

**CORRELATION BETWEEN KNOWLEDGE AND THE ADEHRENCE TO
TAKE ANTIHYPERTENSIVE MEDICATION FOR ELDERLY
HYPERTENSIVE PATIENTS IN KRIAN PUBLIC HEALTH CENTER
SIDOARJO REGENCY**

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Abstract: Hypertension is a condition of elevated abnormal arterial blood pressure that lasts persistently. Some knowledge that should be known by hypertensive patients are such as the meaning of hypertension, the cause of hypertension, the symptoms that come along, and the importance of regular and long term treatment, also knowing the dangers posed if not taking the medication. This study aims to determine the correlation between knowledge and adherence to taking antihypertensive medication in elderly hypertensive patients at the Krian Public Health Center, Sidoarjo Regency. In this study, the population was elderly hypertensive patients who examined themselves or only took control to take medication at the Elderly Polyclinic of Krian Public Health Center in Sidoarjo Regency with 332 populations with 75 samples taken. The result of this research was obtained sig. value = 0,000 (<0,05). This study used the Spearman Correlation statistical test in analyzing the data. From the results of this study it was concluded that there was a relationship between knowledge and adherence to taking antihypertensive medication in elderly hypertensive patients at the Krian Public Health Center, Krian District, this was proved by the acquisition of sig values. = 0,000 (<0.05).

Keywords: knowledge, the adherence of taking medication, hypertension

INTRODUCTION

Hypertension is a condition of elevated abnormal arterial blood pressure that lasts persistently. The American Heart Association (AHA) defines someone categorized as having hypertension if they have systolic blood pressure ≥ 140 mmHg and / or diastolic pressure ≥ 90 mmHg.¹

World Health Organization in 2012, explains that hypertension contributes to nearly 9.4 million deaths from cardiovascular disease each year.² It also increases the risk of coronary heart disease by 12% and increases the risk of stroke by 24%.³

Therapy for hypertensive patients consists of pharmacological therapy and non pharmacological therapy. Pharmacological therapy can use drugs to reduce blood pressure. Non pharmacological thereapy can be done by modifying life style such as losing weight, stop smoking, avoiding alcohol, reducing stress, increasing excersice, and having enough rest.¹ Puspita (2016), about factors related to adherence in takin medication for hypertensive patients, showed that factors of education level, duration of hypertension, knowledge, family support, the role of health workers, gender motivation, employment status, participation of health insurance and affordability health insurance service.⁴

Knowledge is the level of patient's behavior in taking medication, and behavior suggested by doctors or others. Knowledge is a very important domain in forming person's behavior. Some knowledge that should be known by hypertensive patients are such as the meaning of hypertension, the cause of hypertension, the symptoms that come along, and the importance of regular and long term treatment, also knowing the dangers posed if not taking the medication.¹

From the data in Krian Public Health Center, Sidoarjo Regency, there were 5,31%

cases of hypertension in 2017, decreased compared with 2016 for 7,14% cases. But in 2017, hypertension case was still in top 10 most diseases in Krian Public Health Center, Sidoarjo Regency (Profil Kesehatan Puskesmas Krian, 2017).

The success in controlling hypertension is a teamwork between patient and the doctors. The adherence of hypertensive patients is not only see by their adherence in taking antihypertensive medication, but also their active role in checking their health to their doctors regularly, and also recommended healthy lifestyle changes.

Adherence and a good understanding in running therapy can affect blood pressure and prevent complications from occurring.⁵ Adherence to treatment is generally defined as the level of behavior in which the patient uses the medications, obeys all the rules and advice and is continued by the healthcare provider. Some reasons patients are not compliant to use anti-hypertensive drugs due to long-term therapy that makes patients bored, side effects of drugs, lack of understanding of the management and risk of hypertension and relatively high treatment costs.⁶

The purpose of this study was to determine the level of knowledge of hypertensive patients about treatment at the Krian Public Health Center. This research was conducted at the Krian Public Health Center because the researchers saw that a similar study had never been done at the Krian Public Health Center.

RESEARCH METHOD

This research used analytic survey research methods. While the type of analytical research used was cross sectional approach, which was independent variables and dependent variables in this study collected at the same time to determine the relationship of knowledge with compliance

with taking anti-hypertension medication in elderly hypertension patients in Krian Public Health Center, Sidoarjo Regency.

In this study, the population was elderly hypertensive patients who examined themselves or only took control to take medication at the Elderly Polyclinic of Krian Public Health Center in Sidoarjo Regency with 332 populations with 75 samples taken.

