Factors Related To Hypertension Control Behavior In Hypertension Patients

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Abstract

The increasing prevalence of hypertension every year is a public health problem today, so it is necessary to be active in controlling hypertension to reduce the risk of complications. Therefore, this study aims to determine the factors associated with hypertension control behavior in hypertensive patients in Tegal Parang Village, South Jakarta in 2022.This research is a quantitative research using a cross sectional study design. The population of this study was 1,180 hypertensive patients. The sample in this study was 178 respondents using the Cluster Sampling technique. The analysis used in this research is univariate and bivariate analysis using Chi Square test. The study found that from 178 hypertensive patients, 121 (68%) hypertensive patients did not do routine control, while 57 (32%) hypertensive patients did routine control. Based on statistical tests, it was concluded that there was a relationship between age (*P-value* 0.000), gender (*P-value* 1.000), education (*P-value* 0.041), time of suffering from hypertension (*P-value* 0.005), knowledge (*P-value* 0.033), attitude (*P-value* 0.435), access to health services. (*P-value 0*.601), family support (*P-value* 0.000) and support from health workers (*P-value* 0.000) with hypertension control behavior.That there is a significant relationship between age, education, time of suffering from hypertension, knowledge, family support and support from health workers with hypertension control behavior.

Keywords: Degenerative; Hypertension; Non-Communicable Diseases

Background

Hypertension is one of the non-communicable diseases that is a public health problem today. It can be seen that there are factors that increase the incidence of hypertension including treatment and prevention factors for hypertension and hypertension complications hypertension means abnormally high pressure in the arteries which increases the risk of heart failure, heart attack, kidney damage and even stroke. This happens because the heart works harder to pump blood to meet the body's needs for oxygen and nutrients (Savitri, 2017). In general, hypertensive patients do not give complaints and symptoms so that many do not realize, it is often said to be the silent killer and symptoms such as fatigue, headache, and vertigo.

As of 2019, 22% of the world's population suffers from hypertension, according to statistics from the World Health Organization. In such a situation, only one-fifth of Africans with a prevalence of 27% manage hypertension successfully. Southeast Asia has the third highest population density, at 25% of the global total. One out of every five women globally, has a greater number among the male group who have hypertension. So that public health becomes a threat, because it has the potential to cause

complications such as damage to chronic high blood pressure. Therefore, it is necessary to carry out early detection by checking blood pressure regularly (Dirjen P2P Kemkes RI, 2019).

Many variables can influence a person's adherence to hypertension medication and even their level of exercise. Successive national and international committees have reviewed the evidence and recommended individualized treatment, simplified drug dosing where possible, and advised patients on the importance of hypertension control behavior (Wilson et al., 2015).

Almost all provinces in Indonesia experienced an increase in the prevalence of hypertension by 34.1% in 2018, according to a population size of 18 years old based on Riskesdas data (Kemenkes, 2018). According to Halitopo (2019) stated that most of the respondents did not comply with controlling blood pressure by 58.89%. Most of the respondents had a history of non-routine controls of 70.1% (Yulita et al., 2019).

Based on Maharani & Syafrandi's (2017) about factors related to blood pressure control behavior in hypertension patients at Harapan Raya Health Center Pekanbaru City in 2016, it can be concluded that there is a relationship between knowledge, attitudes, diet, exercise, family support and the role of health workers with behavior of controlling blood pressure in hypertensive patients(Annisa et al.,2015). Knowledge of hypertension patients affects the attitude to obey control, because the more knowledge they have, the greater their desire for control. The success of controlling blood pressure requires knowledge about hypertension in order to take action and good hypertension management(Annisa et al., 2013).Health worker support and family support such as providing emotional support, appreciation support, instrumental support, and informational support that can result in patients following the control provisions set by health workers. In this case, the family needs to take part in an educational program so that the family can meet the patient's needs, so

that the situation does not get worse and avoid complications of high blood pressure (Yeni *et al.* 2016). In 2018 the prevalence of hypertension The highest was in South Jakarta at 10.92% (Kemenkes, 2018).

