penyakit Nomor HK.02.02/4/1/2021 Tentang Petunjuk Teknis Pelaksanaan Vaksinasi Dalam Rangka Penanggulangan Pandemi Corona Virus Disease 2019 (COVID-19). Jakarta: Kementerian Kesehatan RI.

Kementerian Kesehatan Republik Indonesia. 2020. Keputusan Menteri Kesehatan Nomor HK.01.07/ Menkes/12758/2020 tentang Penetapan Jenis Vaksin untuk Pelaksanaan Vaksinasi COVID-19. Jakarta: Kementerian Kesehatan RI.

Marzali A. 2012. *Antropologi dan Kebijakan Publik.* Jakarta: Kencana Prenada Media Group.

Nickerson, A.B. & Nagle, R.J. 2005. Parent and Peer Attachment in Late Childhood and Early Adolescence. *Journal of Early Adolescence, 25*(2), pp. 223-249. doi: 10.1177/0272431604274174

Notoatmodjo, S. 2014. *Ilmu Perilaku Kesehatan.* Jakarta: Rineka Cipta.

Notoatmodjo, Soekidjo. 2010. *Prinsip-prinsip Dasar Ilmu Kesehatan Masyarakat.* Jakarta: Rineka Cipta.

Pramitasari, D. A., Puteri, I. R. P. 2017. Hubungan Pengetahuan Dan Sikap Ibu Dengan Kepatuhan Dalam Mengikuti Imunisasi Measles-Rubella (MR) Massal Di Posyandu Wilayah Kerja Puskesmas Nganglik II Kabupaten Sleman Yogyakarta. *The Shine Cahaya Dunia D-Iii Keperawatan, 2*(2), pp. 54-62.

Presiden RI. 2020. Peraturan Presiden Nomor 99 Tahun 2020 tentang Pengadaan Vaksin dan Pelaksanaan Vaksinasi dalam Rangka Penanggulangan Pandemi Corona Virus Disease 2019 (COVID-19). Jakarta: Presiden RI.

Satuan Petugas Penanganan COVID-19. 2021. Peta Sebaran. Available at https://covid19.go.id/peta-sebaran

A cross sectional study knowledge and attitude towards participation in the covid 19 vaccination program among medical students