

# Correlation of Knowledge and Attitude with Compliance with Druging in Lans with Hypertension in Regions Work of Poigar Public Health Center

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**Abstract.** (Hypertension is a degenerative disease, which is found more in the elderly. With increasing age it causes physiological changes in various organs of the body, especially the circulatory system, one of which is stiffness in the arteries so that blood pressure tends to increase. In addition, the increasing age of the elderly, the ability to think such as remembering begins to decline and affects knowledge and attitudes about medication adherence. The purpose of this study was to analyze the relationship between knowledge and attitudes with adherence to taking medication in the elderly with hypertension at Poigar Public Health Center. This research is an analytic survey research with a cross sectional approach. The sample consisted of 43 elderly people with hypertension and taking hypertension drugs. Data analysis used chi square statistical test. The results of the correlation analysis showed that knowledge was related to medication adherence in the elderly with hypertension ( $p = 0.003$ ) and attitude was related to medication adherence in the elderly with hypertension ( $p = 0.000$ ). So it can be concluded that knowledge and attitudes are related to adherence to taking medication in the elderly with hypertension at Poigar Public Health Center. It is advisable for the elderly to routinely have their blood pressure checked and take hypertension medication regularly as well as actively participate in health education conducted by health workers during visits to the elderly posyandu at the Puskesmas.

**Keywords:** Knowledge, Attitude, Elderly, Compliance with Hypertension Medication

## 1 Introduction

The success of development is the aspiration of a nation which can be seen from the improvement of the standard of living and life expectancy (UHH) / life expectancy (AHH). However, increasing life expectancy may result in an epidemiological transition in the health sector due to increased morbidity due to degenerative diseases such as hypertension [1]. Hypertension or what is known as high blood pressure is a condition in which there is an increase in blood pressure above the normal threshold of 120/80 mmHg. According to the WHO (World Health Organization), the blood pressure limit that is considered normal is less than 130/85 mmHg. If the blood pressure is more than 140/90 mmHg, it is considered hypertension (this limit is for adults over 18 years). The World Health Organization (WHO) said that the number of hypertension sufferers will continue to increase along with the increasing population in 2025, an estimated 29% of the world's population is affected by hypertension. WHO says that developing economies have hypertension sufferers by 40%, while developed countries only 35%, Africa holds the top position for hypertension sufferers, which is 40%. America region by

35% and Southeast Asia 36%. Asia region this disease has killed 1.5 million people every year. This indicates that one in three people suffer from hypertension [2]. The main results of the [3], concluded that the prevalence of hypertension in the Indonesian population over the age of 18 years based on a doctor's diagnosis was 8.4% of hypertension sufferers, 8.8% of hypertension sufferers took medication, and 34.1% population measurement results [3]. According to the Department of Health and Human Service [4], hypertension is found in 60-70% of the population over 65 years of age. Elderly over 80 years of age often experience persistent hypertension, with persistent systolic pressure above 160 mmHg. The typical type of hypertension often found in the elderly is Isolated Systolic Hypertension (ISH), where the systolic pressure is high (above 140 mmHg), but the diastolic pressure remains normal (below 90 mmHg). The elderly are at high risk for degenerative diseases such as coronary heart disease (CHD), hypertension, diabetes mellitus, gouth (rheumatism) and cancer. One of the diseases suffered by the elderly is hypertension. The prevalence of hypertension increases with age. Increasing age causes various physiological changes in the body such as thickening of the artery walls due to collagen buildup in the muscle layer, so that blood vessels gradually lose their elasticity and become stiff, increasing the risk of atherosclerosis. In old age there is also a decrease in the elasticity of the peripheral blood vessels which will increase the resistance of the peripheral blood vessels which in turn will increase the occurrence of systolic hypertension. Elderly people often develop hypertension due to stiffness in the arteries so that blood pressure tends to increase. Older people who are getting older are likely to have decreased intelligence and ability to accept or remember. The increasing age of a person can have an effect on the increase in knowledge gained, but at certain ages the ability to receive or remember knowledge will decrease. Knowledge of hypertensive sufferers will be closely related to the attitude to comply with treatment because the higher the knowledge, the desire to comply with treatment will also increase. Research conducted [5], at the Drupadi Elderly Posyandu towards 70 elderly people with hypertension, concluded that there is a significant relationship between the level of adherence of the elderly about hypertension with adherence in taking medication, the higher a person's level of compliance with hypertension, the higher also the level of adherence in taking medication. Adherence in undergoing treatment is needed to detect early complications of hypertension. Based on the initial survey conducted by the author on March 26, 2019 at the Poigar Public Health Center, 43 elderly with hypertension came for treatment. Based on interviews with puskesmas officers, it was stated that there were some elderly people who did not comply with their treatment. This of course requires proper handling and identifying whether knowledge and attitudes are related to elderly disobedience in taking medication at Poigar Public Health Center.

