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Case Report Paper

Relationship of Knowledge Level on Medicine Use in Hypertension Patients in the Puskesmas Sungai Tabuk Area

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Abstract: Hypertension or high blood pressure is a condition in which a person experiences an increase in blood pressure if the systolic blood pressure is more than or equal to 140 mmHg and the diastolic pressure is more than or equal to 90 mmHg. In 2018 the Province of South Kalimantan was ranked first at 44.1% at the age of >18 years, which means that there was a significant increase in the number of people with hypertension in the Province of South Kalimantan. The purpose of this study was to determine the relationship between the level of knowledge and the use of drugs in hypertensive patients in the Sungai Tabuk 3 Community Health Center. The method used was a csoss-sectional or cross-sectional design. The sample is the people who live in the Sungai Tabuk Health Center area with a sample of 60 people with the Consecutive Sampling sampling technique. Using a questionnaire as a measuring tool. Data were analyzed by Spearman rho test with 95% confidence level. The result of the level of knowledge of respondents in the good category is 41 people (68.33%) with rational use of antihypertensive drugs as many as 33 people (50.00%). The results of the Spearman rho test on the relationship between the level of knowledge and the use of antihypertensive drugs obtained a significance value of 0.000 (<0.05), the correlation coefficient was 0.532 with a positive correlation direction. There is a relationship between the level of knowledge and the use of antihypertensive drugs in the community living in the Sungai Tabuk 3 Community Health Center.

Keywords: Hypertension, Knowledge Level on Medicine Use, Use of Anti-Hypertensive Drugs.

1. Introduction

Hypertension or high blood pressure is a condition in which a person experiences an increase in blood pressure, blood pressure is said to be normal if the systolic is less than 120 mmHg and diastolic is less than 80 mmHg or simplified the normal limit does not exceed the normal blood pressure value, which is above 120/80 mmHg. A person is declared to have stage 1 hypertension if the systolic blood pressure is more than or equal to 140 mmHg and the diastolic pressure is more than or equal to 90 mmHg.

In accordance with most major guide line it is recommended that hypertension be diagnosed when a person's systolic blood pressure (SBP) in the office or clinic is ≥140 mm Hg and/or their diastolic blood pressure (DBP) is ≥90 mm Hg following repeated examination. High-normal BP is intended to identify individuals who could benefit from lifestyle interventions and who would receive pharmacological treatment if compelling indications are present. Isolated systolic hypertension defined as elevated SBP (≥140 mmHg) and low DBP (<90 mmHg) is common in young and in elderly people. In young individuals, including children, adolescents and young adults, isolated systolic hypertension is the most common form of essential hypertension. However, it is also particularly common in the elderly, in whom it reflects stiffening of the large arteries with an increase in pulse pressure (difference between SBP and DBP). Individuals identified with confirmed hypertension (grade 1 and grade 2) should receive appropriate pharmacological treatment. Details of home-, office- and ambulatory BP measurement techniques are addressed.

Hypertension is still the number one problem globally in the world that can cause complications of various diseases, including coronary heart disease or myocardial infarction which is a condition in which blood vessel blockage causes heart tissue damage, stroke, and kidney failure. In 2018 South Kalimantan Province was ranked first at 44.1% at the age of >18 years, which means that there was a significant increase in the number of people with hypertension in South Kalimantan Province [1].

The prevalence of hypertension is 34.1%, it is known that 8.8% is diagnosed with hypertension and 13.3% of people diagnosed with hypertension do not take medication and 12% do not take medication regularly. This is in accordance with research which states that people with hypertension with low levels of knowledge should be given knowledge and effective interventions such as providing socialization in an effort to increase public awareness of the importance of knowing about the use of hypertension drugs correctly. This will be able to add a person's disease to hypertension. Based on statistical data from the Province of South Kalimantan in the Health Sector in 2018. Banjar Regency is ranked first with the number of hypertension sufferers of 21,334 people, out of a total of 76. 193 people with hypertension in South Kalimantan [2].

