

Factors That Influence The Level Of Compliance Take Medication For Hypertension Patients In The Village Tosaren, Pesantren District, Kediri City

Noviani Eufranta Sana^{1*}, Janik Kurniawati²

Pharmacy Study Program, Faculty of FAKAR, Strada Indonesia Institute of Health Sciences Kediri

*Corresponding author: novianisana97@gmail.com

ABSTRACT

Hypertension is a disease that requires long-term therapy, so patient compliance is required in undergoing treatment to control blood pressure and reduce the risk of complications. Hypertension treatment takes a long time so individual compliance in undergoing treatment is one of the basic things to do. The aim of this research is to determine the level of compliance and the factors that influence the level of compliance with taking medication for hypertension patients in Tosaren Village, Islamic Boarding School District, Kediri City. This research is a quantitative study using a correlational descriptive design with a *cross sectional approach*. The population in this study were patients who had been diagnosed with hypertension in Tosaren Village, Islamic Boarding School District, Kediri City, using a *total sampling technique* of 40 respondents. The independent variables are the factors age, gender, education and employment. The dependent variable is adherence to taking medication. The research instrument used a questionnaire and the results were analyzed with the SPSS program using the *Chi-square* statistical test with a significance level of 95% ($\alpha=0.05$). The research results and conclusions were obtained as follows, namely 80% of patients were non-compliant with taking medication and 20% were compliant. Furthermore, there is a significant relationship between the age factor ($p=0.017$) and adherence to taking medication, namely, the higher the age the more non-compliant, then the factors gender ($p=0.605$), education ($p=0.714$), occupation ($p=0.086$) do not there is a significant relationship with adherence to taking medication. From these results and conclusions, it can be recommended for hypertensive patients to further increase compliance with taking medication so that blood pressure remains stable and complications do not arise, if necessary there is policy intervention from the health service regarding companions and supervisors taking medication, especially elderly patients.

Keywords: Compliance With Taking Medication, Hypertensive Patients

INTRODUCTION

Based on the results of Basic Health Research data in 2013, chronic diseases are one of the main causes of death in Indonesia (Toulasik, YA (2019). Chronic diseases also cause death in 36 million people worldwide or the equivalent of 36% of deaths in the world according to WHO (World Health Organization). These chronic diseases include hypertension. WHO data shows that worldwide around 972 million people or 26.4% suffer from hypertension, and is estimated to be 1.15 billion in 2025 or around 29% of the world's total population (Lende, et al (2019). Meanwhile in Southeast Asia hypertension kills almost 8 million people per year.

The prevalence rate of hypertension in East Java Province is still quite high when compared with the prevalence rate in Indonesia, which is 26.2% (Ministry of Health of the Republic of Indonesia, 2013). Then, based on 2019 Basic Health Research (Riskesdes) data,



it is stated that the estimated number of hypertension sufferers aged ≥ 15 years in East Java Province is around 11,952,649 people, with the proportion of men being 48% and women being 52%. Of this number, those who received health services for hypertension sufferers were 40.1%

Data from the Kediri City Health Service for Health Services reported that in 2012 the number of visits for hypertension cases was 45,937. Based on reports from the Community Health Center Integrated Recording and Reporting System (SP2TP) at the Islamic Boarding School II Community Health Center, Kediri City in 2016, 819 out of 7338 elderly people (11.16%) suffered from hypertension. Researchers conducted pre-research on February 12 2017 at the Islamic Boarding School II health center. From 10 elderly respondents, the results showed that 5 respondents (50%) had severe hypertension, 3 respondents (30%) had moderate hypertension and 2 respondents (20%) had mild hypertension.

Hypertension is a form of chronic disease that must be treated because this disease can interfere with the patient's daily survival and can cause complications. There are several obstacles in treating hypertension, namely patient negligence, lack of knowledge about hypertension and antihypertensive drugs, as well as lack of communication and collaboration between patients and health workers (Pramesstutie & Silviana, 2016). According to JNC (Joint National Committee) VIII, a person is said to be suffering from hypertension if the stolic blood pressure is >140 mmHg and the diastolic pressure is >80 mmHg. This disease is often called the silent killer because there are no symptoms and without realizing it, sufferers experience complications in vital organs (Ministry of Health, 2006).