## **2 Research Methods**

This research is an analytical survey research with a cross sectional approach in which data concerning the independent variable or independent variable and the dependent or dependent variable are collected at the same time [6]. This research has been carried out in the working area of the Poigar Public Health Center. The population in this study were all hypertensive elderly who sought treatment at the Poigar Public Health Center in the time interval from May to July 2019, totaling 43 elderly people who took hypertension medication, sampling with total sampling, that is, the entire population is sampled and fulfills the inclusion criteria. Instruments in primary data collection with using a questionnaire consisting of demographic data of respondents and questions about the knowledge and attitudes of the elderly about adherence to taking hypertension medication. Data analysis is univariate analysis to determine distribution

the frequency of each variable while bivariate analysis to determine the relationship or correlation between the independent and dependent variables using SPSS version 22 software and the statistical test used is the chi-square test, one of the statistical tests to determine the relationship between variables and categorical data types.

### 3 Results

#### 3.1 Characteristics of Respondents

The distribution of respondent characteristics can be seen in Table 1, as follows:

**Table 1.**

Characteristic of Responden	n	%
Age		
60-69 Years	30	69.8
70-90 Years	13	30.2
Gender		
Male	16	37.2
Female	27	62.8
Education		
primary school	34	79.1
Junior high school	9	20.9
profession		
Fisherman	10	23.3
Farmer	5	11.6
housewife	28	65.1
<b>Total</b>	<b>43</b>	<b>100</b>

Based on Table 1 above, it can be seen that the elderly age category is mostly aged 60-69 years as many as 30 or 69% of respondents. Most of the sexes were women as much as 27 or 62.8%. Most of education has SD education as much as 34 or 79.1%. Most respondents work as housewives (IRT) as many as 28 or 65.1%.

#### 3.2 Univariate Analysis

Univariate analysis to see the distribution of each variable can be seen in Table 2 as follows:

**Table 2.**

Univariate Analysis	n	%
Knowledge		
Poorly	4	9.3
Good	39	90.7
Attitude		
Poorly	5	11.6
Good	38	88.4
Obedience		
Obedient	38	88.4
Not obey	5	11.6
<b>Total</b>	<b>43</b>	<b>100</b>

The data in Table 2 shows that most respondents have good knowledge as much as 39 or 90.7%. Based on the attitude, most of the respondents had a good attitude as much as 38 or 88.4%.

88.4% and the level of compliance of most of the respondents had an obedient attitude as much as 38 or 88.4%.

### 3.3 Bivariate Analysis

- a. The Relationship between Knowledge of the Elderly and Compliance with Hypertension Medication at Poigar Public Health Center can be seen in Table 3 as follows;

**Table 3.**

Knowledge of the elderly	Compliance with hypertension medication				Total	%	P Value
	Not Obey		Obedient				
	n	%	n	%			
Poorly	3	7.0	1	2.3	4	9.3	0.003
Good	2	4.7	37	86.0	39	90.7	
<b>Total</b>	<b>5</b>	<b>11.6</b>	<b>38</b>	<b>88.4</b>	<b>43</b>	<b>100</b>	

The data in Table 3 above shows that of the 4 respondents with insufficient knowledge, 3 or 7% of respondents did not obey in taking hypertension medication while 1 or 2.3% of those who obeyed took hypertension medication. The data also shows that of the 39 respondents with good knowledge, 2 or 4.7% of respondents who are not obedient to take hypertension medication while those who are obedient in taking medication are 37 or 86% of respondents. Judging from the significance value (probability) of 0.003 less than  $\alpha$  0.05 ( $0.003 < \alpha$  0.05), then  $H_a$  is accepted or there is a relationship between knowledge and elderly compliance in taking hypertension medication at Poigar Public Health Center.