The report from the Tegal Parang Village Health Center, South Jakarta, shows that the prevalence of hypertension has increased every month. In August – October 2021 there were 565 hypertensive patients and in November – December 2021 there were615 hypertensive patients with characteristics of 36% male and 64% female with mean age 45 years.

The results of the preliminary study found 60% who had low knowledge about hypertension. There are 70% who do not care about the process of controlling hypertension that occurs in themselves. 70% of patients who claimed to have received less support from their families in undergoing control at health service center. There were 50% who stated that health workers did not invite hypertensive patients to come to control blood pressure. Based on previous research (Septradianti, 2020) stated the relationship between the behavior of hypertensive patients and controlled blood pressure.So that research on Hypertension Control Behavior in the control program every month in the Tegal Parang Region is expected to help solve the problem of hypertension. Based on this background, researchers are interested inconducted research with the title "Factors Associated withControl behavior in hypertensive patients in Tegal Parang Village, JakartaSouth in 2022".

Methods

This research is a type of quantitative research, with a cross sectional approach design. Research location This research was conducted in the area of the Puskesmas Tegal. Parang Village, South Jakarta with the address Jl. Mampang Prapatan XI from March to April 2022. The population of this study was 1,180 hypertensive patients. The sample in this study was 178

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respondents with age criteria not at risk: if < 45years and at risk: if > 45 years using the Cluster Sampling technique.

The method of data collection was carried out using primary data in the form of interviews with hypertension patients using a questionnaire. Interviews were conducted by reading out instruments that had been tested for validity and reliability. The instrument used in this research is a questionnairecontains several closed questions that are directly asked to the respondent.The questionnaire includes independent and dependent variable data.The data analysis technique used the Chi Square test, which was used to determine whether there was a relationship between two categorical variables (Hastono, 2015). This study included humans as subjects with an ethic aprroval of UHAMKA number : 03/22.02/01532

Results and Discussion

Based on table 1, it is known that respondents who do not control hypertension are 121 respondents (68%), who have a risky age of 129 respondents (73%) , with female sex as many as 120 respondents (66%), with low education as many as 123 respondents (69%). In table 2 it is known that 118 respondents (66.3%), with a poor level of knowledge were 118 respondents (66%), with a negative attitude of 115 respondents (65%), with access to health services not easy. 143 respondents (80.3%), with low support as many as 124 respondents (70%), with high support as many as 126 respondents (71%).

In table 3 it is known that the related variables are age (*Pvalue* 0.000), gender (*Pvalue* 1.000),education (*Pvalue* 0.041), time of suffering from hypertension (*Pvalue* 0.005), knowledge (*Pvalue* 0.033), attitude (*Pvalue*0.435), access to services. health (*Pvalue*0.601), family support (*Pvalue* 0.000), support from health workers (*Pvalue* 0.000).

Table 1. Characteristics of Respondents

Variable	f (%)
Hypertension Control Behavior	
Control	57 (32%)
No Control	121 (68%)
Age	
No Risk	49 (27%)
At Risk	129 (73%)
Gender	
Man	58 (33%)
Woman	120 (67%)
Education	
Higher education	55 (31%)
Low education	123 (69%)

Table 2. Frequency Distribution of Time Suffering from Hypertension, Knowledge, Attitude, Access to Health Services, Family Support, and Support of Health Workers

Variable	f (%)
Suffering Time	
Not long	60 (33.7%)
Long	118 (66.3%)
Knowledge	
Well	60 (34%)
Not good	118 (66%)
Attitude	
Positive	63 (35%)
Negative	115 (65%)
Access to health Services	
Easy	35 (19.7%)
Not easy	143 (80.3%)
Family support	
High support	54 (30%)
Low support	124 (70%)
Health officer	
High support	52 (29%)
Low support	126 (71%

