

RELATIONSHIP BETWEEN KNOWLEDGE, ATTITUDE, FAMILY SUPPORT, AND ADHERENCE TO TAKING MEDICATION IN PATIENTS WITH HYPERTENSION

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ABSTRACT

Background: Adherence to antihypertensive medications is a key component to control blood pressure levels. Poor adherence to these medications leads to the development of hypertensive complications and increase risk of cardiovascular events which in turn reduces the ultimate clinical outcome. This study aimed to determine the relationship between of knowledge, attitudes, family support, and adherence to taking medication among patients with hypertension.

Subjects and Method: This was a cross-sectional study conducted at Palmerah Village, Palmerah sub-district, West Jakarta. A random sample of 110 patients with hypertension were selected for this study. The dependent variable was adherence to taking medication. The independent variables were knowledge, attitude, and family support. The data were collected by a questionnaire. The data were analyzed by chi-square test and odds ratio (OR).

Results: Adherence to taking medication increased with good knowledge (OR= 17.75; CI 95%= 4.67 to 67.47; p <0.001), positive attitude (OR= 1.51; CI 95%= 0.38 to 6.09; p <0.001), and family support (OR= 6.94; CI 95%= 2.96 to 16.29; p <0.001).

Conclusion: Adherence to taking medication increases with knowledge, attitude, and family support, among patients with hypertension.

Kata Kunci: knowledge, attitude, family support, adherence to taking medication, hypertension.

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BACKGROUND

Hypertension is a condition in which systolic blood pressure is ≥ 140 mmHg and/or diastolic blood pressure is ≥ 90 mmHg, on repeated examinations (PERHI, 2019). Hypertension is still a major health problem worldwide due to its high and increasing prevalence. The prevalence rate of hypertension in Indonesia ranges from 27.8% - 29.39% or around 15 million people with hypertension, but only 4% of them are classified as controlled hypertension,

namely people with hypertension who know they have hypertension and are currently taking treatment (WHO, 2013). Based on the Basic Health Research report in 2018, there were 32.3% of hypertension sufferers who did not take medication regularly.

DKI Jakarta's health profile explains that there are 5,621 people (43.22%) who have hypertension in the West Jakarta area. The resource person at the Palmerah District Health Center said that the number of patients with

hypertension was quite a lot at the puskesmas and most of the patients came from the Palmerah Village. The large number of hypertensive patients who experience relapse and undergo inpatient treatment at the hospital can indicate that there is still a lack of adherence of hypertensive patients in undergoing treatment. Compliance with treatment is very important, this aims to achieve controlled blood pressure (Márquez-Contreras et al., 2018).

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Patient knowledge and attitudes can also affect a person's adherence to taking medication (Busari et al., 2010). The better a person's knowledge, the better his behavior will be, however, good knowledge is not accompanied by an attitude, so that knowledge will be meaningless (Notoatmodjo, 2012).

The purpose of this study was to determine the relationship between the level of knowledge, attitudes, and family support with adherence to taking medication for hypertension

patients in Palmerah Village, Palmerah District, West Jakarta.

SUBJECTS AND METHOD

1. Design Study

This was an analytic observational study with a cross-sectional design, conducted at Palmerah Village, Palmerah District, West Jakarta.

2. Population and Sample

The population in this study were patients with hypertension in the Palmerah Village, Palmerah District, West Jakarta. The sample in this study were patients with hypertension in the Palmerah Village, Palmerah District, West Jakarta, who met the inclusion criteria of 110 subjects. The technique used in this research is Simple Random Sampling. According to Sugiono (2010) this technique is a random sampling technique without regard to the existing strata in the population.

3. Study Variables

The dependent variable is the level of medication adherence in hypertensive patients. The independent variables are the level of knowledge and attitudes related to hypertension and family support.

4. Definition Operational of Variables

Knowledge was all the things the subject knows about hypertension. The variable level of knowledge is measured using a questionnaire, using an ordinal scale with the results of measuring the level of knowledge is good if the answer score is >75% through the highest score (8-10). The level of knowledge is sufficient if the answer score is 56% - 75% through the highest score (5-7). The level of knowledge is lacking if the

answer score through the highest value is <56% (<5) (Septianingsih, 2018).

Attitudes were assessments, feelings, or views that are either negative or positive by respondents regarding hypertension. The attitude variable was measured using a questionnaire, using an ordinal scale with good attitude measurement results if the answer score was > 75% through the highest score (30-40). Attitude is sufficient if the answer score is 40% - 75% through the highest value (16-29). Attitude is lacking if the answer score is <40% through the highest value (<16) (Azwar in Daeli Sonifati's research, 2017).