- b. The Relationship between Elderly Attitudes and Compliance with Hypertension Medication at Poigar Public Health Center can be seen in Table 4 as follows:

**Table 4.**

Attitude of the Elderly	Compliance with hypertension medication				Total	%	P Value
	Tidak Patuh		Patuh				
	n	%	n	%			
Poorly	4	9.3	1	2.3	5	11.6	0.000
Good	1	2.3	37	86	38	88.4	
<b>Total</b>	<b>5</b>	<b>11.6</b>	<b>38</b>	<b>88.4</b>	<b>43</b>	<b>100</b>	

The data in Table 4 above shows that out of 5 respondents with insufficient attitudes there were 4 or 9.3 respondents who were not obedient in taking hypertension medication while those who were obedient were 1 person. The data also shows that of the 38 respondents with a good attitude as much as 1 or 2.3% of respondents who are not obedient in taking hypertension medication while those who are obedient in taking hypertension medication are 37 or 86%. while those who obeyed in taking medicine were 37 or 86% of respondents. Judging from the significance value (probability) of 0.000 less than  $\alpha$  0.05 ( $0.000 < \alpha$  0.05), then  $H_a$  is accepted or there is a relationship between attitude and

adherence to the elderly in taking hypertension medication at Poigar Public Health Center.

## **4 DISCUSSION**

### **4.1 The Correlation Between Elderly Knowledge and Compliance with Hypertension Medication at Poigar Public Health Center.**

Based on the bivariate analysis using the Chi Square statistical test, the value of  $\rho = 0.003$  was obtained. The value of  $P < \alpha 0.05$  indicates that there is a relationship between knowledge of the elderly and adherence to taking medication at Poigar Public Health Center. This means that the better the knowledge of the elderly about hypertension, the more obedient the elderly will be in taking hypertension medication. This is supported by univariate data analysis showing that most respondents have a good knowledge category, in this case the elderly understand and understand about hypertension, its causes, symptoms, complications and prevention of hypertension. Although most of the elderly have low education, namely primary school education, knowledge of the elderly about health is not only obtained from formal education but health information can also be obtained from family, health workers, neighbors. Education is the guidance that someone gives to others in order to understand hypertension and management or treatment of hypertension. It cannot be denied that the higher a person's education, the easier it is to receive information and in the end the knowledge he / she has will increase, with more information received, the more knowledge about adherence to taking hypertension medication [6], defines knowledge as the result of knowing and occurs through one's five senses (sensing) towards a certain object, namely through the senses of sight, hearing, smell, taste and touch. In this study, it was also found that there were still 2 people with good knowledge but disobedience, this could be due to the low or lack of information that the elderly got. In addition, treatment adherence to hypertension sufferers can be influenced by age where in old age there is a decrease in cognitive function so that it affects the ability of the elderly. in remembering so that it does not adhere to hypertension treatment. [1], explained that in this case, a process called the aging process will occur. The aging process is a life cycle characterized by the stages of decreasing various functions of the body's organs, which is marked by the increasing vulnerability of the body to various diseases that can cause death, for example in the cardiovascular system and blood vessels, respiratory, digestive, endocrine and so on. The results of this study are in line with research conducted by [5] at the Drupadi Elderly Posyandu towards 70 elderly people with hypertension, concluding that there is a significant relationship between the level of adherence of the elderly about hypertension with adherence in taking medication, the higher the level of one's adherence to the disease. hypertension, the higher the level of compliance in taking medication. Likewise, research conducted by Rachmayanti at Posyandu Melati, Ampel Village, Surabaya City on 50 elderly people shows that there is a relationship between knowledge and blood pressure control measures in the elderly. Knowledge of hypertension sufferers will be closely related to adherence to treatment because the higher the knowledge, the desire to comply with treatment will also increase.