Table 3. Results of Bivariate Analysis

Variable	Hypertension Control Behavior				Pvalue	PR (95% CI)
	Control		No Control			
	n	%	n	%		
Age						
No Risk : < 45	27	55.1	22	44.9	0.000	2,369 (1,584-3,544)
Risk : > 45	30	23.3	99	76.7		
Gender						
Man	19	32.8	39	67.2	1,000	1.034 (0.658-1.627)
Woman	38	31.7	82	68.3		
Education						
Higher education	24	43.6	31	56.4	0.041	1,626 (1,070-2.472)
Low education	33	26.8	90	73.2		
Time to Suffer from Hypertension						
Not long	28	46.7	32	53.3	0.005	1,899 (1,253-2,879)
Long	29	24.6	89	75.4		
Knowledge						
Well	26	43.3	34	56.7	0.033	1,649 (1.085-2.506)
Not good	31	26.3	87	73.7		
Attitude						
Positive	23	36.5	40	63.5	0.435	1.235 (0.803-1.900)
Negative	34	29.6	81	70.4		
Access to Health Services						
Easy	13	37.1	22	62.9	0.601	1,207 (0.735-1.983)
Not easy	44	30.8	99	69.2		
Family support						
High Support	37	68.5	17	31.5	0.000	4,248 (2,745-6,597)
Low Support	20	16.1	104	83.9		
Health Officer Support						
High Support	29	55.8	23	44.2	0.000	2,510 (1,671-3,769)
Low Support	28	22.2	98	77.8		

Based on the results of research on respondents who are hypertensive patients in Tegal Parang Village, South Jakarta, it shows that 121 respondents (68%) did not control hypertension. On average, respondents do not actively carry out health control, because respondents feel that they are healthier and have no problems. So that respondents tend to be lazy if they have to visit the puskesmas regularly.

Supported by research conducted at the Durian Gantang Public Health Center, HST District, 64.7% of respondents were not actively carrying out hypertension control(Rahmah, 2019). The results of another study conducted at the Pisang Health Center stated that 45.5% of hypertensive patients did not comply with routine control(Emiliana et al., 2021).

From the many results of these studies that there is still a high number of hypertensive patients

who do not carry out routine control. Control behavior is determined by several factors that often interfere with the patient's ability to follow optimal care, including socioeconomic factors, health care systems, disease characteristics, and factors related to patients. Patients need to be given information related to treatment so that it can have a big influence on the patient's mindset and attitude(Mengendai *et.al.* 2017).

Controlling blood pressure to nonhypertensive levels through nonpharmacological and pharmacological treatment reduces the risk of events. However, hypertension control can only be achieved if people with hypertension are identified, diagnosed, and treated. The first step is the diagnosis of hypertension. Once hypertension is diagnosed, effective non-pharmacological and pharmacological approaches need to be applied to lower blood pressure. Finally, healthcare services should be adhered to and titrated to optimize risk reduction with factors related to hypertension awareness, treatment, and control, as well as system-level algorithm components designed to improve control rates (Carey et al., 2018).

Chi Square test showed that there was a relationship between age and hypertension control behavior (*Pvalue* 0.000). This study is in line with that conducted by Darussalam & Warseno (2017) which states that there is a relationship between age and uncontrolled hypertension.This is the developmental process of a person over the age of 60 years who must experience a decrease in the body's ability to carry out activities and is accompanied by a decrease in function (Pharr et al., 2014). It is caused by reduced arterial elasticity, as well as accumulation of collagen and hypertrophy of thin and fragmented smooth muscle cells and fracture of elastin fibers (Holm et al., 2019). With increasing age, structural abnormalities such as endothelial dysfunction occur, thereby increasing the stiffness of the arteries in a person.Increasing age is caused by changes in the structure of large

blood vessels in the form of narrowing of the lumen and a decrease in the elasticity of the vessel walls, thereby increasing blood pressure. Systolic and diastolic blood pressure tends to increase with age (Kuswandi, 2012). The elderly experience the aging process which causes a decrease in various systems with higher disease rates than young adults, this causes the elderly to be no longer productive at work. Elderly should spend more activities at home and social activities in the community (Labata et al., 2019).

Chi Square test showed that there was no relationship between gender and hypertension control behavior (*Pvalue* 1,000). The results of this study are in line with the research conducted by Lailiyah *et al.,* (2021) on hypertension patients at the Dinoyo Public Health Center, Malang City which stated that there was no relationship between gender and increased health behavior in hypertensive patients. Gender relates to the different roles and life behaviors of men and women in society. To maintain health, usually women tend to pay more attention to their health than men (Notoatmodjo, 2018).

