Analysis of Medication Compliance in Hypertension Patients at the Cempaka Putih District Health Center, Jakarta

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KEYWORDS	ABSTRACT
Blood Pressure; Hypertension; Obedience	Hypertension is characterized by an increase in blood pressure that is systolic (above 140 mmHg) and diastolic (above 90 mmHg), both of which are above the normal range. This can be seen in the medical records of the most hypertension sufferers from March to May as many as 758 respondents. This incident was caused by several things, one of which was non-compliance in taking drugs in Cempaka Putih Health Center patients. This study aims to determine the description of adherence to medication in hypertensive patients. This researcher uses quantitative with descriptive design. The number of samples in this study was 88 which were obtained through convenience sampling and data collection using a questionnaire. The results of this study showed that adherence to medication in hypertensive patients was obedient as many as 67 people (76.1%). Based on gender, namely female. Based on the elderly age above 56 years as many as 38 people (43.2%). Based on the level of education, namely high school graduates as many as 46 people (52.3%). Based on religion, namely Islam as many as 76 people (86.4%). Based on marital status that is married as many as 64 people (72.7%). Based on the work that is not working as many as 49 people (55.7%). Based on the distance of health services that is 1 km as many as 78 people (88.6%). Based on the length of suffering from hypertension that is > 5 years as many as 68 people (77.3%). Based on the number of drugs consumed, namely single as many as 88 people (100%). Based on the type of drug consumed, namely amlodipine as many as 82 people (93.2%).

Introduction

According to *World Health Organization* that hypertension is a health problem that is quite dangerous in the world, because hypertension is a major risk factor that leads to cardiovascular disease such as heart attack, heart failure, stroke and kidney

disease which in 2016 ischemic heart disease and stroke are the two main causes of death in the world (Siswanto, Widyawati, Wijaya, & Salfana, 2020). Hypertension is the biggest health problem in the world because of the high prevalence rate. Hypertension almost affects 26% of the adult population worldwide even in 2025 it is projected that 29% of the world's population (1.56 billion adults) will experience hypertension. Data from *World Health Organization* in 2013 shows that there are 9.4 million citizens of the world each year. The percentage of hypertension sufferers is currently the most common in developing countries.

According to *World Health Organization* (WHO) estimates that by 2025 there will be an increase in cases of hypertension of around 80%, in 2000 from 639 million cases to 1.5 billion cases in 2025 will occur in developing countries including Indonesia. Hypertension is the third leading cause of death in Indonesia for all ages (6.8%), after stroke (15.4%) and tuberculosis (7.5%). Meanwhile, only 9.4% of hypertension sufferers were successfully diagnosed by health workers in Indonesia (Hazwan & Pinatih, 2017).According to the Ministry of Health, hypertension is more common in Indonesia among those aged 55 to 64 years (55.2%), 65 to 74 (63.2%), and 75 years and over (69.5%). (2018). This region is DKI Jakarta, which ranks third overall in Indonesia. The prevalence of hypertension is determined to be 14.6% for men and 13.7% for women in urban areas such as Jakarta.

Research conducted by Tsara Syarifah Istiqomah, Julia Ramadhanti and Kurnia Wahyudi (2019) regarding adherence to taking medication in hypertensive patients, obtained data on gender, age, education level, marital status, occupation, income, medium of payment, duration of hypertension, number of drugs taken. consumed, type of drug, motivational support, and level of adherence. A total of 74 hypertensive patients at the Jatinangor Health Center had high adherence in taking anti-hypertensive medication. It is hoped that this research can be used in an effort to increase public awareness regarding drug adherence, especially hypertension medication adherence in the working area of the Jatinangor Health Center. Research conducted by Dewi Wulandari, Trilestari and Kusumawardani in (2021) showed that the level of compliance with the use of antihypertensive drugs at the Bantul II Health Center was 36.8% in the low category, 12.3% in the medium category and 50.7% in the high category. The compliance rate for returning to the doctor's control was 4.6% in the disobedient category, 24.6% in the less compliant category and 70.8% in the compliant category.

