

## Correlation between Family Support and Obedience of Blood Pressure Control in Patients with Primary Hypertension

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### Abstract:

Hypertension is a major health problem for non-communicable diseases. Family support is the best preventive strategy to help family members maintain their health. This study aimed to determine the correlation between family support and obedience to blood pressure control in patients with primary hypertension. This research method is a quantitative descriptive correlation design with a cross-sectional approach. The sample was 71 patients with primary hypertension using the purposive sampling technique. The results showed that most patients with primary hypertension were in the good category about 47 respondents (66.20%) and compliance with blood pressure control in patients with primary hypertension was in the high category about 41 respondents (57.75%). The analysis using the rank Spearman test showed that the value of  $p = 0.000$  ( $p < 0.05$ ) indicates a correlation between family support and compliance with blood pressure control.  $r$  value is 0,570 (moderate strength) and positive correlation direction means that the better the family support, the higher blood pressure control compliance. Family support has a significant influence on family members who suffer from hypertension, the family functions to carry out nursing care practices to care for sick family members, including obediently controlling blood pressure. Based on the research results, it is hoped that the Community Health Center can provide ongoing education about managing hypertensive patients, especially family involvement in patient care.

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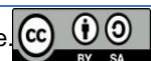
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## INTRODUCTION

Hypertension is a major problem in public health, which is generally experienced by the elderly. This disease does not show symptoms but once the disease is suffered, the patient's blood pressure must be monitored routinely. This is done to anticipate rising blood pressure and will cause ongoing symptoms such as coronary heart disease, stroke (Yogiantoro, 2016). Based on data from the World Health Organization (WHO) it was reported that in 2015 around 1.13 billion people in the world have hypertension, which means that 1 out of 3 people in the world is diagnosed with hypertension. The number of hypertension continues to increase every year, it is estimated that by 2025 there will be 1.5 billion people affected by hypertension and every year 9.4 million people will die from hypertension and its complications (WHO, 2020). Based on the 2018 Riskesdas, the prevalence based on the results of measurements in the population aged 18 years was 34.1%, the highest was in South Kalimantan at 44.1%, and the lowest was in Papua at 22.2%, while the Province of Bali was 29.9% (Badan Penelitian Dan Pengembangan Kesehatan Departemen Kesehatan Republik Indonesia, 2018). Based on data from the Bali Provincial Health

Office, there were 728,192 cases of hypertension reported in Bali in 2018, with the most cases were in Gianyar Regency, namely 284,744 cases (39.1%).

Primary hypertension cases are the third most common after acute respiratory infections and pharyngitis at UPTD Puskesmas Ubud I. Based on medical record at in 2022, there were 657 cases of primary hypertension visits in the last 3 months and 110 individual cases in July. Classification of hypertension based on the cause is categorized into primary hypertension (essential hypertension) and secondary hypertension (non-essential hypertension). Primary hypertension is hypertension of unknown cause (idiopathic). However, it is associated with a combination of lifestyle factors such as sedentary lifestyle and eating patterns, occurring in approximately 90% of hypertension sufferers (Kemenkes, 2014).

Hypertension is a chronic disease that needs regular treatment. Regularly controlling blood pressure can prevent further consequences or complications in people with hypertension. The impact if hypertension lasts for a long time (persistent) can cause damage to the kidneys (kidney failure), heart (coronary heart disease) and brain (cause stroke) if not detected early and receive adequate treatment, and hypertension becomes uncontrolled, and the number continues to increase. According to Nugraha (2020) the impact of hypertension which does not receive proper treatment can lead to complications of stroke, coronary heart disease, diabetes, kidney failure and blindness. Stroke by 51% and coronary heart disease by 45% which is the highest cause of death. Efforts made by the government for the treatment of hypertension through the revitalization of Community Health Centers for the control of PTM (Non-Communicable Diseases) through increasing professional and competent health worker resources in efforts to control PTM, efforts to prevent and treat hypertension begin with increasing public awareness and changing lifestyles towards a more positive Healthy. Controlling blood pressure can be done through eating arrangements, smoking cessation, weight management, regular and appropriate activity and exercise, stress management and adherence to taking medication as recommended by a doctor. Several efforts have been made by health workers, namely counseling, forming prolanis groups (chronic disease management programs), consultations, and assistance by health cadres, but these efforts have not had an optimal impact (Andala, 2022).