The assumption of the researcher on the results of this study is that the male sex often controls compared to the female gender. In terms of maintaining health, women usually pay more attention to their health than men. However, this study shows that compliance with hypertension control in men can occur because of their own motivation or family support. Several respondents also admitted that in carrying out routine check-ups, their families need to be reminded of the importance of family support in the recovery process.

Based on the results of research and existing theories that there is no significant relationship between gender and hypertension control behavior. This is because the prevalence of hypertension in men is less than in women, because most of the respondents in this study were not balanced

between the number of respondents who were male and female.

Chi Square test showed that there was a relationship between education and hypertension control behavior (*Pvalue* 0.041). The results of this study are in line with the research conducted by Budiman *et al.* (2013) showed that there was a significant relationship between education level and patient treatment adherence. Higher education to provide education on medication adherence and blood pressure control requires health services to maximize patient motivation to control their hypertension by staying on treatment, maintaining a healthy lifestyle, taking prescribed medication, and monitoring progress towards goals (Moher et al., 2015). The level of education affects a person's compliance, with good education having good quality with a level of health literacy that can affect control and symptoms, each of which has a good effect on self-care in controlling blood pressure (Surani et al., 2022). The lower the level of education, the more non-adherent the patient to treatment. This is because the low level of education has a significant impact on the acceptance of information. The level of education can also indirectly affect a person's blood pressure because the level of education affects a person's lifestyle. The high risk of developing hypertension in low education is due to the lack of knowledge of patients with low education on difficulties or delays in receiving information provided by health workers so that it has an impact on behavior (Yuliarti, 2012).

Chi Square test showed that there was a relationship between the time of suffering from hypertension and hypertension control behavior(*Pvalue* 0.005). The results of this study are in line with the research conducted by Arifin *et al.* (2016) shows that there is relationshipbetween long suffering from hypertension and compliance in undergoing hypertension treatment. This is probably caused by the causative factor, namely psychological factors that exist in hypertensive patients. Patients diagnosed with old or new hypertension have the same emotions, such as feelings of worry and fear that can causeanxiety. The long process of treating hypertension, which does not go away, also increases anxiety (Soegondo, 2012). However, the results of interviews with respondents, it was found that the reason the respondents did not control was because they felt their condition had improved or recovered and took control if they felt sick again.

Chi Square test showed that there was a relationship between knowledge and behavior of hypertension control (*Pvalue* 0.003). Shows that there is a relationship between knowledge and adherence to hypertension treatment in the elderly (Annisa & Ansar 2013). It has been found that patients who have received education and counselling on hypertension management showed an increasing compliance (Sidhar et. al., 2015). Compliance is affected by anything sourced from within a person, such as knowledge. To give education on condition and treatment for hypertension, knowledge on such topic is necessary (Nieuwlaat et. al., 2016).

Compliance is influenced by everything that comes from within, such as knowledge. Respondents who have high knowledge mean that they can know, understand and understand the importance of the benefits and goals of treating hypertension on a regular basis. The respondent's level of knowledge is not only formal, but also through experience. With this knowledge, respondents are motivated to undergo treatment.

The results of the analysis using the *Chi Square test* showed that there was no relationship between attitudes towards hypertension control behavior (*Pvalue* 0.435). A person's attitude towards something is shaped by knowledge. To reach someone, it is necessary to convey information slowly and repeatedly (Notoatmodjo, 2018).The results of this study are in line with research conducted by (Susriyanti, 2014) stated that there was no relationship between attitude and

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behavior in treating hypertension in the elderly. Attitude is a domain of behavior, where a person's attitude can get high blood pressure. Therefore, the more a person has a positive attitude towards a behavior, the more desirable, enjoyable, and rewarding the behavior will be (Hatefnia et al., 2019). If a person is properly aware of high blood pressure, it can prevent the development of high blood pressure, suggesting that attitude plays a role in determining better behavior, but it does not mean that good attitude is always good behavior. Because attitudes do not yet have behavior or activities, but tendencies.