Research conducted by Putu Kenny Rani Evadewi and Luh Made Karisma Sukmayanti S in (2013) showed that there were differences in medication adherence between hypertensive patients with types A and B personalities. Overall, subjects with poor drug adherence were more dominant (189 people) than with subjects who have good medication adherence (78 people). In addition, the results of the analysis of medication adherence based on age, gender, duration of hypertension showed that more subjects were male, aged 52 to 59 years, experienced hypertension 6 to 10 years which may have played a role in the subjects' adherence to taking medication. Antihypertensive drugs are proven to be able to control blood pressure in hypertensive patients within stable limits. Antihypertensive drugs play a role in reducing the incidence of complications that can occur due to unstable blood pressure in hypertensive patients. The success in treating hypertension sufferers is influenced by many factors, one of which is the patient's adherence to taking medication. Compliance with hypertension sufferers in taking medication can control (Anwar & Masnina, 2019).

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Compliance with the treatment of hypertensive patients is important because hypertension is an incurable disease but must always be controlled or controlled so that complications do not occur which can lead to death. The problem of non-adherence is common in the treatment of chronic diseases that require long-term treatment such as hypertension and also plays an important role in reducing the risk of developing cardiovascular complications. However, the use of hypertension drugs alone is proven to be insufficient to produce long-term blood pressure control effects if it is not supported by adherence to using these hypertension drugs (Hasyim, 2019). Based on the data above, the researchers conducted a study at the Cempaka Putih District Health Center, Central Jakarta, where the highest number of hypertension sufferers from March to May were 758 patients. Preliminary study conducted in June 2022 researchers conducted a survey and interviewed 4 respondents in the Non-Communicable Polyclinic (PTM) stating that 2 respondents who adhered to taking antihypertensive drugs and 2 respondents who were not compliant, took antihypertensive drugs when they felt headaches and dizziness. So researchers are interested in knowing medication adherence in hypertensive patients at the Cempaka Putih District Health Center, Central Jakarta.

Research methods

This type of research is a quantitative research with a descriptive design that was conducted to find out about the description of medication adherence in hypertensive patients at the Cempaka Putih District Health Center, Central Jakarta. The variable in this study was adherence to taking medication in hypertensive patients at the Cempaka Putih District Health Center, Central Jakarta. The sampling technique used by researchers is convenience sampling, as many as 88 respondents. The questions used are closed questionnaires and where the questionnaire is modified as simply as possible so that the respondent only needs to give a mark checklist (√). The questionnaire that has been provided is to fill in the sociodemographic data of the respondents and fill out a medication adherence questionnaire.

Results and Discussion

Table 1. Distribution of Respondent Characteristics Based on Gender, Education Level and Age

Category	Frequency	Presentase
Gender		
Man	35	39,8
Woman	53	60,2
Level of education		
SD	14	15,9
JUNIOR HIGH SCHOOL	7	8,0
SMA	46	52,3
Diploma	12	13,6
Masters	8	9,1
Magister	1	1,1
Age		
Early Adult	1	1,1
Late Adult	3	3,4
Early Seniors	12	13,6

Late Seniors	38	43,2
Manula	34	38,6
Long Suffering from Hypertension		
≤ 5 years	20	22,7
> 5 years	68	77,3

The table above shows that the majority of respondents who were female were more, namely as many as 53 respondents (60.2%), while those who were male were fewer, namely as many as 35 respondents (39.8%). The data above shows that there were more respondents with high school education, namely 46 respondents (52.3%), followed by 14 respondents with elementary education (15.9%), but 12 respondents with D3 education (13.6%). , then those with junior high school education were 7 respondents (8.0%), then those with undergraduate education were 8 respondents (9.1%), and those with postgraduate education were 1 (1.1%). The table above shows that there are more respondents aged 56-65, namely 38 respondents (43.2%), however, respondents aged > 65 are elderly, namely 34 respondents (38.6%), then respondents aged 46- The initial 55 elderly, namely 12 respondents (13.6%), then those aged 36-45 late adults were 3 respondents (3.4%) and those aged 26-35 early adults were 1 respondent (1.1%). The data above shows that there are 68 respondents (77.3%) who have suffered from hypertension for > 5 years and 20 respondents (22.7%) who have been diagnosed with hypertension for ≤ 5 years.