After processing the data, the data was analyzed statistically analytically. Univariate analysis was performed on each variable from the results of the study. In general, this analysis only produces the distribution and percentage of each variable.⁷ Bivariate analysis is the result of an independent variable that is thought to have a relationship with the dependent variable. The analysis used was the Spearman test ($P < 0.05$).

RESULTS AND DISCUSSION

The data characteristic of the respondents based on gender resulted most of respondents was male. There was 56 % of male respondents, and 44% for female respondents. Saepudin et al (2011) showed that there was no relationship between gender and adherence taking medication in hypertensive patients.^{8,9} this is because women and men alike had awareness in adherence taking hypertension medication

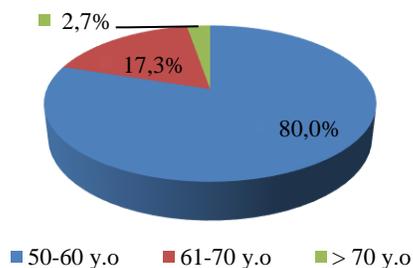


Figure 1. The characteristic of respondents based on the gender

Based on the figure 1 it can be seen that the majority of respondents in this study were aged between 50-60 years.

Respondents who are mature have more desire to live healthy. Respondents with adult age still have a longer life expectancy compared to the elderly.

In the term of education background, 53,3% of the respondents had higher education background; while 35 people (46.7%) other respondents had a low level of education. Higher educated respondents will have more extensive knowledge compared to respondents whose education level is low so that it is easier to absorb and receive information and be able to participate actively in overcoming the health problems of themselves and their families. education level can affect the compliance of hypertensive patients in undergoing treatment.

In this research, the respondents mostly work as entrepreneur (42,1%). Su-Jin Cho's research (2014) states that work has a significant effect on non-adherence with antihypertensive medications.¹⁰ In addition to the type of work, the duration of working hours also affects to it. If the patient works in the formal sector and is bound by working hours, so opportunities to come to health facilities are limited, while those who work are mostly in the informal sector (farmers / laborers, drivers, and traders) who are not bound by working hours so have more time to use the time to take medicine. (figure 2).

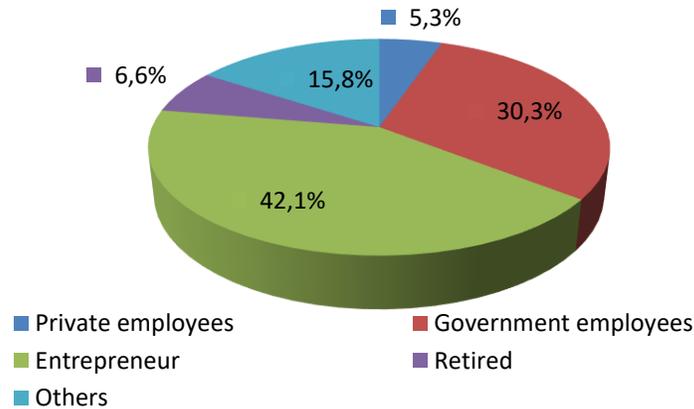


Figure 2. The characteristic of respondents based their profession

The characteristics of respondent's knowledge about hypertension was distributed in three groups: less, moderate, and good. As in figure 3, the respondents mostly has good knowledge about hypertension; which leads to the adherence in taking medication. This will affect the patient's blood pressure so that complications such as coronary heart disease and kidney disorders do not occur in patients.

Based on the adherence it self, the distribution was also divided into three groups: less adherence, moderate adherence, and high adherence. In figure 4, it shows the majority of respondents in this study had a moderate level of adherence in taking the drug as many as 39 people (52%). Adherence describes the extent to which patients carry out the rules in the treatment given by health workers who provide management. Patient adherence influences the success of treatment, low adherence is an inhibiting factor for good control.¹¹

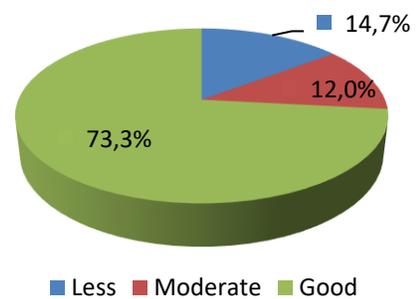


Figure 3. The characteristic of respondents based on knowledge distribution

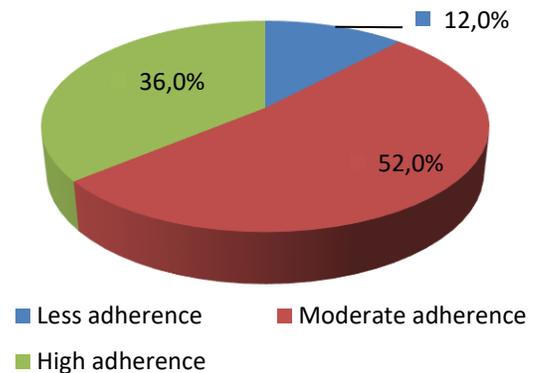


Figure 4. The characteristic of respondent's adherence level

Table 1. Tabulation of the correlation between knowledge and the adherence in taking antihypertensive medication in elderly hypertensive patients at Krian Public Health Center, Sidorjo Regency.