The researcher's assumption on the results of this study is that the respondents have a positive attitude towards the management of hypertension, but the behavior of controlling hypertension is still low. So the results of this study indicate that respondents who have a positive attitude do not necessarily carry out routine control. The attitude of the respondent can affect their health, so that personal experience becomes the basis of a person's attitude that affects his health. Green stated that health behavior is influenced by several factors, one of which is attitude. The attitude of the respondent will affect his own health and personal experience becomes the basis of a person's attitude that affects his health (Notoatmodjo, 2018).

Chi Square test showed that there was no significant relationship between affordability of access to health services and hypertension control behavior (*Pvalue* 0.601). The results of this study are in line with research conducted by Annisa (2013) which states that there is no relationship between the affordability of health services and adherence to hypertension treatment at the Puskesmas. The results of this study indicate that most of the respondents access to health services is not easy. This is evidenced by the results in the field that respondents who do not have easy access to health services are 83 (64.3%) who are not incontrol, and 46 (35.7%) are in control. While

respondents who have easy access to health services are 38 (77.6%) who are not in control and as many as 11 respondents (22.4%).

The researcher's assumption in the results of this study is that affordability of access to health services is not related to hypertension control behavior in carrying out control. Controlling hypertension is caused by several factors, such as the distance between home and health services and the patient's lack of awareness in controlling when there is a complaint that makes respondents do not have the opportunity to control, because some respondents claim to have suffered from hypertension > 5 years, so they feel bored with treatment. they are living, so that they will come for control if they feel a complaint.

The results of this study are supported by the theory put forward by Sujudi (2012) which states that the farther the distance from the patient's house from the health service and the difficulty of transportation will be related to the regularity of treatment.

Chi Square test showed that there was a relationship between family support and hypertension control behavior (*Pvalue* 0.000). The results of this study are supported by Surani et al. (2022) indicating that there is a relationship between family support and self-care in hypertensive patients and is also supported by researchby Violita (2015) showing that family support is needed to support patients in monitoring routine blood pressure checks. The type of family support that respondents received the most was the type of emotional support because all respondents could comfortably use it in a family environment, while the least received by respondents was the type of assessment and instrumental support, because most of the respondents were not reminded by their families and their families did not accompany the respondent to health services.

The low family support received by hypertensive patients affects compliance behavior in respondents during treatment (Romadhon et al., 2021). The number of respondents who do not comply with treatment is caused by one of them, because there is no role for the family to remind hypertensive patients to be obedient in undergoing hypertension treatment. on the other hand, families who provide good support and show a caring attitude to family members with hypertension play an important role in patient compliance for treatment. Family attention starts from direction and advice and prohibits eating fatty foods, smoking, and drinking alcohol. Remind to obey in Treatment is more effective to make respondents seek treatment more regularly than hypertensive patients who receive less attention from their families.

The results of this study are in line with (Trianni, 2012) which states that there is a significant relationship between family support and medication adherence, one of which is blood pressure control compliance at the Ngaliyan Public Health Center Semarang.This is also driven by Friedman's (2013) theory which states that family support is the attitude, behavior, and determination of the family towards sick sufferers. Family support is the closest and inseparable part of the patient. Patients will feel happy and comfortable with the attention and support that will increase their confidence in dealing with their illness.

Chi Square test showed that there was a relationship between the support of health workers and hypertension control behavior (*Pvalue*0.000). The results of this study are supported by Violita *et al.* (2015) which showed that there was a relationship between the support of health workers and adherence to taking antihypertensive drugs. The study conducted by Violita shows that respondents who have a greater role as health workers are more compliant in managing hypertension than those with lower involvement, with the assistance of health workers as a reference that influences respondent compliance.

The study conducted by Hatefnia et al., (2019) shows that community health workers can play an important role in controlling hypertension among low-income people. They provide health coaching to patients and families on lifestyle modification and medication adherence in practicing and tracking patient home blood pressure monitoring. Health services arrange appointments with patients to deliver medicines when needed and listen to patients and their family members, provide motivation and provide social support (Brownstein et al., 2018).

Conclusion

Based on the results of research conducted in Tegal Parang, South Jakarta, that there is a relationship between age, education, time of suffering from hypertension, knowledge, family support and support from health workers on hypertension control behavior.

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