Family support was an effort made by the family in providing motivation and assistance to family members who have hypertension in taking medication. Family support variables were measured using a questionnaire, using an ordinal scale with less measurement results if <55%, sufficient if 56-75%, good if 76-100% (Toulasik, 2017).

Adherence to taking medication was the behavior of hypertensive patients in complying with the treatment recommended by the doctor. The medication adherence variable was measured using a questionnaire, using an ordinal scale with the results of measuring high adherence if the score < 2, low adherence if the score \geq 2 (Mustafa, 2016).

5. Study Instrument

As for the writer used the instrument in the form of a questionnaire to measure the variable level of knowledge, attitudes, family support, and the level of medication adherence.

6. Data Analysis

Bivariate analysis used the chi square test through the level of significance at a p value of 0.05 with a 95% CI.

RESULTS

1. Sample Characteristics

The distribution of subjects according to these characteristics (Table 1).

2. Univariate Analysis

The results of the univariate analysis can be seen in Table 2. The data shows that the majority (53.6%) of the subjects in this study had a good level of knowledge. Of the 110 subjects in this study the majority (55.5%) had an adequate attitude and 44.5% had a good attitude.

3. Bivariate Analysis

Table 3 shows the analysis of the linkages between knowledge at the level of compliance showing that of the 55.3% of subjects with good knowledge the majority (45.4%) have a high level of compliance. The results of the chi-square test showed that good knowledge increased adherence in taking medication, and the results were statistically significant (OR=17.75; 95% CI= 4.67 to 67.47; $p < 0.001$).

Table 3 shows an analysis of the linkages between attitudes at the level of compliance showing that of the 55.5% of subjects in the attitude category, the majority (37.3%) had a low level of compliance. As many as 44.5% of the subjects were in the good attitude category, the majority (35.4%) had a high level of compliance. The results of the chi-square test showed that a positive (good) attitude increased adherence in taking medication, and this result was statistically significant

(OR= 1.51; 95% CI= 0.38 to 6.09; p<0.001).

Table 1. Distribution of subject characteristics

Characteristics	Frequency (n)	Percentage (%)
Gender		
Female	62	56.4
Male	48	43.6
Age (years)		
35-48 years	23	20.9
49-61 years	69	62.8
62-75 years	18	16.3
Education		
Elementary School	14	12.7
Junior High School	9	8.2
Senior High School	71	64.5
Diploma III	4	3.6
Bachelor	12	10.9
Occupation		
No Work	36	32.8
Non governmental	14	12.7
Laborer	22	20
Self-employed	34	30.9
Civil Servants / TNI / POLRI	3	2.7
Etc	1	0.9
Income		
< UMP (Rp.4.267.439)	75	62.8
≥ UMP (Rp.4.267.439)	35	31.8

Table 2. Frequency Distribution of Variables

Characteristics	Frequency (n)	Percentage (%)
Knowledge		
Not enough	18	16.4
Enough	33	30
Good	59	53.6
Attitude		
Not enough	0	0
Enough	61	55.5
Good	49	44.5
Family Support		
Not enough	36	30
Enough	16	14.5
Good	61	55.5
Adherence to taking medication		
Low	51	46.4
High	59	53.6

Table 3 shows an analysis of the relationship between family support

and the level of adherence, showing that of the 55.5% of individuals who

receive good family support, the majority have a high level of compliance. Of the 14.5% of subjects with sufficient family support, almost all of them, namely 11.8%, had a low level of compliance. Of the 30% of subjects with less family support, as many as 25.5%

had a low level of medication adherence. The results of the chi-square test showed that family support increased medication adherence, and the results were statistically significant (OR= 6.94; 95% CI= 2.96 to 16.29; p<0.001).

Table 3. The relationship between the level of knowledge, attitudes and family support with the level of adherence to taking medication in hypertensive patients in the Palmerah Village, Palmerah District, West Jakarta in 2020

Independent variable	Adherence to taking medication						OR (95%CI)	p
	Low		High		Total			
	N	%	N	%	N	%		
Knowledge								
Not enough	18	16.4	0	0	18	16.4	17.76 (4.67–67.47)	<0.001
Enough	24	21.8	9	8.2	33	30		
Good	9	8.2	50	45.4	59	53.6		
Attitude								
Not enough	0	0	0	0	0	0	1.51 (0.38 – 6.09)	<0.001
Enough	41	37.3	20	18.2	61	55.5		
Good	10	9.1	39	35.4	49	44.5		
Family Support								
Not enough	28	25.5	5	4.5	33	30	6.94 (2.96 – 6.29)	<0.001
Enough	13	11.8	3	2.7	16	14.5		
Good	10	9.1	51	46.4	61	55.5		

DISCUSSION

The results of research in Palmerah Village, Palmerah District, West Jakarta in September 2020 found that the proportion of hypertension patients in the Palmerah Village area, Palmerah District, West Jakarta, was mostly female, namely 62 (56.4%) people. The existence of hormonal factors that are greater in women than men cause an increase in blood pressure (Agrina and Hairitama, 2011). Women who have entered menopause have hormonal factors that cause blood pressure to increase, so that the prevalence of hypertension in the female sex increases (Indriana, 2020).

