# **Original Research Article**

# ANALYSIS OF FACTORS INFLUENCING COMMUNITY-BASED HYPERTENSION CONTROL EFFORTS

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#### **ABSTRACT**

Introduction. Hypertension is still a big challenge in Indonesia. Hypertension is a condition that is often found in health services. The urgency of this research is the large number of hypertension patients at the Ngoresan Health Center, Surakarta and has increased almost every year. The objective problem in this study is that the number of patients with hypertension increases from year to year, so research is needed on the relationship of knowledge, attitudes and family support with efforts to control hypertension. The importance of this research is as an effort to control hypertension which continues to increase from year to year by means of a questionnaire interviews and distribution of brochures/pamphlets with the aim of approaching the community. The purpose of this study was to analyze the factors that influence efforts to control hypertension in patients at the Ngoresan Health Center, Surakarta. Method. The stages of achievement in this study are for the approach used in this study, namely cross sectional. The sample in this study amounted to 86 respondents. Sampling technique with accidental sampling method based on inclusion and exclusion criteria. The statistical test used is Chi-Square with ( $\alpha$ =0.05). **Result and** Analysis. The results of this study indicate that there is a relationship between knowledge and efforts to control hypertension in the elderly with a p-value = 0.003 ( $\alpha$ =0.05), there is a relationship between attitudes and efforts to control hypertension in the elderly with a p-value = 0.011 ( $\alpha$ =0.05) and there is a relationship between family support and efforts to control hypertension in the elderly with a p-value = 0.034 ( $\alpha$ =0.05). **Discussion.** There is a relationship between knowledge, attitudes and family support with efforts to control hypertension.

Keywords: Respondent Characteristics, Knowledge, Attitudes, Support, Hypertension Control

#### INTRODUCTION

The background of this research is that non-communicable diseases (PTM) are the main cause of death globally. One of the Non-Communicable Diseases (PTM) which is the most serious health problem today is hypertension (Ministry of Health, 2019). According to the results of Basic Health Research (Riskesdas) (Ministry of Health, 2021) the prevalence rate of hypertension in people aged > 18 years in Indonesia is 34.1%. The prevalence is obtained by measuring blood pressure, namely when blood pressure is > 140/90 mmHg. This

prevalence rate is higher than in 2019, which was 25.8%. Central Java Province Health Profile 2022 (Central Java Provincial Health Office, 2021) records the prevalence of hypertension in Central Java in 2022 of 41.6% while the 2021 Riskesdas results (Ministry of Health, 2021) is 39.6%, an increase compared to the 2019 Riskesdas results namely 29.4% (Ministry of Health, 2019).

The city of Surakarta is included in the Province of Central Java with a prevalence of hypertension of 19.2% (Surakarta City Health Office, 2021). Based on data from the Surakarta City Health Office for 2022

(Dinas Kesehatan Kota Surakarta, 2021) showed that the highest prevalence of hypertension in Surakarta City occurred in the Sibela Health Center (10.6%), Purwodiningratan Health Center (6.7%) and Ngoresan Health Center (5.8%). Among these puskesmas, the Ngoresan Health Center experienced an increase in cases of hypertension in 2019 as many as 3115, in 2020 as many as 2133, in 2021 as many as 318, in 2022 as many as 123 and in 2023 until now there are as many as 638.

Patients with hypertension at the Ngoresan Health Center in 2023 (up to June 27 2023) consist of 5 age groups, namely the 20-44 year age group of 96 sufferers, the 45-54 year age group of 254 sufferers, 95 sufferers of 55-59 years, the age group of 60-69 years were 120 sufferers and aged > 70 years were 63 sufferers (Ngoresan Health Center, 2023). The age group that experienced the highest hypertension was in the 45-54 year age group which was included in the elderly category (elderly). An initial study conducted on 15 elderly people with hypertension at the Ngoresan Health Center found that 80% of the elderly had insufficient knowledge about the symptoms, meaning, causes and complications of hypertension, 60% of the elderly had attitudes that tended to be negative towards hypertension control, 53% of the elderly lacked get support from family, and 73% of the elderly have poor behavior in controlling hypertension.

The behavior of controlling hypertension can be seen using individual behavior theory according to the Surakarta City Health Office (2021) which is influenced by 3 main factors, namely predisposing factors including age, gender, education, knowledge, and attitudes. Enabling factors include distance affordability and availability of medicines.