Compliance with blood pressure control is a very important factor in the successful treatment of hypertensive patients. Compliance and good understanding in carrying out therapy affect blood pressure and gradually to prevent complications. Controlled blood pressure means a condition where a person's blood pressure can be controlled within normal limits with medication and lifestyle changes (Dramawan, 2017). Control of hypertension in patients can be improved or can work well with family support to supervise patient members in blood pressure control programs in hypertensive patients (Nugraha, 2020). Families can provide support to sufferers of hypertension, not only in the form of accompanying family members who are sick while seeking treatment at health facilities, but also providing the love, care and assistance needed by patients (Andala, 2022). The practical function of the family is aimed at protecting the family and providing psychosocial support. Fulfillment of socioemotional needs, self-image and a sense of belonging is achieved through interactions within the family (Kurniyawan et al., 2023). Family support is very important for families undergoing treatment because it can provide support such as attention, empathy, support, input and advice, as well as knowledge (Dewi et al., 2023).

Family support is a form of service carried out by the family, both in the form of emotional support (attention and affection), appreciation support (appreciating and providing positive feedback), information support (advice, advice, and information) and instrumental support (help labor, money, and time). The existence of family support will provide strength and create an atmosphere of belonging to each other in these family members in meeting their needs, this is the

best preventive strategy to increase adequate family support in helping members maintain their health (Handayani, 2012). The affective function of the family aims to protect and provide psychosocial support for family members (Kurniyawan et al., 2022). Family support has been shown to have a strong relationship with the compliance of hypertensive patients taking medication and making other efforts to control blood pressure, where the better the support given by the family to hypertension sufferers, the better the patient compliance. Furthermore, the better the patient's compliance in efforts to control blood pressure, the more controlled the patient's blood pressure will be better (Andala, 2022).

Based on the preliminary study in December 2022 at UPTD Puskesmas Ubud I by conducting interviews with 10 people with primary hypertension, there were 9 people who said they rarely got attention, love, were appreciated, gave positive feedback, gave advice, advised, information and assistance with energy, money and time from his family, while 1 person said he received attention, affection, valued, gave positive feedback, gave advice, advice, information and assistance with energy, money and time from his family. Of these 10 people, 8 people had uncontrolled blood pressure ( $>140/100$  mmHg) and 2 people had controlled blood pressure ( $<140/90$  mmHg). This study aimed to determine the correlation between family support and obedience to blood pressure control in patients with primary hypertension.

## METHOD

This research was conducted in the Working Area of the UPTD Puskesmas Ubud I in January 2023. This research was a quantitative descriptive study, with a cross sectional approach. The population in this study were all primary hypertension sufferers at the UPTD Puskesmas Ubud I, with an average of 110 people a month. The sample in this study were primary hypertension sufferers. The sampling technique used in this study was carried out by means of non-probability sampling, namely purposive sampling, with a total of 71 people. Data collection techniques using family support questionnaires and blood pressure control adherence questionnaires. The data processing process consists of editing, coding, entry, processing, and cleaning. Data analysis was performed with univariate and bivariate analysis. Univariate analysis by looking for the frequency distribution, and bivariate analysis by using Spearman's rank test.

## RESULT

Table 1. Frequency Distribution of Respondents Based on Age, Gender and Education Level

Respondent Characteristics	f	%
Age		
46-55	14	19.72
56-65	20	28.17
>65	37	52.11
Gender		
Male	46	64.79
Female	25	35.21
Level of education		
Elementary school	29	40.84
Junior high school	17	23.95
Senior high school	19	26.76
Diploma	6	8.45
Total	71	100

Based on Table 1, the characteristics of respondents in the age category the most respondent was at the age >65 years as many as 46 people (52.11%) and the gender category the most respondent were male as many as 46 people (64.79%).