The majority of subjects in this study, namely 69 (62.8%) people, were

in the age range of 49-61 years. Blood pressure generally begins to increase after the age of 40, this is because the arteries will experience thickening, causing narrowing of the blood vessels and follow by a decrease in the elasticity of the blood vessels (Yugiantoro, 2015).

The last education of hypertension patients in Palmerah Village, Palmerah District, West Jakarta, in 2020, the majority of them had high school education, namely 71 (64.5%) people. Education is something that is very important because it can affect one's knowledge. The higher a person's education, the easier it is for that person to accept new things, especially in undergoing hypertension therapy (Muiz in Said, 2016).

The subjects in this study were 36 (32.7%) people who did not work and the remaining 76 (69.1%) people who worked. Of the 76 (69.1%) people who work, the majority work as entrepreneurs, namely 34 (30.9%) people. Subjects who do not work tend to rarely do physical activities such as exercise. Hypertension is prone to risk in people with sedentary lifestyles (Agrina and Hairitama, 2011).

The majority of monthly income in the subjects of this study had a monthly income below the UMP and only 35 (31.8%) people had income above the UMP. People with low incomes will tend to prioritize their income to meet their basic needs such as paying house rent, paying for electricity and paying for water rather than prioritizing eating healthy food and having their health checked (Lestari, 2019). The higher the income, the higher the material obtained, be it food or health services which can later affect health (Oakes in Ningsih's research, 2017).

The distribution of knowledge levels in hypertension patients in Palmerah Village, Palmerah District, West Jakarta in 2020, it is known that most of the subjects have a good level of knowledge, namely 59 (53.6%) people. This result is in line with Harun's research (2012) where the majority of subjects had a good level of knowledge, namely 27 (61.4%) people. Knowledge is the result of knowing someone about objects through their senses (Notoatmodjo, 2015). The subject's level of knowledge related to the disease he is suffering from, namely hypertension, can support the success of the therapy carried out (Pramestutie and Silviana,

2016). The majority of subjects have a good level of knowledge even though they have low education. Education is one of the factors that can influence one's knowledge. The higher a person's education, the higher his knowledge. However, it is possible if someone with low education accesses information from available media (Hernawan and Arifah, 2012).

The distribution of attitudes towards hypertensive patients in the Palmerah Village, Palmerah District, West Jakarta in 2020, most of them had an adequate attitude, namely 61 (55.5%) people. These results differ from Sitompul's study (2016) which examined the relationship between attitude and medication adherence in hypertensive patients, in which the majority had a good attitude in that study. Attitude in this case is not yet an action or behavior but a closed reaction or closed behavior. According to the researcher's analysis, in this study the majority of subjects disagreed with the statement that hypertensive patients must be routinely monitored every month and they also prefer to continue taking antihypertensive drugs without the need for control to health services.

The distribution of family support for hypertensive patients in Palmerah Village, Palmerah District, West Jakarta in 2020, most of the subjects had good family support, namely 61 (55.5%) people. These results are in line with Toulasik's study (2019) which examined the relationship between family support and medication adherence, in which 182 subjects (91%) had good family support. Family support is needed by hypertensive patients, because someone who is sick needs

attention from the closest person, in this case the family. The family can act as a motivator so that hypertensive patients remain compliant with treatment (Wulandari, 2019).

The distribution of the level of adherence to taking medication in hypertensive patients in Palmerah Village, Palmerah District, West Jakarta in 2020, most of the subjects had a high level of adherence to taking medication, namely 59 (53.6%) people. These results are in line with Pamungkas' research (2020) which examined the relationship between family support and medication adherence. In this study, the majority of subjects were compliant in taking medication. This compliance can arise when a person has the will to achieve something that is expected, in which case the patient's blood pressure is controlled (Pamungkas, 2020). A person's compliance is the ability to maintain or implement the rules suggested by health providers, this can later have a positive effect on patients in efforts to control their hypertension (Pamungkas, 2020). Adherence to treatment is an important factor in the continued health of hypertensive patients (Patel and Taylor in Falupi 2013).

