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Community Education on Hypertension in Batua Dua Village's Simalungun Regency Area

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Abstract.

According to the 2018 *Indonesian Basic Health Research Statistics* (Riskesdas), 34.11% of Indonesians aged 18 or older have hypertension, with 8.36% of those affected based on diagnosis. According to the American Heart Association, the number of individuals with hypertension rises annually, and the average death rate from the condition increased by almost 21% between 2000 and 2010. Additionally, the death rate significantly increases in at least 46% of individuals with hypertension. The purpose of this service is to educate clients both before and after counseling on lifestyle compliance. The strategy is to distribute information on hypertension, which can raise public awareness by demonstrating positive answers and accuracy in responding to the questions. There was a difference in knowledge between the 20 respondents who participated in the counseling before and after it was provided. The results show that before the counseling was carried out, the score was 13 people (65%) lacking, 7 people (35%) enough, and 0 people (0%), whereas after counseling an average of 16 people were in the good category (80%), 4 people were in the fair category (20%), and 0 people less category (0%).

Keywords: *Counseling, Hypertension, Simalungun*

I. INTRODUCTION

According to the 2018 Indonesian Basic Health Research Statistics (Riskesdas, 2018), 34.11% of Indonesians aged 18 or older have hypertension, with 8.36% of those affected based on diagnosis. This indicates that a minimum of 25% of individuals encounter elevated blood pressure, although remain oblivious to their ailment or lack a diagnosis. There are several medical problems related to hypertension. Whether primary or secondary hypertension, the pathophysiology of high blood pressure is frequently unknown. While second stage hypertension refers to a subset of hypertension patients who have significant symptoms, first stage hypertension is incurable but still under control. According to statistics from the World Health Organization (WHO, 2023), 22% of people worldwide suffer from hypertension, and only a tiny percentage of those people are ready to manage their blood pressure. To improve people's sense of wellbeing, preventive and promotional measures such as routine medication use and early detection of blood pressure monitoring are required. Because it considers the various problems and symptoms related to hypertension, this approach of diagnosing the condition is now applicable (Ministry of Health Indonesia, 2019).

According to statistics from the WHO Community Study of the Elderly Java Central, hypertension and cardiovascular disease were the second most common ailments among the elderly, behind arthritis, accounting for 15.2% of 1203 samples. Elderly people are those who are 60 years of age or older. The Ministry of Health defines the elderly as those who are 65 years of age or older, early elderly as those who are 55–64 years old, and high-risk elderly as those who are over 70 years old. Indonesia is about to enter a regulated population aging period, given that

7.18 percent of its population is 60 years of age or older. By 2025, predictions from the National Planning and Development Agency (BAPPENAS) indicate that over 25% of Indonesians will be elderly. The senior population is the focus of attention for scientists, society, and the government since it poses a number of issues for which solutions must be foreseen and developed, notably in the health sector (Yanti, S., & Vera, 2020).

(Thomas et al, 2014) state that hypertension is a disorder brought on by high blood pressure that can manifest as a variety of distinct symptoms in each person as well as frequently non-specific symptoms or the onset of other illnesses. Hypertension is referred to as the silent killer because of its uncontrollable disease course and uncommon emergence of symptoms. Long-term, sharp increases in blood pressure can result in left ventricular hypertrophy (damage to the heart muscle), coronary heart disease (damage to the blood supply to the heart), and stroke (damage to the brain). Stroke complications are among the leading causes of death for individuals with hypertension. (Satryasa et al, 2018).

(Smeltzer, S., C., & Bare, B., 2013) states that there are two types of hypertension: primary (essential) hypertension and secondary hypertension, depending on the origin of the condition. Between 90% and 95% of people who are deaf have primary hypertension. Particularly, hypertension lacks a cause that can be identified based on particular clinical symptoms, and there is a strong likelihood that this illness is complex. Primary hypertension can be controlled with the right medical care, even though it cannot be cured. In this instance, inherited factors may have a significant role in the development of primary hypertension and other forms of progressive high blood pressure (Bell et al, 2015). Severe hypertension is characterized by carotid artery narrowing and many causes, including renal artery narrowing, pregnancy, some drugs, and other

factors. A different kind of acute hypertension called secondary hypertension may point to structural alterations in the heart (Ignatavicius et al, 2017).