Table 2. Family Support in Hypertension Patient

Family Support	f	%
Less	6	8.45
Fair	18	25.35
Good	47	66.20
Total	71	100

Based on Table 2 shows that the family support in hypertension patient as many as 47 people (66.20%) are in good category.

Table 3. Obedience of Blood Pressure Control in Hypertension Patient

Family Support	f	%
Low	11	15.49
Medium	19	26.76
High	41	57.75
Total	71	100

Based on Table 3. shows that the obedience of blood pressure control in hypertension patient as many as 41 people (57.75%) are in high category.

Table 4. Correlation between Family Support with Obedience of Blood Pressure Control in Hypertension Patient

Family Support	Obedience of Blood Presure Control						Total		p-value	r
	Low		Medium		High					
	f	%	f	%	f	%	f	%		
Less	4	5.63	2	2.82	0	0	6	8.45	0.000	0.570
Fair	4	5.63	9	12.78	5	7.05	18	25.35		
Good	3	4.23	8	11.26	36	50.70	47	66.20		
Total	11	15.49	19	26.76	41	57.75	71	100		

Table 4. shows that respondents with good family support have compliance in controlling blood pressure in the high category as many as 47 people (66.20%). Based on the Spearman Correlation Test, the Spearman's rho value was 0.570 and the p-value = 0.001 was less than 0.05, so it can be interpreted that there is a correlation between family support with obedience of blood pressure control in hypertension patients.

## DISCUSSION

The results of the family support study found that most of the family support in patients with primary hypertension was categorized as good by 47 respondents (47%). The research results obtained were supported by Toulasik (2019) as many as 182 people (91%) had family support in the good category and research conducted by Ningrum (2019) obtained data as many as 33 people (55.9%) received family support in the good category. Family support is a form of action taken by the family in the form of emotional support (attention and affection), appreciation support

(appreciating and giving positive feedback), informational support (advice, advice, and information) and instrumental support (energy assistance, money, and time). Family support will provide strength and create an atmosphere of belonging to one another in maintaining the health of family members with hypertension. This is an effective preventive strategy to improve health maintenance in helping members maintain their health (Handayani, 2012). Families provide support to sufferers of hypertension, not only in the form of accompanying family members who are sick while seeking treatment at health facilities, but also providing the love, care and assistance needed by patients (Andala, 2022). Based on the questionnaire used in this study, it shows that all family members care for family members who suffer from hypertension with love. The family provides closeness and warmth, provides attention, and accompanies the family in undergoing hypertension treatment. According to the researchers, the study's results showed that most family support was categorized as good. This was supported by characteristics based on the age of the respondents, who were 52.11% elderly. Family members with the elderly category need special attention from their children and family traditions in Bali are that parents will live with their children so that a child will always give love in caring for their parents.

The results of the blood pressure control compliance study found that most of the blood pressure control compliance in patients with primary hypertension was categorized as high by 41 respondents (57.75%). The research results obtained were in line with research conducted by Dramawan (2017) which examined adherence to blood pressure control in hypertensive patients, from 94 respondents, 51 people (54.25%) had good category compliance and research conducted by Toulasik (2019) revealed that adherence to taking medication in hypertensive patients as many as 111 people (55.5%) with high adherence category. Compliance with blood pressure control is a very important factor in successfully treating hypertensive patients. Compliance and good understanding in carrying out therapy affect blood pressure and gradually to prevent complications. Controlled blood pressure means a condition where a person's blood pressure can be controlled within normal limits with medication and lifestyle changes (Dramawan, 2017). Control of hypertension in patients can be improved or can work well with family support to supervise patient members in blood pressure control programs in hypertensive patients (Nugraha, 2020). Opinion of researchers from research results that show compliance with blood pressure control is mostly categorized as high, this is because it is supported by characteristics based on education which is 26.76% with high school education and 8.45% with diploma or college education so that it supports respondents' understanding of treatment disease and the importance of blood pressure control to control blood pressure and prevent complications.