The results of the bivariante analysis between the level of knowledge and adherence to taking medication for hypertension patients in the Palmerah sub-district, Palmerah district, West Jakarta in 2020 explain that there is a relationship between the level of knowledge and the level of adherence to taking medication for hypertensive patients. The results of this study are in line with Indriana's research (2020), in that study it was stated that there was a

relationship between the level of knowledge and the level of adherence to taking medication ($p= 0.005$). Someone who is well-informed about the disease he is suffering from will be more compliant in taking medication because he already knows the risks that may occur if he is not compliant in taking medication (Arifin, 2016). Based on the results of data analysis as much as 53.3% of subjects have a good level of knowledge even though the majority of subjects only have high school education background. Education is one of the factors that can affect a person's level of knowledge, if a person's level of education is high, the level of knowledge will also be high. It is possible that people with low levels of education have a high level of knowledge, this is because these people can get various information from available public media or from other people around them. In this study there were 53.6% of subjects who had good knowledge and almost all of them, namely 45.5% had high compliance and as many as 16.4% of subjects with less knowledge had a low level of compliance, so it can be concluded that the level of adherence to taking medication for hypertension sufferers in Palmerah Village West Jakarta Palmerah District in 2020 is influenced by their knowledge of the disease they are suffering from. The higher the level of one's knowledge, the higher the awareness or desire to be healed by being obedient in taking medicine.

From the results of the study there were 9 (8.2%) people with a good level of knowledge had a low level of medication adherence. People with a good level of knowledge do not

necessarily have high medication adherence. This can be caused by other factors such as internal factors in the form of attitudes and external factors in the form of family support. If someone has good knowledge about hypertension but does not do what should be done, then this can lead to reduced adherence in taking medication. Likewise, if someone with good knowledge, without family support in terms of motivation, reminds the patient to take medication, this can also cause a person's lack of compliance. A person's low adherence can also occur because the person forgets to take the drug, this is one of the unintentional non-adherences so that even people with good knowledge can be reduced (Hernawa and Arifah, 2012).

The results of a biivariate analysis between attitudes and medication adherence of hypertensive patients in the Palmerah sub-district, Palmerah district, West Jakarta in 2020 explain that there is a relationship between attitude and the level of medication adherence in hypertensive patients. The results of this study are in line with the research of Haldi et al (2020) which states that there is a significant relationship between attitudes and the level of adherence to taking medication ($p=0.002$). Lawrence Green's theory also states that attitude is also a factor that can influence a person's compliance behavior. Harun's research (2012) which examined the relationship between knowledge and attitudes and compliance, stated that there was a significant relationship between attitudes and medication adherence ($p=0.013$). The better a person's eating attitude, the better his adherence to taking

medication. Half of the subjects in this study had a sufficient attitude category, namely as many as 61 (55.5%) people where the majority answered strongly disagreed with the statement stating that hypertension sufferers should exercise control every month and prefer to continue taking hypertension medication without checking themselves to health services. Non-adherence of patients to control every month is likely to occur due to economic factors, in which the majority of subjects have monthly income below the UMP so that this can be one of the obstacles for patients to have routine control every month.

The relationship between family support and adherence to taking medication in hypertensive patients in Palmerah Village, Palmerah District, West Jakarta in 2020 shows $p < 0.001$, meaning that there is a relationship between family support and the level of adherence to taking medication in hypertension patients in Palmerah Village, Palmerah District, West Jakarta in 2020. Results this is in line with Toulasik's research (2019), where there is a relationship between family support and patient adherence in taking medication ($p < 0.001$). With the family support received by the patient, the patient will feel that someone is paying attention in undergoing treatment. This is different from the research conducted by Pauline (2015) which stated that family support was not related to medication adherence ($p = 0.162$). The results of this study found that 30% of subjects with poor family support, almost all of them, namely 25.5%, had a low level of medication adherence. Family support in this case

greatly influences patient medication adherence, because hypertensive patients need the closest person who lives in the same house so that they are always enthusiastic about undergoing treatment.

The implementation of the research was in accordance with the procedure, but there were several limitations including the collection of primary data using a questionnaire allowing results that are subjective, so that the accuracy of filling depends on the understanding and honesty of the subject. Retrieval of data using Google from allows subject errors in clicking on the answer choices.

Based on the results of the study, the majority of subjects had a good level of knowledge, sufficient attitude, good family support and a high level of medication adherence. This study concluded that there is a relationship between the level of knowledge and the level of adherence to taking medication, attitude and the level of adherence to taking medication, and family support with the level of adherence to taking medication in hypertensive patients in Palmerah Village, Palmerah District, West Jakarta in 2020.

AUTHOR CONTRIBUTION

In this study the authors contributed to data collection with research subjects, and also the supervisor provided input to the authors in terms of writing and material.

CONFLICT OF INTEREST

The purpose of writing this research is to fulfill the final assignment as a requirement for obtaining a bachelor's degree in medicine.

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