For every 20% increase in blood pressure during adulthood, the risk of dying from heart disease rises by 60%. According to the American Heart Association (AHA, 2021), the average death rate from hypertension rose by almost 21% between 2000 and 2010, and the number of patients continues to rise annually. Furthermore, a notable rise in mortality occurs in at least 46% of individuals with hypertension. When examining the incidence and prevalence of hypertension, it is important to take into account a number of factors, one of which is the fact that a significant number of people with hypertension live in rural areas and have never received intensive care from medical professionals. Most people with hypertension do not have any complaints, and the coverage is highly ambiguous when considering treatment-management and asymmetry (Notoatmodjo, 2022).

This place of service is carried out in Simalungun village, where this village is very rarely or tends to be used as a place of service, therefore one way to generalize is that the community also has the right to gain more knowledge about a disease and how to prevent it which can increase their insight or knowledge.

II. METHOD

To make hypertension easier to understand and manage in daily life, information regarding the condition's definition, symptoms, complications in hypertension patients, and prevention and treatment options is disseminated. The goal of this community service project is to raise citizens' awareness of people who suffer from hypertension. A pre-test is administered before to counseling sessions starting, and counseling

activities conclude following the post-test. After that, the information and data are processed, and a descriptive analysis is done in light of the difficulties that were discovered.

III. RESEARCH FINDINGS

a. Respondent Characteristics

In May 2024, this service was provided to 20 respondents in Batu Dua Village, Simalungun Regency. The outcomes of data analysis based on respondent characteristics, such as gender, age, occupation, and educational attainment, are as follows. The characteristics of the respondents in this service are distributed as follows:

Table 3.1 Based on respondent characteristics, service outcomes

Characteritics	Frequency	Percent (%)
Gender		
Male	2	10
Famale	18	90
Total	20	100
Age		
20-25	4	20
25-30	3	15
30-40	8	40
40-50	2	10
>50	3	15
Total	20	100
Work		
Doesn't work.	8	40
Housewives	2	10
Civil servants	0	0
Private employees	5	25
Farmers/laborers	5	25
Level of Eduction	20	100
Elementary School	8	40
Junior High School	5	25
Senior High School	4	20
Bachelor	3	15
Total	20	100

Table 3.1 indicates that 90% of the respondents were female and that their gender was 18. Ages 30 to 40 (40%) are the most prevalent

age groups. Eight persons (40%) are the maximum number of household workers based on the respondent's occupation, and eight individuals (40%) have the highest degree of education, having completed elementary school.

b. Variable Observation Results

Before counseling, there was a range of three to seven correct responses out of fifteen questions about public knowledge of hypertension. Based on the percentage of right responses, the frequency distribution of knowledge of hypertension before to counseling was divided into the following three categories:

Table 3.2 Knowledge Categories of Respondents About Hypertension Before Counseling: Frequency Distribution

Variable	Frequency	Percent (%)
Good	0	0
Sufficient	7	35
Less	13	65
Total	20	100

Table 3.3 After counseling, the respondents' knowledge categories regarding hypertension were distributed in terms of frequency

Variable	Frequency	Percent (%)
Good	16	80
Sufficient	4	20
Less	0	0
Total	20	100

Information:

Less : 1-5

Sufficient : 6-10

Good : 11-15

3.3 Hypertension Knowledge Questionnaire

No	Question	Correct	Wrong
1	Another name for high blood pressure is hypertension		
2	It is said to be high blood pressure if the blood pressure value is more than 140/90 mmHg		
3	Captopril is a drug for high blood pressure		

4	High blood pressure can cause complications such as stroke		
5	Severe hypertension occurs when a person's blood pressure is more than 180/110 mmHg		
6	Salty foods will not affect the increase in high blood pressure		
7	Smoking is not a risk factor for high blood pressure		
8	Uncontrolled high blood pressure will result in stroke, heart failure, and kidney failure		
9	Hypertension medication can be taken before eating		
10	Excessive depression and stress can trigger high blood pressure		
11	People with high blood pressure do not need to take medication regularly		
12	People with high blood pressure should only take herbal medicines		
13	People with high blood pressure must be able to manage their lifestyle		
14	Hypertension sufferers are required to carry out regular high blood pressure checks		
15	High blood pressure can be cured by taking medication		

The knowledge category on high blood pressure, which included the above table, was presented to respondents both before and after counseling in order to give them a very broad understanding of science. One useful instrument for evaluating and raising community awareness of hypertension is the Hypertension Knowledge Questionnaire. Its use in research like the one carried out in Batua Dua Village aids in assessing the efficacy of educational interventions and providing direction for upcoming public health initiatives meant to lower the morbidity and mortality associated with hypertension. Through a discussion of the HKQ in relation to the article, scholars can offer valuable perspectives on the distinct educational requirements of various communities and further the wider objective of enhancing health literacy and outcomes concerning hypertension.