Reinforcing factors include family support and health workers. This is supported by research (Maharani et al, 2017; Anggreani, 2019; Delfriana et al, 2019; Sari et al, 2016; Sartik et al, 2017 and Artiyaningrum, 2016) which states that there is a significant relationship between knowledge about hypertension and control blood pressure in the elderly and research (Daeli, 2017; Maulidina et al, 2019; Jehani et al, 2022; Tumanduk et al, 2019; Saraswati el at, 2019: Septianingsih, 2018 and Kusumayanti el al, 2021) which states that is a relationship significant relationship between the attitudes of hypertensive patients and efforts to control hypertension and research (Imran, 2017; Arisandi, 2020; Lisiswanti et al, 2016; Sunarti and Patimah, 2019; Naryati and Sartika, 2021; Masyudi, 2018; Oktaviani et al, 2022; Irianti et al. al, 2021 and Rahmadhani, 2021) which states that there is a relationship between family support and adherence to hypertension control in the elderly. Based on the description of the problem above, researchers are interested in conducting research on "Analysis of Factors Influencing Efforts to Control Hypertension in Patients at the Ngoresan Health Center, Surakarta".

The formulation of the problem to be studied is what are the factors that influence efforts to control hypertension? The general objective of this study was to analyze the factors that influence efforts to control hypertension in patients at the Ngoresan Health Center, Surakarta. The specific objectives of this study were to determine the frequency distribution of respondents' characteristics, to determine the relationship between knowledge and efforts to control hypertension, to determine the relationship between attitudes and efforts to control hypertension and to determine the

relationship between family support and efforts to control hypertension.

## **METHOD AND ANALYSIS**

The first stage of this research is the stage of reviewing the results of previous researchers' research (Arini, 2020) which is an initial research as an overview or comparison for the studies of subsequent researchers. For the second stage of this study, carrying out observations and preliminary studies at the research location (Public Health Center in Ngoresan, Surakarta), from this second stage the researchers obtained data on the number of hypertensive patients for the last five years from 2019 to June 2023.

To determine the population, the total number of hypertensive patients in 2023 (January-June) totaled 638, then using the Slovin formula with a percentage of 10% obtained a sample of 86. The third research stage was conducting research (quantitative descriptive). In the third research phase, the researchers collected primary data by conducting interviews and questionnaires to 86 hypertensive patients with a crosssectional design using accidental sampling. The interviews and questionnaires that will be carried out also aim to approach patients through small outreach and also provide leaflets/pamphlets about hypertension. The fourth stage of the research is the correlative test. In this third stage, the research data were analyzed univariately in the form of a frequency distribution table. The final stage (these five studies are bivariate tests using the chi-square test at a significance level of 0.05. For the discussion stage of research results, researchers will use comparisons with the results of previous research/preliminary research (Arini, 2020)

and also by comparing with the results of other studies.

This research was developed using descriptive quantitative research with a correlational descriptive approach. The research design used cross sectional. The population in this study hypertensive patients aged 45-54 years who were recorded in the medical records of the Ngoresan Health Center, Surakarta from January to June 2023, namely 638 sufferers. The sample in this study amounted to 86 respondents by accidental sampling technique. Primary data collection using a questionnaire with the interview method. The interviews and questionnaires that will be carried out also aim to approach patients through small outreach and also provide leaflets/pamphlets about hypertension. The research data were analyzed univariately in the form of frequency distribution tables and bivariately using the chi-square test at a significance level of 0.05.

# **RESULTS**

## 1. Characteristics of Respondents

Table 1. Frequency Distribution of Respondent Characteristics in the Work Area of the Ngoresan Health Center in 2023

No	Variable	f	%			
<b>a.</b> <i>A</i>						
1.	45 year	11	12,79			
<u>2.</u> 3.	46 year	8	9,30			
3.	47 year	8	9,30			
4. 5. 6.	48 year	7	8,14			
5.	49 year	8	9,30			
6.	50 year	9	10,47			
7.	51 year	5	5,81			
8.	52 year	11	12,79			
9.	53 year	11	12,79			
10.	54 year	8	9,30			
,	Total	86	100			
b. Gender						
1.	Man	33	38,37			
2.	Woman	53	61,63			
,	Total	86	100			
			•			

c. Level of Education						
1.	No school	2	2,33			
2.	Elementary school	24	27,91			
3.	Junior High School	26	30,23			
4.	Senior High School	30	34,88			
5.	College	4	4,65			
	Total	86	100			

Information: Research Data for 2023 Processed

Based on table 1 it can be seen that the ages of the respondents were mostly 45, 52 and 53 and the smallest age was 51 years. Most of the respondents were female and the last level of education of the respondents was dominated by the last level of education, namely SMA.