2. Literature Review

Based on the results of a preliminary study conducted in the Sungai Tabuk 3 Community Health Center Area, Sungai Tabuk District, the authors conducted observations with 10 community respondents in the Sungai Tabuk 3 Community Health Center area using google form media in the form of questions about public knowledge of the use of hypertension drugs. Of the 7 respondents who were undergoing therapy by taking drugs to lower blood pressure, only 2 respondents knew about the side effects of the drugs they were taking while the other 5 respondents did not. 6 people get the drug directly from the pharmacy and 1 person from a doctor's prescriptionFrom the results of preliminary studies that have been carried out.

Due to its high prevalence, severe complications and lack of adequate control, hypertension is a major health problem throughout the world. Globally, hypertension affects over one billion people, seven million of whom die annually as a direct result of the disease [3]. Almost three-quarters of those suffering from hypertension (639 million people) live in developing countries with limited health resources, and people have a very low awareness of the disease [4]. In the lower-income countries of Europe and Central Asia, hypertension has been the cause of more than one-third of all deaths [5]. Although the recent advances in the diagnosis and treatment of hypertension have been shown to prevent cardiovascular diseases and to extend life [6], hypertension still remains an inadequately managed worldwide disease. Even in developed countries, 62–67% of hypertensive patients being treated have no adequate control of their diseases. The corresponding number in developing countries varies from 66 to 70% [7].

The cause of uncontrolled hypertension is multifactorial [8]. Several studies throughout the world have shown that lifestyle, such as physical activity and nutrition, plays an important role in controlling hypertension and preventing its long-term complications [9]. In order to actively improve their

lifestyle, patients must have knowledge and understanding of hypertension and the potential health risks associated with the condition, as well as the potential positive effects of lifestyle modification [10]. Inadequate patient knowledge and awareness about blood pressure (BP) are also potential causes for non-adherence to taking antihypertensive drugs, and consequently, high rates of uncontrolled BP [11]. Patients with hypertension should have the knowledge they need to take care of themselves, to be able to define their condition, to evaluate risk factors, and to appreciate the significance of lifelong medical control [10] [11] [12] Furthermore, patients with a good knowledge of their disease are more motivated to practice home blood pressure monitoring, which significantly improves medication adherence and blood pressure control [13] [14] [15].

3. Methodology

The research design used in this study was analytic observational (non-experimental) using google form media with a csoss-sectional or cross-sectional research design. Cross-sectional re-search or cross-sectional study is research that studies the relationship between cause and effect that will be obtained by means of observation or collecting data at a certain time and time (No-toatmojo, 2010). Determining the size of the sample using Consecutive Sampling obtained a sample of 60 samples obtained from the Tabuk River Region Health Center

4. Finding and Discussion

4.1. Data Distribution

4.1.1. Data Distribution by Age

The results of demographic data based on the age of the respondents that have been obtained at the time of the study are respondents with an age range of 26-35 years as many as 1 person (1.7%), age 36-45 years as many as 12 people (20.0%), age 46-55 years as many as 28 people (46.6%), age 56 – 65 years as many as 12 people (20.0%) and age 65 years and over as many as 7 people (11.7%). Based on data on hypertension patients at Sungai Tabuk 3 Public Health Center, the age range of 46-65 years is more than that of other age ranges. This is in accordance with the results obtained because the majority of respondents with an age range of 46-55 years are more than other age ranges.

Table 1. Distribution by Age of Respondents

No	Age	Amount	
		F	%
1	26-35	1	1.7
2	36-45	12	20.0
3	46-55	28	46.6
4	56-65	12	20.0
5	>65	7	11.7
Total		60	100

4.1.2. Data Distribution by Gender

The results of demographic data based on the sex of the respondents that have been obtained at the time of the study were 22 men (36.7%) and 38 women (63.3%). The results obtained are more female respondents than male respondents. This is because at the time of the study, the researcher started the study in the morning, at which time there were more female respondents than male respondents.