Compliance with taking medication or medication adherence is the main factor determining the success of therapy Compliance and good understanding in carrying out therapy can influence blood pressure and can prevent complications (Ministry of Health, 2006). Adherence to taking medication is influenced by demographic factors, patient factors, therapeutic factors and the patient's relationship with health workers. One indicator of patient compliance with taking antihypertensive medication is blood pressure control (Dewanti, at al (2015). According to Hazwan (2017) the level of knowledge and level of education can also influence the compliance of taking medication with hypertension patients. Based on research by Nanurlaili (2014), compliance with hypertension patients In taking medication it was also proven to be quite poor (53.8%) resulting in no significant improvement in the results of blood pressure measurements. This proves the need to increase the level of compliance with taking medication in hypertensive patients.

Tosaren Village has a dense population and is surrounded by health facilities such as: hospitals, health centers, clinics and pharmacies. The total population in the Tosaren area is 8,907 people, consisting of 4,415 men and 4,492 women (Disdukcapil). Most of the people in Tosaren earn their livelihood by working as private employees, farm workers, housewives, civil servants and small traders (Disdukcapil). Visits for hypertension sufferers in 2022 in.

The number of pustu and puskesmas is 125 people, consisting of 27 male sufferers and 98 female sufferers, data from (Islamic boarding school health center II) .

METHODS

The research used is descriptive in nature with a quantitative approach so that "Factors that Influence the Level of Compliance with Taking Medicine for Hypertension Patients in Tosaren Village" are clearly known. This research is a quantitative study using a correlational descriptive design with a cross sectional approach . Using this study, the prevalence of a phenomenon (dependent variable) will be obtained and then connected to the cause (independent variable) (Nursalam, 2017). After that the data can be analyzed using the

SPSS program. The sampling technique in this research is total sampling. The number of samples obtained was 40 respondents, based on inclusion and exclusion criteria.

Data processing in this research uses an ordinal categorical table, namely compliance and non-compliance. Then it was analyzed using the Chi-square comparative test between demographics and the patient's level of adherence to taking antihypertensive medication (Dahlan 2014).

The test was carried out with a confidence level of 95% ($\alpha = 0.05$), which means that if the p value < 0.05 , there is a relationship between the level of compliance of hypertensive patients and demographic conditions. If the p value is > 0.05 then there is a non-significant relationship between the level of patient compliance and demographic data in hypertensive patients on Tosaren.

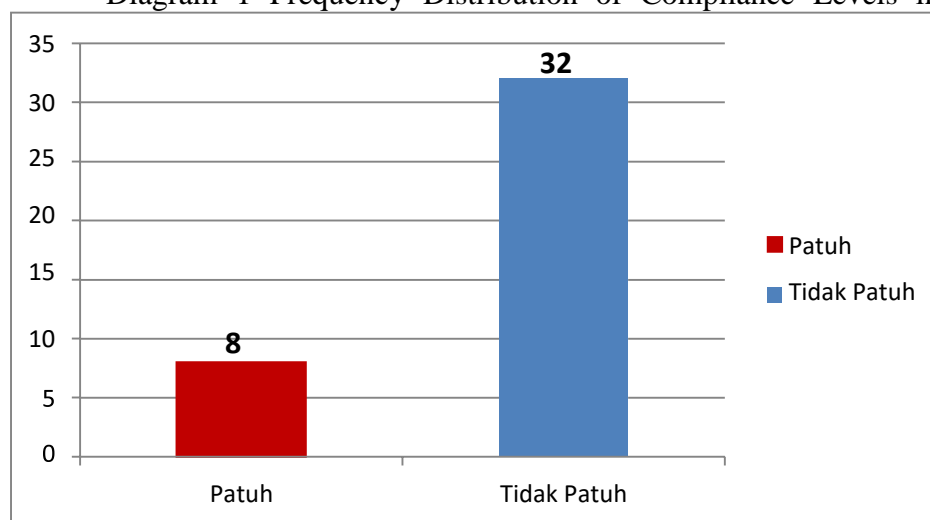
The instrument or research tool used was a questionnaire. This questionnaire is divided into 2 parts, namely: demographic data, medication adherence questionnaire.