Table 2. Distribution of Respondents' Characteristics Based on Number of Drugs, Types of Drugs and Medication Compliance

Category	Frequency	Presentase
Drug Amount		
Single	88	100
Combination	0	0
Drug Type		
Amlodipine	82	93,2
Candesartan	6	6,8
Medication Compliance		
Disobedient	21	23,9
Comply	67	76,1

The table above shows that the number of drugs consumed was single as many as 88 respondents (100.0%); the type of drug consumed by respondents was amlodipine more, namely as many as 82 respondents (93.2%), while the drug candesartan was 6 respondents (6.8%); 67 respondents (76.1%) took medication adherence, while 21 respondents (23.9%) did not comply.

Based on the results of the study that of the 88 respondents who were female, 60.2%. According to research (Ayuchecaria, Khairah, & Feteriyani, 2018) that also showed that there were more male respondents than women, namely as many as 69 with a percentage of 33.49% compared to female respondents as many as 137 patients with a percentage of 66.50%. This may be because women have more potential to suffer from hypertension because women have more complex hormonal conditions than men. In

addition, women over 45 years of age have experienced menopause which causes changes in blood pressure. Based on the results of research with high school education as much as 52.3%. According to Uchmanowicz (2018) said someone with higher education tends to be more obedient in taking medication while someone with secondary education or no education is more likely to have low adherence than people with higher education. The level of education and the type of work the samples in this study were quite diverse. The level of education can have an effect on when the patient is undergoing hypertension therapy because the higher the level of education, the hypertensive patient should be able to easily receive information related to the treatment of hypertension being undertaken (Yusmaniar, Susanto, Surahman, & Alfian, 2020).

Based on the results of the study, the respondents who were aged 56-65 were 43.2% elderly. According to Aripin (2015), individuals aged 45 years or more have a 90% risk of suffering from hypertension. As we get older, a degenerative process occurs, namely a decrease in the elasticity of the blood vessel walls, so that the arterial pressure becomes higher (Nurmalita, Annisa, Pramono, & Surnasih, 2019). The risk of suffering from hypertension due to aging that occurs in the cells of the human body, aging causes structural changes in the main blood arteries, which narrow and tighten resulting in an increase in systolic blood pressure. Increasing age will experience a decrease in organ function caused by a reduced number of cells and nutritional intake which results in structural and physiological changes in organs, one of which is the brain which will experience changes in cognitive function in the form of difficulty in remembering and also reduced ability to make decisions and act slower (Aprilliyani & Ramatillah, 2019). The characteristics of respondents based on the length of time they suffer from hypertension can be seen that the duration of suffering from hypertension > 5 years is 54.2%. This study is in line with the fact that long suffering from hypertension is also a factor in the lack of adherence to antihypertensive treatment. As many as 48.1% suffer from hypertension for > 5 years. According to Suhadi, the length of time suffering from hypertension in the elderly is related to the duration of hypertension treatment, so that the duration of suffering from hypertension is not a factor that influences adherence to hypertension treatment.