3.4 Documentation of Community Service Results

3.5 Questionnaire Results Before and After Counseling

BEFORE					AFTER				
CORRECT	**%**	**WRONG**	**%**	**Ket**	**CORRECT**	**%**	**WRONG**	**%**	**Ket**
3	20	12	80	kurang	10	67	5	33	Cukup
4	27	11	73	kurang	10	67	5	33	Baik
2	13	13	87	kurang	15	100	0	0	Baik
6	40	9	60	cukup	14	93	1	7	Baik
7	47	8	53	cukup	14	93	1	7	Baik
7	47	8	53	cukup	15	100	0	0	Baik
5	33	10	67	kurang	15	100	0	0	Baik
5	33	10	67	kurang	7	47	13	87	Cukup
4	27	11	73	kurang	15	100	0	0	Baik
6	40	9	60	cukup	15	100	0	0	Baik
3	20	12	80	kurang	15	100	0	0	Baik
7	47	8	53	cukup	6	40	14	93	cukup
6	40	9	60	cukup	13	87	2	13	Baik
8	53	7	47	cukup	14	93	1	7	Baik
5	33	10	67	kurang	12	80	3	20	Baik
4	27	11	73	kurang	15	100	0	0	Baik
5	33	10	67	kurang	14	93	4	27	Baik
4	27	11	73	kurang	14	93	4	27	Baik
3	20	12	80	kurang	13	87	2	13	Baik
5	33	10	67	kurang	14	93	1	7	Baik

IV. DISCUSSION

The amount of knowledge on hypertension that was gathered from several respondents is discussed below.

a. Respondents' Knowledge About Hypertension

According to the outcomes of the service provided for hypertension awareness education, 13 individuals (65%), 7 people (35%), or 0% of the respondents had inadequate knowledge prior to receiving counseling in the low group.

According to these findings on knowledge, a small percentage of respondents do not yet fully understand what is meant by high blood pressure. This is because of their limited knowledge, which is evident from a number of respondents' educational characteristics: eight individuals (or40%) have only completed elementary school, and the remaining respondents have completed junior high school. 5 individuals (25%), 4 high school students (20%), and 3 non-health related degree holders (15%). This is related to research conducted by (Nugroho, P. S., & Sari, 2019), which states that, aside from lifestyle factors related to the risk of hypertension, many respondents to the study had lower educational attainment because, on average, they had longer work hours and were more likely to have a job after finishing their education.

Based on the work experience in this study, the respondents' group that did not work as many people (40%) compared to the respondents who worked as IRTs and temporary employees, consisting of two people (10%) and five people (25%).

This is related to the respondents, the majority of whom are women, who only respond as ibu rumah tangga. This is because most of them only engage in sedentary activities at home, such as watching TV, cooking food that isn't diet-compliant, taking excessively long

naps, and playing sports. This is in line with research conducted by (Agrina et al, 2011), which found that hypertension is associated with a less active or vigorous daily life.

Based on several data that have been analyzed previously, the results obtained for the hypertension knowledge category after counseling were carried out were an average of 16 people in the good category (80%), 4 people in the fair category (20%), and zero people who acored less (0%). This is in line with the systematic research on hypertension that should be conducted with the general public in order to ascertain as much as possible and to consider the facto-factors that predispose people to hypertension. Accordingly, information regarding high blood pressure should be gathered and distributed throughout each desa in order to prevent the aforementioned disease and lessen the incidence of hypertension. This is related to the research done by (Vandana, 2018), who found that knowledge is an important factor in strengthening the hypothesis that knowledge-based learning will result in learning that is more advanced than learning-based learning. Additionally, knowledge is acquired through open and honest means, namely through the educational process. At the same time, when an individual's level of education generally rises, it will become easier for them to retain information, making their knowledge more sound. When someone has good knowledge, their perception of reality consistently shifts to a positive one.

V. CONCLUSION

Based on the population's survey results, it can be inferred that there are differences in the categories of knowledge regarding hypertension before and after treatment based on a few respondent characteristics, namely type of patient, kind of service, type of job, and type of education.

The results show that before the counseling was carried out, the score was 13 people (65%) lacking, 7 people (35%) enough, and 0 people (0%), whereas after counseling an average of 16 people were in the good category (80%), 4 people were in the fair category (20%), and 0 people less category (0%).

VI. RECOMMENDATIONS

The suggestion for future service is to involve participants to work together with PKK mothers in making herbal drinks to prevent hypertension or to treat hypertension.

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