Family support has a strong relationship with the adherence of hypertension sufferers to taking medication and carrying out other efforts to control blood pressure, where the better the support given by the family to hypertension sufferers, the better the patient compliance. Furthermore, the better the patient's compliance in efforts to control blood pressure, the more controlled the patient's blood pressure will be better (Andala, 2022). This is in accordance with the research results obtained, namely as many as 36 respondents (50.70%) respondents had good family support with high category blood pressure control compliance. Control of hypertension aims to prevent morbidity and mortality due to complications associated with achieving and maintaining blood pressure below 140/90 mmHg. Treatment in hypertension includes medication adherence including special treatment regarding lifestyle such as diet, rest, and exercise as well as drug consumption. In an effort to improve health status by increasing the ability to convey clear information to sufferers about the disease they are suffering from, and the method of treatment, involvement and approach taken.



The results of cross tabulation obtained the most good family support with the highest blood pressure control compliance with the high category, namely as many as 36 people (50.70%) and the Spearman rank test to analyze the relationship of family support with adherence to blood pressure control in patients with primary hypertension, the value obtained  $p = 0.000$ , which means  $H_0$  is rejected and  $H_a$  is accepted, so there is a relationship between family support and adherence to blood pressure control in patients with primary hypertension. The correlation strength value is 0.570 (moderate strength) and the direction of the correlation is positive. This shows that if family support is good, blood pressure control compliance will be higher. Family support has a strong relationship with the adherence of hypertension sufferers to taking medication and carrying out other efforts to control blood pressure, where the better the support given by the family to hypertension sufferers, the better the patient compliance. Furthermore, the better the patient's compliance in efforts to control blood pressure, the more controlled the patient's blood pressure will be (Andala, 2022).

Control of hypertension aims to prevent morbidity and mortality due to complications associated with achieving and maintaining blood pressure below 140/90 mmHg. Treatment in hypertension includes medication adherence including special treatment regarding lifestyle such as diet, rest, and exercise as well as drug consumption. In an effort to improve health status by increasing the ability to convey clear information to sufferers about the disease they are suffering from and the method of treatment, involvement, and approach taken. According to Maharani (2017), the better the family support, the better the efforts of hypertension sufferers in controlling blood pressure so that the hypertension they suffer from does not get worse. Family support has a major influence on family members who suffer from hypertension, the family functions to carry out nursing care practices, namely preventing health problems or caring for sick family members, in hypertensive patients family support can be realized from controlling the patient's blood pressure.

The results of this study are in line with research conducted by Nita (2018) that there is a relationship between family support and dietary compliance in hypertensive patients. According to researchers, family support is good because patients with hypertension require a long period of treatment so that the family has an important role in providing enthusiasm, encouragement, and support in undergoing the treatment process. With good family support, patient blood pressure control adherence will also be higher.

## CONCLUSION

Based on the results of the research and discussion conducted, it was concluded that family support for patients with primary hypertension was obtained by 6 people (8.45%) in the less category, 18 people (25.35%) in the sufficient category and 47 people (66, 20%) with good category. Blood pressure control compliance in patients with primary hypertension, as many as 11 (15.49%) in the low category, as many as 19 people (26.76%) in the medium category and as many as 41 people (57.75%) in the high category. There is a relationship between family support and adherence to blood pressure control in patients with primary hypertension ( $p=0.000$ ). The strength value of the correlation is 0.570 (moderate strength) and the direction of the correlation is positive, which means that the better the support from the family, the better the control of blood pressure in hypertensive patients.

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### CONFLICT OF INTEREST

The author declares that there is no conflict of interest regarding the publication of this paper.

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