Table 2. Distribution by Gender of Respondents

No	Gender	Amount	
		F	%
1	Man	22	36.7
2	Woman	38	63.3
Total		60	100

4.1.3. Data Distribution by Education

The results of the demographic data based on the respondent's latest education that have been obtained at the time of the study are the Elementary level consisting of 25 people who are not in school to elementary school (SD) (41.7%), the Middle level consisting of junior high school (SMP) and high school (SMA) as many as 33 people (55.0%), and high level (Bachelor/Diploma) as many as 2 people (3.3%). From the data, it can be seen that respondents with secondary education are the most dominant among other education levels.

Table 3. Distribution by Education of Respondents

No	Level of education	Amount	
		F	%
1	Base	25	41.7
2	Intermediate	33	55.0
3	Tall	2	3.3
Total		60	100

4.1.4. Data Distribution by Work

The results of demographic data based on the respondents' occupations that have been obtained at the time of the study are 26 housewives (IRT) (43.3%), then 9 private employees (15.0%), 11 entrepreneurs (18.3%), 1 teacher (1.7%), and 13 farmers (21.7%). From these results it can be seen that the majority of respondents' occupations in the Sungai Tabuk 3 Puskesmas area are housewives (IRT). The results obtained are in accordance with the data obtained from the sex frequency distribution, namely women are more dominant which allows for a relationship, namely with work as housewives (IRT).

Table 2. Distribution by Work of Respondents

No	Gender	Amount	
		F	%
1	IRT	26	43.3
2	Private employees	9	15.0
3	entrepreneur	11	18.3
4	Teacher	1	1.7
5	Farmer	12	21.7
Total		60	100

4.1.5. Data Distribution by Monthly Income

The results of demographic data based on the income of respondents that have been obtained at the time of the study are 26 people (43.3%), income <1 million as many as 24 people (40.0%), 1 million to 2 million as many as 4 people (6.7%), and > 2 million as many as 6 people (10.0%). From these results, it can be seen that the majority of respondents' income in the Sungai Tabuk 3 Puskesmas area is not fixed income. The results obtained are related to the data obtained from the frequency distribution of the respondent's work, namely only as a housewife (IRT) is more dominant which allows for a relationship, namely the absence of a fixed income.

Table 5. Distribution by Income of Respondents

No	Gender	Amount	
		F	%
1	No Income	26	43.3
2	<1 million	24	40.0

3	1 million to 2million	4	6.7
4	>2 million	6	10
Total		60	100

4.1.6. Data Distribution by Types of Antihypertensive Drugs

Based on the results obtained, it can be seen that the antihypertensive drugs used by the respondents were amlodipine 53.3%, then captopril 13.3%, candesartan 31.7%, bisoprolol 3.3% and hydrochlorthiazide (HCT) 3.3%.

Table 6. Distribution by Types of Antihypertensive Drugs of Respondents

No	Types of Antihypertensive Drugs	Amount	
		F	%
1	Captopril	8	13.3
2	Candesartan	16	26.7
3	Amlodipine	32	53.3
4	Bisoprolol	2	3.3
5	Hydrochlorthiazide (HCT)	2	3.3
Total		60	100

This data aims to determine the types of antihypertensive drugs that are often used for patients in the puskesmas area. From the results obtained, it can be seen that the majority of respondents used the drug amlodipine as much as 53.3%. The results obtained are in accordance with the recap data on the use of antihypertensive drugs at the Sungai Tabuk 3 Public Health Center. Amlodipine is a calcium channel blocker (CCB) drug.

4.2. Univariate Test Analysis

4.2.1. Knowledge Level of Antihypertensive Drugs

Based on the results of the study, it showed that respondents who had good knowledge with the largest percentage were 41 people (68.33%), and 9 people had less knowledge (31.67%).