RESULTS AND DISCUSSION

The frequency distribution of medication adherence levels in this study includes age, gender, education and occupation.

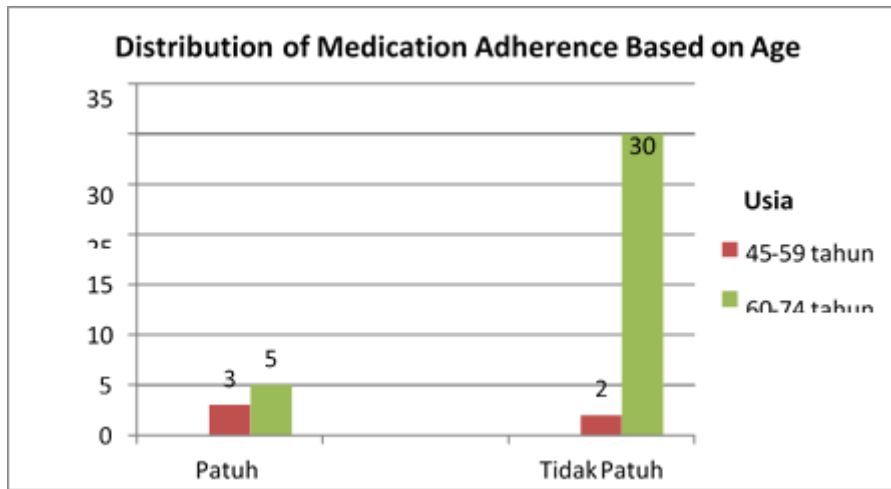
The results of the frequency distribution data on medication adherence levels are in the following table:

Diagram 1 Frequency Distribution of Compliance Levels in Taking Medication

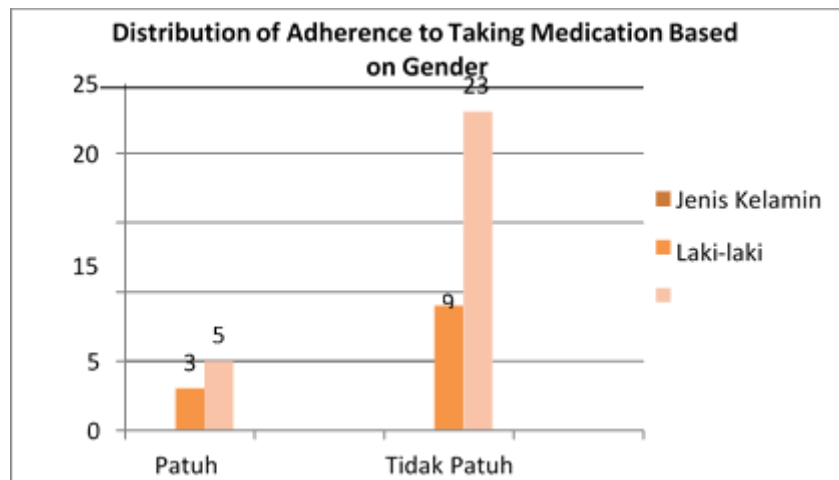


From the data in diagram 1, it is known that the level of adherence to taking medication for hypertensive patients was 8 people (20%) and 32 people were non-compliant (80%).

