Empowerment Of Vocational School Students As Health Cadres Through Blood Pressure Examination Training As An Effort To Control The Increase In Blood Pressure In The District Of Takisung District, Tana

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Empowerment Of Vocational School Students As Health Cadres Through Blood Pressure Examination Training As An Effort To Control The Increase In Blood Pressure In The District Of Takisung District, Tanah Laut Regency

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INTRODUCTION

Empowerment of vocational students as health cadres through blood pressure examination training needs to be done to control hypertension. The importance of this community partnership activity is intended to remember that hypertension is one of the most common chronic diseases, especially in developing countries, including Indonesia. Basic Health Research data in 2018, it was recorded that 8.84% of the Indonesian population and 10.81% of the South Kalimantan population suffer from hypertension or take antihypertensive drugs.

Understanding of hypertension is not fully understood by the community, it is necessary to hold outreach and empowerment activities for vocational students to prevent and control increased blood pressure to avoid other complications, including blood pressure examination.

Blood pressure examination training needs to be carried out so that students and the community of SMKN 1 Takisung can be empowered as public health cadres and independently monitoring the blood pressure of themselves and their families at home to support the implementation of these efforts. The method of this activity includes counseling, the practice of using a sphygmomanometer, and mentoring students in measuring human blood pressure. The determination of the competence of health cadres was obtained from the results of the Public Health team's observations on the indicators of placing a sphygmomanometer cuff on the measured

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upper arm of the student, the skill of using the sphygmomanometer by pumping the cuff, and blood pressure readings based on the reference table.

SITUATION ANALYSIS

According to The Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC), hypertension is a syndrome or collection of progressive cardiovascular symptoms, as a result of other complex and interrelated conditions (Sylvestris, 2014). Hypertension is a disease that has an iceberg phenomenon, it has bigger morbidity more than the data that has been recorded by health care centers (Singh, 2014). Hypertension is now a global problem because its prevalence continues to increase in line with lifestyle changes such as smoking, obesity, physical inactivity, and psychosocial distress. WHO predicts that by 2025 around 29% of adults worldwide will suffer from hypertension (Wahyudi, 2018). In Indonesia, It was recorded that 8.84% of the population was diagnosed with hypertension or taking antihypertensive drugs. While in South Kalimantan it was experienced by 8.36% of the population (Riskesdas 2018).

Based on the cause, hypertension is divided into 2 groups, namely primary hypertension of unknown cause or idiopathic, and secondary hypertension that caused by other diseases (Sylvestris, 2014). Primary or essential hypertension is hypertension with an unknown cause. This type of hypertension is 90% of cases of hypertension that occurs in the community. Hypertension is a complex process of several major organs and systems, including the heart, blood vessels, nerves, hormones, and kidneys. Secondary hypertension is an increase in blood pressure caused by a specific cause (Anam, 2016). This type of hypertension occurs in 5% of cases that occur in the community. Risk factors that play a role in hypertension include non-modifiable factors such as genetics, age, gender, and ethnicity (WHO, 2011). While the modifiable factors include stress factors, diet, physical activity patterns, smoking, and obesity. Of the factors mentioned above, there is no one main factor that can be determined as a direct cause of hypertension (Hartono, 2011).

Given the high incidence of hypertension found in health care facilities and high cases of hypertension, especially in people who have not been reached by health services, it is necessary to prioritize the prevention and control of hypertension in Tabanio Village. This activity is a coaching model for the general public to add insight and understanding about hypertension. This activity will increase public awareness in preventing hypertension. The activities of the Lambung Mangkurat University Research and Community Service Institute were carried out in collaboration with the community in Tabanio Village. The results of the meeting and discussion with partners agreed that hypertension prevention efforts would be carried out with a community training strategy for hypertension which aims to:

(1) increase public understanding of hypertension

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(2) improve the community's ability to prevent hypertension

(3) increased involvement of college and become closer to the community and continue to provide tangible benefits

(4) The public health program is a means for service implementers to continue to obtain efficient and effective methods related to hypertension control efforts.

PARTNER PROBLEMS

Based on demographic changes in society without considering lifestyle changes, it is estimated that hypertension sufferers will increase rapidly in the next 15 years, especially in developing countries. At present, efforts to control hypertension have not yet occupied the main priority scale in health services, although it is known that its negative impacts are quite large, including stroke and coronary heart disease.

Hypertension is 1 of the 10 most common diseases in the Tabanio Village area, and the complications that will arise, along with the low level of public knowledge about how to monitor blood pressure, it is necessary to carry out community training activities to care for hypertension in ordinary people who have not entered the old age (< 60 years old) to be able to monitor and prevent an increase in blood pressure. Implemented by involving cadres in Tabanio Village, South Kalimantan as partners to continue the hypertension care program.