### **4.2 The Correlation Between Elderly Attitudes and Compliance with Hypertension Medication at Poigar Public Health Center.**

Based on the bivariate analysis using the Chi Square statistical test, the value of  $\rho = 0,000$  was obtained. The value of  $P < \alpha 0.05$  indicates that there is a relationship between the attitude of the elderly and adherence to taking medication at the Poigar Health Center. This means that the better the attitude of the elderly, the more obedient in the treatment of hypertension. Attitude is a response based on the assessment or tendency of the elderly to act to comply with treatment.

The good attitude of the elderly can be seen in filling out the questionnaire that most respondents agree to have their blood pressure checked at the health center, especially if they feel dizzy, have blurred vision, have heavy necks, reduce ready-to-eat food such as canned food or salted food, get more rest to reduce the burden on thoughts can cause blood pressure to rise. Although there are still respondents with an attitude that is not obedient to treatment, this can be caused by busyness or activity. The respondent's busyness can be a trigger in skipping the medication schedule so that the target of treatment is not achieved, in this case there are respondents who work as fishermen so they forget to take medicine or don't take medication at all. The results of this study are supported by research [7] concluded that there is a relationship between the level of adherence with a job on hypertensive patients at the first level health facilities in Bandung City. states that the busyness or activity of an individual is a variable that can be a trigger in skipping the medication schedule so that the treatment target is not achieved. In this study there was also 1 respondent with a lack of attitude but obedience to the treatment of hypertension because of the desire of the respondent to recover, so that any information provided by health workers was acceptable so that the respondent would comply with hypertension treatment. The results of this study are in line with research conducted by [2], in the upstream village of Pancur Batu District towards 108 respondents, showing a significant influence between attitudes towards hypertension disease. In accordance with the theory put forward by Newcomb in [8] that attitude is a person's assessment of stimuli. A person's attitude will affect health behavior. If an individual has a good attitude towards a stimulus or health object, he will have an attitude that shows or shows, accepts, recognizes, approves and implements the norms that apply where the individual is located. Conversely, if he has a bad attitude towards a stimulus or health object, then the individual will have an attitude that shows or shows rejection or becomes vulnerable to disagreeing with the prevailing norms where the individual is, supported by Green's theory in [9] which states that attitude is part of the predisposing factors that influence a person's behavior.

## **5 Conclusions and Suggestions**

### **5.1 Conclusion**

Based on the results of research and discussion of the relationship between knowledge and attitudes of the elderly with adherence to taking medication at the Poigar Public Health Center which was carried out from May to July 2019, conclusions can be drawn:

- a. Knowledge of the elderly about adherence to taking hypertension medication at Poigar Public Health Center is in the good category as many as 39 (90.7%).
- b. The attitude of the elderly about adherence to taking hypertension medication at Poigar Public Health Center is in the good category 38 (88.4%).
- c. Elderly compliance in taking hypertension medication at Poigar Public Health Center is in the good category 38 (88.4%).
- d. There is a correlation between knowledge of the elderly and adherence to taking hypertension medication at Poigar Public Health Center ( $p = 0.003 < A 0.05$ )
- e. There is a correlation between the attitude of the elderly and adherence to taking hypertension medication at Poigar Public Health Center ( $p = 0.000 < A 0.05$ )

### **5.2 Suggestion**

- a. For the elderly  
It is hoped that the elderly will be more proactive with various counseling conducted by health workers, especially those with less knowledge and attitudes and not only limited to

- hypertension but other degenerative diseases. The elderly must routinely have their blood pressure checked at the nearest health facility.
- b. For community health centers  
It is hoped that health workers will make a health education program, especially to conduct intensive counseling about the dangers of hypertension and how to prevent it, not only for the elderly but generally for the community.
  - c. for researchers  
Other authors can conduct further research by looking at factors regarding compliance with hypertension treatment such as family support, elderly access to puskesmas, economic level, and other characteristics of the elderly.

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