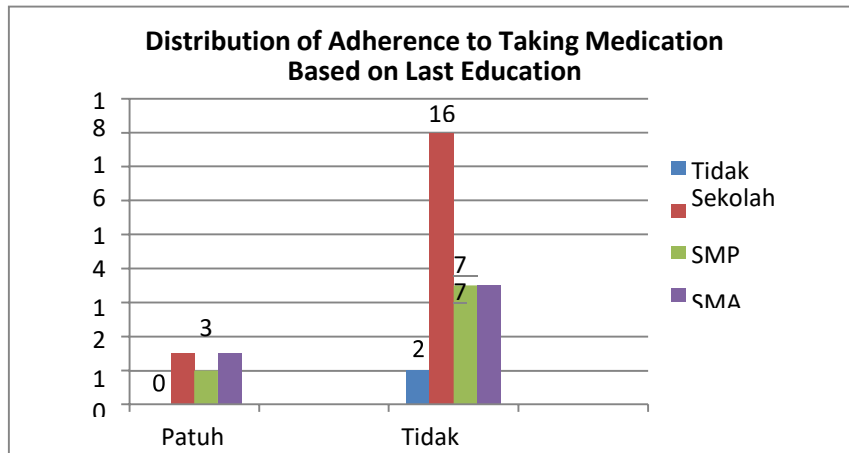
Distribution of Medication Adherence Based on Age
 Diagram 2 Distribution of Medication Adherence Based on Age



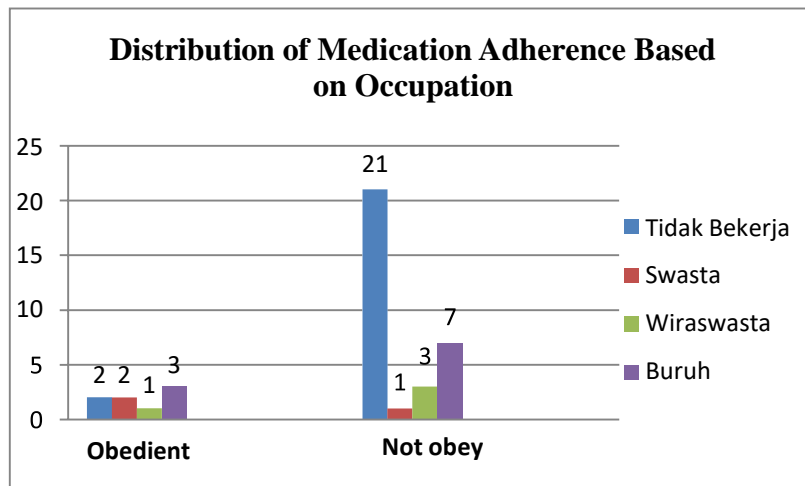
Distribution of Adherence to Taking Medication Based on Gender
 Diagram 3 Distribution of Adherence to Taking Medication Based on Gender



Distribution of Medication Adherence Based on Education
 Diagram 4 Distributio of Compliance with Taking Medicine Based on Educ



Distribution of Medication Adherence Based on Occupation
 Diagram 5 Distribution of Medication Adherence Based on Occupation



Statistical Test Results

the Chi Square statistical test data can be seen in the table below

Table 1 Chi Square Test Results for Level of Compliance with Medication

Factors that influence compliance	Compliance Level				Sig value
	Obedient		Not obey		
	n	%	n	%	
Age	3	7.5	2	5	p=0.017
45- 59 Years					
60-74 Year	5	12.5	30	75	
Gender	3	7.5	9	22.5	P=0.605
Man					
Woman	5	12.5	23	57.5	
Last education					p=0.714
No school	-	0	2	5	
elementary school	3	7.5	16	40	
JUNIOR HIGH SCHOOL	2	5	7	17.5	
SENIOR HIGH SCHOOL	3	7.5	7	17.5	
Work					p=0.086
Doesn't work	2	5	21	52.5	
Private	2	5	1	2.5	
Self-employed	1	2.5	3	7.5	
Laborer	3	7.5	7	17.5	

1. The Relationship between Age and Medication Adherence

The level of compliance is one of the things that plays an important role in the treatment of chronic diseases. Age is one indicator that is still a consideration for the causes of hypertension. Age influences the occurrence of hypertension. As age increases, the risk of developing hypertension becomes greater. In old age, hypertension is mainly found only in the form of an increase in systolic blood pressure. This incident is caused by structural changes in large blood vessels (Mutmainah, N., & Rahmawati, M. (2010).