Knowledge	Adherence Level			Total	Spearman
	Less	Moderate	High		
Less	9 (81,8%)	2 (18,3%)	0 (0%)	11 (100%)	r = 0,559 Sig. = 0,000
Moderate	0 (0%)	7 (77,8%)	2 (22,2%)	9 (100%)	
Good	0 (0%)	30 (54,5%)	25 (45,5%)	55 (100%)	
Total	19 (12,0%)	39 (52,0%)	27 (36,0%)	75 (100%)	

Source: Survey result in 2018

Based on table 1 it is known that of the 100% respondents who lack knowledge, 81.8% have less adherence in taking antihypertensive medication. Furthermore, from 100% of respondents who are knowledgeable enough, as many as 77.8% have sufficient adherence in taking antihypertensive medication. And finally out of 100% of respondents who are well-informed, as many as 45.5% have good adherence in taking anti-hypertensive medication.

From the results of the Spearman statistical test shows the value of sig. = 0,000 (<0.05) which means that there is a correlation of knowledge with adherence to taking antihypertensive medication in elderly hypertensive patients at the Krian Public Health Center in Sidoarjo Regency. The correlation coefficient of 0.559 is included in the quite strong category. This shows that there is a strong relationship between knowledge and adherence to taking antihypertensive medication in elderly hypertensive patients at the Krian Public Health Center in Sidoarjo Regency.

Data analysis in this study was carried out by grouping hypertensive patients who were having treatment at the Krian Public Health Center. From 75 respondents in the study, it was found that respondents with insufficient knowledge of 11 (14.7%) with less adherence in taking antihypertensive

medictaion were 9 (81.8%) and moderate compliance with taking antihypertensive medication was 2 (18.3%). Then 9 (12.0%) moderate knowledgeable hypertensive patients with 7 (77.8%) respondents with high adherence 2 (22.2%) and 55 (73.3%) respondents with good knowledge with moderate adherence amounted to 30 (54.5%) and high adherence by 25 (45.5%). From the results of the Spearman statistical test shows the value of sig. = 0,000 (<0.05) which means that there is a correlation of knowledge with adherence to taking antihypertensive medication in elderly hypertensive patients at the Krian Public Health Center in Sidoarjo Regency. This is the same as the theory that the higher the patient's knowledge about hypertension, the higher the adherence with taking the medicine.¹² These results are also in line with Hannys' research (2018) which concluded that there is a significant correlation between the levels of adherence of the elderly regarding hypertension with adherence to taking medication.¹³

Adherence to treatment is an important factor in the continued health and well-being of hypertensive patients.¹⁴ Adherence and obedience are prerequisites for the effectiveness of hypertensive therapy and the greatest potential for improving hypertension control lies in improving the behavior of these patients.¹⁵

Patient knowledge about hypertension and drugs is needed in achieving higher

adherence.¹⁶ Improving knowledge about hypertension requires a multidimensional approach aimed at fulfill the patient needs. While patients must be educated about the consequences of uncontrolled hypertension.¹⁷

Health workers play a role in increasing the knowledge of hypertensive patients about medications and providing information related to drugs and non-drugs (life style). It is expected that after health workers provide information related to drugs and non-drugs (life style), the level of knowledge of hypertensive patients about treatment will increase and the adherence of hypertensive patients in taking medications can also increase.

CONCLUSIONS

The majority respondents in this reseach has higher level education background (53,3%) but mostly the adherence levels in taking medication for those respondents are in moderate level (52%); whereas the respondents with high level of adherence are only 36% from the samples. This research also concluded that there is correlation between the adherences in taking antihypertensive medication with hypertensive patients in elderly group in Krian Public Health Center, Krian District.

It is expected that health workers at the Krian Public Health Center can improve counseling or information about hypertension so that hypertensive patients can find out the benefits of medication adherence so that patients can apply this knowledge in the treatment of the disease. Also, institutions to add more literature on hypertension and adherence to taking anti-hypertensive medication so that it can be used as literature for future researchers. The next researcher should examine the environment and clean and healthy living behavior by direct observation to the respondent.

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