## 2. Research Variable Data

Table 2. Frequency Distribution of Research Variable Data in the Working Area of the Ngoresan Health Center in 2023

	meanin Ce	IIICI I	11 2025					
No	Variable	f	%					
a. I	Knowledge							
1.	Not enough	25	29,07	-				
2.	Good	61	70,93					
	<b>Fotal</b>	6	100					
b. Attitude								
1.	Negative	32	37,21					
2.	Positive	54	62,79					
-	<b>Fotal</b>	86	100					
c.	Family Suppor	t						
1.	Not enough	37	43,02					
2.	Good	49	56,98					
-	<b>Fotal</b>	86	100					
d. Hypertension Control Efforts								
1.	Not enough	31	36,05					
2.	Good	55	63,95					
r	<b>Fotal</b>	86	100					

Information: Research Data for 2023 Processed

Respondents who had a good level of knowledge related to hypertension control were more than respondents who had less knowledge and respondents who had positive attitudes related to hypertension control were more compared to respondents who had negative attitudes and respondents who had good family support regarding

hypertension control were more compared to respondents who have less family support.

# 3. Bivariate Analysis

Table 3. Relationship between knowledge, attitude and family support with efforts to control hypertension in the elderly

Variable	Hypertension Control Efforts Not Good			Total		p- valu e	OR	CI (95%)		
	Not enough		ď	boo			-			
	f	%	f	%	f	%	•		Lower	Upp er
Knowledge	2									
Not enough	1	40	1 5	60	25	29,07	0,00 3	4,2 1	1,579	11,2
Good	3 0	49,1 8	3 1	50, 82	61	70,93				71
Total	4	48,1 9	4 6	53. 49	86	100				
Attitude										
Negative	1 2	37,5 0	2	62, 50	32	37,21	0,01 1	3,2 3	1,286	8,15
Positive	2	37 <b>.</b> 0 4	3 4	62, 96	54	62,79				2
Total	3 2	37,2 1	5 4	62, 79	86	100				
Family Sup	pport									
Not enough	1 6	43,2 4	2 1	56. 77	37	43,02	0,03 4	2,6 2	1,062	6,48
Good	2 2	44,8 9	2 7	55, 10	49	56,98	-			1
Total	3 8	44,1 9	4 8	55. 81	86	100	-			

Information: Research Data for 2023 Processed

The results of the analysis show that there is a relationship between knowledge and efforts to control hypertension in the elderly with a p-value = 0.003 ( $<\alpha$ =0.05). The OR results obtained show that respondents with less knowledge are 4.219 times more likely to make efforts to control hypertension that are not good compared to respondents with good knowledge.

The results of the analysis show that there is a relationship between attitudes and efforts to control hypertension in the elderly with a p-value = 0.011 ( $<\alpha$ =0.05). The OR results obtained showed that respondents with a negative attitude had a 3.238 times greater risk of making less efforts to control hypertension than respondents with a positive attitude.

The results of the analysis show that there is a relationship between family

support and efforts to control hypertension in the elderly with a p-value = 0.034 ( $<\alpha$ =0.05). The OR results obtained show that respondents with less family support are 2.623 times more likely to make less efforts to control hypertension than respondents with good family support.

#### DISCUSSION

1. The Relationship between Knowledge and Hypertension Control Efforts in the Elderly

The results of the analysis show that there is a relationship between knowledge and efforts to control hypertension in the elderly with a p-value = 0.003 ( $<\alpha$ =0.05). The OR results obtained show that respondents with less knowledge are 4.219 times more likely to make efforts to control hypertension that are not good compared to respondents with good knowledge.

will Respondents' knowledge influence the decisions taken regarding the efforts to control hypertension. Respondents who have good knowledge and actions occur because respondents already have good knowledge regarding hypertension so that it can be a means to assist respondents in controlling hypertension. The more the respondent understands about his disease, the more he understands the actions that must be maintained or changed. Lack knowledge about hypertension can occur due to lack of information obtained by respondents, seen from the majority of respondents' last education level, namely SD (Elementary School) where the higher the respondent's education, the easier it will be to receive information and the more knowledge he has.

According to Notoatmodjo (2010), knowledge is an important aspect in the formation of individual behavior or actions. Respondents' high knowledge of hypertension control will influence respondents to take good actions. Actions based on knowledge will be lasting and vice versa if an action is not based on knowledge then it will be temporary or not durable (Notoatmodjo, 2010).

The results of this study support the theory used, where the respondent's knowledge is an important aspect in determining hypertension control measures. Knowledge related to efforts to control hypertension can be seen from the results of the study, respondents did not know the risk factors for hypertension and habits that can cause hypertension and check blood regularly pressure SO that many respondents did not make efforts to control hypertension properly. This lack of knowledge can make respondents not carry out a healthy lifestyle and routine blood pressure checks. This can trigger an increase in blood pressure to cause complications.