In Diagram 2. from the research results, it was found that 5 respondents were compliant with taking medication aged 60-74 years (12.5%), consisting of 3 female respondents and 2 male respondents with primary school education. , 1 junior high school person, and 2 senior high school students, with employment criteria consisting of 1 person not working, 2 people in the private sector, 1 person self-employed and 1 person as a worker.

There were 3 respondents who adhered to taking medication aged 45-59 years (7.5%), 1 person was male, 2 were female, 1 person had an elementary school education, 1 person had a junior high school and 1 person had a high school level, the respondent's job criteria were not working 1 2 workers. There were 2 non- compliant respondents aged 45-59 years (5%), 2 people were male, 2 people had no school education, and 2 people did not work.

Respondents who did not comply with taking medication were aged 60-74 years as many as 30 people (75%) were 9 men and 23 women, with a final education of 16 people in elementary school, 7 people in junior high school and 7 people in high school, the criteria for employment were not working 21 people, 1 private person, 3 self-employed people and 7 workers. The statistical test results obtained P Value = 0.017, so it can be concluded that there is a significant relationship between age and adherence to taking medication hypertensive patients, namely P value >0.05. This is because as a person gets older, they become less

compliant with taking medication and the more problems they face, especially those related to their health, degenerative diseases such as stroke and dementia begin to emerge, which causes hypertensive patients to forget to take their medication. This occurs due to a gradual decline in the function of the entire body.

2. Relationship between Gender and Medication Adherence

Based on the research results in Diagram 3, it was concluded that the majority of respondents in this study were female, 28 people (70%), of the total female respondents, there were 5 respondents (12.5%) who were compliant and 23 respondents who were disobedient (57.5%).) respondents. For male respondents, a total of 12 (30%) respondents, there were 3 (7.5%). respondents who complied and 9 (22.5%) respondents who did not comply. The statistical test results obtained P Value = 0.605 $P > 0.05$, so it can be concluded that there is no significant relationship between medication adherence and gender. This means that non-compliance between female and male patients in using antihypertensive drugs is the same.

Apart from that, hypertension based on gender can also be influenced by psychological and behavioral factors which is unhealthy. Gender is also not a parameter for the high incidence of hypertension in society, because the increase in hypertension can be caused by many factors such as behavior, history of disease and irregularities in treatment Dolo, at al (2021).

3. The Relationship between Education and Medication Adherence

From the research results, most of the respondents had an elementary school education of 19 (47.5%). Judging from Diagram 4, the relationship between medication adherence and education. There were no respondents who did not go to school who were compliant with taking medication and there were 2 (5%) respondents who were non-compliant. Respondents who complied with taking medication at the last elementary school were 3 (7.5%) respondents, those who did not comply were 16 (40%). There were 2 (5%) respondents who adhered to taking medication with a high school education and 3 (7.5%) respondents who adhered to taking medication had a high school education. The results of the statistical test value P Value = 0.714 $> p 0.05$ means it can be concluded that there is no significant relationship between education and adherence to taking medication. This can happen because patient compliance in treatment or taking medication is mainly influenced by other factors, namely attitudes, beliefs and motivation.

The same results as this research were also obtained by Pumawan (2019) who found that there was no relationship between education and compliance with treatment for hypertension sufferers. However, the level of education is not always a factor in a person's compliance with hypertension treatment because there are other factors that can influence it (Handayani, at al 2019). But not all low-educated patients have very little knowledge, because knowledge is not only obtained from formal learning. Knowledge can be obtained from experience and the five senses in processing information (Mathavan, Ngurah, & Pinatih, 2017). Apart from that, knowledge is also obtained through information facilities available at home, such as radio and television or through social media. Most human knowledge is obtained through the eyes and ears, so the use of the five senses for information is very important.