Characteristics of respondents based on the number of drugs consumed, it can be seen that a total of 88 respondents indicated that the number of drugs consumed was one as much as 100.0%. This is in line with Untari's study (2015) at the Siantan Hilir Pontianak Health Center, where 72.83% of patients used a single antihypertensive drug. Likewise the results of Chusna's research (2014) at dr. Doris Sylvanus palangkaraya that out of 114 respondents, 71 respondents used a single drug. The use of a single hypertension drug will certainly increase patient compliance more than a combination drug (Wulandari, Trilestari, & Kusumawardani, 2021). For the treatment profile, the use of amlodipine is still the first choice. Amlodipine has been chosen more than captopril because captopril is less effective in lowering blood pressure. Apart from that, the use or rules for taking amlodipine medicine are only taken once a day in the morning (Ayuchecaria, Khairah, & Feteriyani, 2018). Characteristics of respondents based on the type of drug can be seen that a total of 88 respondents indicated that the type of drug consumed by respondents was amlodipine more, namely as much as 93.2%. According to Violota (2015) which states that the majority of respondents consume one type of drug every day as many as 113 people (84.3%). The most widely prescribed type of drug is amlodipine in the Calcium Canal Blocker (CCB) class. One of the antihypertensive groups that has clinical management of hypertension either

monotherapy or combination, the CCB class which has been proven effective and safe in reducing blood pressure. Amlodipine has relatively high oral bioavailability and absorption occurs slowly so as to prevent a sudden drop in blood pressure (Roslandari, Illahi, & Lawuningtyas, 2020). If seen from the hypertension drugs obtained by the patients, most of the patients received amlodipine therapy with a frequency of once daily administration, there were also patients who received combination therapy between amlodipine and candesartan with a frequency of once daily administration for both drugs. The frequency of taking medication that is too frequent can cause patients to be confused and even bored to take medication, this can reduce patient compliance in taking medication. The frequency of taking medication that is not too frequent, for example the drug is only taken once a day, can make it easier for patients to remember and also to set a schedule or time to take medication (Pramana, Dianingati, & Saputri, 2019).

The results of research from Mamaghani (2020) and Tasya (2019) showed that women's medication adherence was 34.1% higher than men's 28.6%. Several studies have also found that there is no significant difference between male and female medication adherence. According to Imanda's research (2021), the same was also found in several countries, namely Palestine, showing that patients with an age range of >45 years and Pakistan with ages >51 years were more compliant with taking medication than those under that age. As people get older, the more problems they face, especially those related to their health, this occurs due to a gradual decline in the function of the whole body. According to Imanda's research (2021) says that someone with higher education tends to be more obedient in taking medication, while people with secondary education, basic education, or no education are more likely to have low adherence than people with higher education. Education also has a major influence on medication adherence in hypertensive patients. The higher a person's education, the easier it will be for a person to receive information so that he has extensive knowledge and increases adherence to taking medication. Long suffering from hypertension> 5 years at the Cempaka Putih District Health Center Jakarta, this is because patients who experience hypertension> 5 years tend to have higher medication adherence due to more patient experience regarding treatment as expected so that patients tend to obey the treatment process.

According to Wulandari (2021) medication adherence in patients taking a single drug is higher than patients taking a combination drug. The highest number of drugs and types of drugs consumed by hypertensive patients was consuming a single antihypertensive drug and the most widely prescribed type of drug was amlodipine. Most of the number of drugs consumed by patients is 1 drug, the less number of drugs the patient gets, the level of patient adherence in taking the drug also increases. This is in accordance with Violota's research (2015) which states that the majority of respondents take one type of drug every day. Differences regarding the use of the number of drugs in hypertensive patients can be caused by the pathophysiological conditions of the disease in each patient which are different. This study is in line with research conducted by Roslandari and Illahi (2020) which found that the most widely prescribed antihypertensive drug was amlodipine. Where amlodipine has relatively high oral bioavailability and absorption occurs slowly so as to prevent a sudden drop in blood pressure.

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Conclusion

The majority of respondents who are female (60.2%), the majority of elderly respondents aged 56-65 years (43.2%), the majority of respondents with high school education (52.3%), the majority of respondents who have long suffered hypertension > 5 years (77.3%), the majority of the number of drugs consumed by respondents was one type (100%), and the majority of types of drugs consumed by respondents were Amlodipine (93.2%). Data on medication adherence among hypertensive patients at the Cempaka Putih District Health Center in Central Jakarta show that most of the patients adhere to taking antihypertensive medication.

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