This research is in line with research conducted by Anggreani and Nasution (2019) which shows that there is a significant relationship between knowledge and hypertension control in the elderly with a p-value of 0.009 < 0.05. This is also in line with research conducted by Daeli (2017), which states that there is a relationship between knowledge and efforts to control hypertension with a p-value of 0.001 < 0.05.

2. Relationship between Attitude and Hypertension Control Efforts in the Elderly

The results of the analysis show that there is a relationship between attitudes and efforts to control hypertension in the elderly with a p-value = 0.011 ( $<\alpha$ =0.05). The OR results obtained showed that respondents with a negative attitude had a 3.238 times greater risk of making less efforts to control hypertension than respondents with a positive attitude.

Notoatmodjo (2010) stated that attitude is a closed response from a person to a certain stimulus or object. Indirect attitude can be seen, it can only be interpreted through closed behavior. more information More and influence and increase knowledge so as to raise awareness which in the end will behave accordance in with knowledge gained from learning and experience (Masyudi, 2018).

Attitudes arise from the knowledge gained by respondents. The more information obtained about hypertension can raise the awareness of respondents so they want to be positive in addressing the condition of their disease. Respondents with a negative attitude tend to have efforts to control hypertension that are not good and do not want to change their behavior, this can occur because the knowledge obtained is still lacking and they do not understand the importance of information about hypertension, namely as a provision in changing their behavior because they realize that there is a need for prevention and control measures. hypertension so that blood pressure can controlled and minimize occurrence of complications.

The results of this study support the theory used, where respondents' attitudes

can determine hypertension control measures. Attitudes related to efforts to control hypertension can be seen from the results of research that many respondents are still closed and lack awareness about checking blood pressure, taking antihypertensive drugs and managing stress so that many respondents do not make efforts to control hypertension properly. This negative attitude can make respondents not want to change their attitude to do routine blood pressure checks and take medication according to doctor's recommendations and manage stress.

This research is in line with research conducted by Septianingsih (2018) which shows that a p-value of 0.000 <0.05 has a significant relationship between respondents' attitudes and efforts to control hypertension. Another study conducted by Anggreani and Nasution (2019) also stated that there was a relationship between attitudes and blood pressure control in the elderly with a p-value of 0.004 <0.05.

3. Relationship between family support and hypertension control efforts in the elderly

The results of the analysis show that there is a relationship between family support and efforts to control hypertension in the elderly with a p-value = 0.034 ( $<\alpha$ =0.05). The OR results obtained show that respondents with less family support are 2.623 times more likely to make less efforts to control hypertension than respondents with good family support.

According to the Indonesian Ministry of Health (2016) there are several roles of family members towards the elderly including giving affection and

providing time and attention, being patient and wise towards the behavior of the elderly. As a family, it gives the elderly the opportunity to live together without seeing them as a burden, reminds and accompanies the elderly in routine health checks at health services, provides healthy food with balanced nutritional principles, helps meet their needs such as recreation and finances, and is frequently invited to communicate with parents and family.

Family support is an important factor in process of controlling hypertension to prevent complications. Family support related to efforts to control hypertension can be seen from the results of research that many respondents did not receive assistance when carrying out health checks at health services and were not invited to exercise regularly. This can trigger the action of not checking blood pressure and regular exercise because they do not get enough attention from their families. This poor family support can make the respondent not routinely check blood pressure at health services so that this action causes the respondent not to know his health condition and does not take prevention which can result and control uncontrolled blood pressure and complications.

Family support is very helpful in increasing enthusiasm for life so that respondents have a high commitment in undergoing hypertension treatment and with support and invitation from family, respondents are able to do regular exercise as a form of hypertension control efforts. Providing support from this family is a motivation for respondents in controlling their illness and can help in maintaining their health.

This research is in line with research conducted by Imran (2017) which states that there is a relationship between family support and adherence to hypertension control in the elderly with a p-value of 0.004 <0.05. This is also in line with research conducted by Saraswati, Abdurrahmat and Novianti (2018) which stated that a p-value of 0.012 <0.05 means that there is a relationship between family social support and hypertension control.

# **CONCLUSION**

- 1. There is a relationship between knowledge and efforts to control hypertension in the elderly with a p-value = 0.003 ( $<\alpha$ =0.05).
- 2. There is a relationship between attitudes and efforts to control hypertension in the elderly with a p-value = 0.011 ( $<\alpha$ =0.05).
- 3. There is a relationship between family support and efforts to control hypertension in the elderly with a p-value = 0.034 ( $<\alpha$ =0.05).
- 4. There is a relationship between knowledge, attitudes and family support with efforts to control hypertension in the elderly.

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