The target in this community service is the general public with hypertension. This implementation involves partners from the local Public Health Center.

SOLUTION

Based on the analysis of the situation above, the solution that can be done is to provide counseling about hypertension, including definitions, risk factors, prevention, and efforts to monitor blood pressure through blood pressure examination. To create a community group that can do blood pressure examination independently, the solution that needs to be done is training and mentoring for students of SMKN 1 Takisung in using a sphygmomanometer.

How to use a sphygmomanometer:

A. Open the Mercury Tensimeter.
B. Slide the needle in the ON direction so that the mercury rises.
C. Feel the pulse of the patient to be examined and then attach the cuff according to the patient's size.
D. Wrap the sphygmomanometer cuff around the left or right upper arm above the elbow. The cuff is wrapped around this section because in this section there are arteries that come directly from the heart, these vessels are located close under the skin can also be called the Brachial Arteries.

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E. Try to place the sphygmomanometer parallel to the heart in a good sleeping or sitting position, checking hands in a relaxed state.
F. Close the air regulator on the sphygmomanometer cuff rubber pump by turning it to the right until it runs out.
G. Place the stethoscope in your ear and then place the flattened part on the elbow crease below the cuff loop.
H. Pump air into the cuff by pressing the rubber pump repeatedly until the pressure is 140 mmHg. a pressure of 140 mmHg above the baseline mmHg above the systolic pressure expected in a normal adult (not suffering from hypertension) of 120 mmHg. If the person being examined is a patient with hypertension, then increase it again to 20 mmHg and so on gradually.
I. The inflated cuff causes the pressure to increase and compresses the brachial artery so that blood flow stops flowing.A. Reopen the air control valve by turning to the left, listen and mute the sound from the stethoscope when the cuff valve is opened and then watch the numbers.
J. The beat that is heard for the first time is the systolic sound, the last beat before the sound completely disappears is the diastolic sound.
K. Then, rearrange the sphygmomanometer equipment.

RESULTS

Of the 30 participants who took part in counseling activities on hypertension and blood pressure examination training, it was found that there was an increase in the aspects of knowledge and skills.

Table 1. Results of pre-test and post-test of hypertension knowledge

No	Knowledge	Pretest	Posttest
1	Low	16	6
2	Moderate	11	11
3	High	3	13
	Amount	30	30

In table 1, it can be seen that most of the respondents experienced an increase in knowledge after attending the counseling. Respondents with a high level of knowledge in the pretest were only 10%, and in the post-test, there was a much increase to 43.3%. Meanwhile, those with low knowledge before counseling were 53.3% and after that, it was reduced to only 20%.

Table 2. Results of cadre skills in blood pressure examinations

No	Blood pressure measurement skills	Before training	After training
1	Less skilled	24	4
2	Well skilled	6	26
	Amount	30	30

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Table 2 shows that before the training 80% of respondents had poor skills in performing blood pressure examinations. However, after the training, there was an increase of 86.67% of respondents became well skilled.

Based on data from community visits to the Takisung Health Center for 1 month after this service activity was carried out, it was found that there was an increase in the number of ordinary people who came for a check-up and early detection of blood pressure by 12.3% compared to the previous month. In addition, an increase also occurred in the compliance rate of the community with hypertension as seen from the increase in their visits to the Public Health Center to take anti-hypertensive drugs and re-control on a predetermined date, which increased by 18% compared to the previous month.

Health education is an activity through the process of spreading messages and instilling confidence with the aim that the community is aware, knows, understands, wants, and can carry out the recommendations given (Fitriani, 2011). Health education is very important as an effort to create community behavior that is conducive to health, marked by the formation of awareness and knowledge of how to maintain health and prevent things that are detrimental to health (Notoatmodjo, 2012), in this activity related to hypertension.

The role of cadres is very large in the success of a program. Thus, community empowerment has great potential to help reduce cases of late-detected or uncontrolled hypertension, including groups of vocational students who of course have had scientific knowledge since Junior High School (Putra, Ibrahim, et al, 2020). The cadres trained in this activity are educated groups who certainly have cognitive intelligence (Putra, Edyson, et al, 2020), making it easy to follow the counseling and training processes that are carried out. Training is one way that can be taken to empower skilled cadres (Sianturi, 2013). Training is defined as a process of transferring knowledge, certain skills, and attitudes to improve the skills of respondents so that they can carry out their responsibilities better according to existing standards. The success of this knowledge transfer activity is assessed from the increase in knowledge and skills that are known through evaluations after the training.

CONCLUSION

There is an increase in knowledge about hypertension and respondents' skills in conducting blood pressure examinations after attending counseling and training.

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