4. The Relationship between Work and Medication Adherence

Work is something that must be done to support life and family. The work factor of the 40 respondents in this study found that the majority of respondents did not work, 23 people 57.5%.

Based on Diagram 5, research results show the relationship between work and medication adherence. There were 2 (5%) respondents who did not work who adhered to taking medication and 21 (52%) respondents who did not comply. 2 respondents with private jobs were compliant with taking medication and 1 (2.5%) was non-compliant. There were

respondents with self-employed jobs who were obedient to taking medication 1 (2.5%) were not compliant 3 (7.5%) and respondents with labor jobs were obedient to taking medication 3 (7.5%) were not compliant 7 (17.5%) respondents. The results of statistical tests in this study have a P value = 0.086, a p value > 0.05, so it is concluded that there is no significant relationship between medication adherence and employment.

According to Karim, et al (2018) , lack of physical activity increases the risk of suffering from hypertension because it increases the risk of being overweight and tends to have a higher heart rate so that the heart muscle has to work harder with each contraction. This is the same as research conducted by Tisna (2011) which stated that there was no significant influence between work and the level of compliance with hypertension medication use. However, these results are different from research conducted by Tambuwun with a sample of 702 respondents who stated that work had a significant effect on compliance with the use of anti-hypertension drugs. Length of working time also influences compliance with taking anti-hypertension medication. This is related to respondents who are bound by working hours will have little opportunity to come to health service facilities (Tambuwun , et al (2021).

CONCLUSIONS

Based on the results and analysis of the research that has been carried out, it can be concluded that:

1. The level of compliance with taking medication for hypertensive patients in Tosaren Village is that most of the patients are 80% non-compliant with taking medication and 20% are compliant.
2. There is a significant relationship between age and adherence to taking medication ($p=0.017$) where the higher the patient's age, the less adherent they are to taking medication.
3. There was no significant relationship between gender and medication adherence ($p=0.605$)
4. There is no significant relationship between education and medication adherence (0.714)
5. There is no significant relationship between work and medication adherence (0.086)

REFERENCES

- Adha, S., Wandu, D., & Susanto, Y. (2019). The Influence of Job Satisfaction on Employee Performance at the Department of Industry, Trade and Energy and Mineral Resources of Pandeglang Regency. *Journal of Vocational Economics*, 2(1), 61-72.
- Damayanti, N. A. S. (2022). The Relationship Between Knowledge and Attitude and Myalgia Prevention Behavior in Farmers in Tajur Village, Working Area of Uptd Puskesmas Cigasong, Majalengka Regency, 2022 (Doctoral dissertation, STIKes Kuningan).
- Mutmainah, N., & Rahmawati, M. (2010). The relationship between adherence to medication use and success of therapy in hypertensive patients at Surakarta regional hospitals in 2010.
- Nuraeni, E. (2019). The Relationship between Age and Gender at Risk with the Incident of Hypertension at Clinic X, Tangerang City. *JKFT Journal*, 4(1), 1-6.
- Pratama, G. W., & Ariastuti, N. L. P. (2015). Factors That Influence Compliance with Hypertension Treatment in Elderly People Assisted by Klungkung Community Health Center 1. *E-Jurnal Medika Udayana*
- Primasari, N. A., Devianto, A., & Sari, H. I. (2022). Family Support and Compliance with Hypertension Medication Consumption in the Elderly: Literature Review. *Journal of Health Research "Forikes Voice"*, 13, 34-39.
- Retnowati, L., Wahyu, A., & Hidayah, N. (2022). FACTORS RELATED TO COMPLIANCE WITH HYPERTENSION TREATMENT IN THE ELDERLY. *Majapahit Hospital (MAJAPAHITMOJOKERTO HEALTH POLYTECHNIC JOURNAL)*, 14(1), 115-128.
- SAFINATUNNAZAH, N. (2021). The effect of administering carrot juice and standard hypertension drug therapy on reducing high blood pressure in women of childbearing age in the work area of Metro Pusat District (Doctoral dissertation, Tanjungkarang Health Polytechnic).