Table 7. Frequency Distribution of Respondents Based on Knowledge Levels about Antihypertensive Drugs

No	Drug use	Amount	
		F	%
1	Not Enough	19	31.7
2	Well	41	68.3
Total		60	60

Table 8. Distribution of Respondents Frequency Based on Antihypertensive Drug Use

No	Drug use	Amount	
		F	%
1	Irrational	27	45.0
2	Rational	33	55.0
Total		60	100

The results of the category of use of antihypertensive drugs by respondents obtained are the category of rational use of antihypertensive drugs as many as 33 people (55%) and the category of irrational use of antihypertensive drugs as many as 27 people (45%). These results indicate that the

dominant respondents use antihypertensive drugs rationally. Factors that affect the rational use of drugs are prescribing patterns, services provided to patients, and the availability of drugs to be given to patients. Prescribing factors directly affect the accuracy of drug administration to be consumed by the patient. Patient care factors affect the accuracy of diagnosis and therapy for patients, as well as information that should be received by patients so that patients understand the goals of therapy and understand the use of their drugs.

4.3. Bivariate Analysis

Connection Level of Knowledge with Use of Antihypertensive Drugs.

Table 9. Relationship between Knowledge Level and Use of Antihypertensive Drugs

No.	Knowledge level	Use of Antihypertensive Drugs				Amount	
		No Rational		Rational			
		F	%	F	%	F	%
1	Not Enough	14	73.7	5	26.3	19	31.7
2	Well	13	31.7	28	68.3	41	68.3
Amount		27	45.0	33	55.0	60	100.0
Sperman Rho test sig = 0.000 sig = 0.000 (sig < 0.05) r = 0.532							

Based on Table 9 shows that the sample who has a low level of knowledge is 19 people (31.7%), 14 (73.7%) of them on irrational use of antihypertensive drugs and 5 (26.3%) of them rational-ly. The sample with a good level of knowledge amounted to 41 people (68.3%), 13 (31.7%) of whom used antihypertensive drugs irrationally, and 28 (68.3%) of them rationally.
The results of spearman rho analysis using SPSS are as follows:

Table 10. Spearman Rho Analysis

Significance	Correlation coefficient	Correlation Direction
0.000	0.532	+

Based on table 10 Spearman Rho analysis shows that the significance value obtained is 0.000, the correlation coefficient is 0.532 and the direction of the correlation is positive. So this shows that the correlation strength obtained is included in the moderate or moderate category, because it is included in the R interval if the value ($0.5 < r < 0.9$) is interpreted as a moderate correlation strength category (Sudarno, 2017), which means that it is one above level is sufficient. The direction of the relationship between the level of knowledge and the use of drugs in hypertensive patients is positive, meaning that the higher the level of knowledge, the higher the rational use of drugs in hypertensive patients in the Sungai Tabuk 3 Community Health Center Work Area and vice versa. A person's level of knowledge is included in one of the internal factors. By having sufficient knowledge about the use of drugs, it can help patients to get rational treatment and avoid the possibility of errors in using drugs. The public needs clear and reliable information so that the determination of the type, duration of administration, rules of use and the amount of medicine used is based on the rationality of using antihypertensive drugs. (Harris, 2017).

5. Conclusion

Based on the research conducted, it can be concluded that the level of knowledge of the com-munity in the Sungai Tabuk 3 Community Health Center on the use of the majority of antihy-pertensive drugs is included in the good knowledge category, which is 68.3%. The majority of people using antihypertensive drugs in the Sungai Tabuk 3 Community Health Center are in-cluded in the category of rational use of antihypertensive drugs, which is 55%. The relationship between the level of knowledge of the community in the Sungai Tabuk 3 Community Health Center on the use of antihypertensive drugs has a significance value of 0.000, with a correlation coefficient of 0.532 and

the direction of the correlation is positive, which means that there is a significant correlation between the two variables connected, the strength of the correlation ob-tained is included in the moderate and correlation categories, unidirectional.

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