Differences of Medical Adherence on the Level I and Level II of Hypertension Patients in Kalideres Sub-District Primary Health Center Year of 2019

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Keywords: Non Communicable Diseases, Hypertension Level I, Hypertension Level II, Medication, Medical Adherence.

Abstract: One of the non-communicable diseases is hypertension, this disease is a health problem because we are not aware that we are including hypertensive sufferers and because of this unconsciousness causes medical related diseases to be excluded. Hypertension is an increase in blood pressure which will discuss target organs such as stroke (for the brain), coronary heart disease (for heart vessels) and right ventricular hypertrophy / left ventricular hypertrophy (for the heart muscle) with the main target is the stroke that brings high mortality. Hypertension is a condition where systolic blood pressure ≥ 140 mmHg and diastolic pressure ≥ 90 mmHg. The purpose of this study was to study the differences of medical adherence on the Level I and Level II of hypertension patients in Kalideres Sub-district Primary Health Center Year of 2019. This study used quantitative with cross-sectional research methods with a sample of 117 people. Source of data analysis using Mann Whitney. Based on the result of Mann Whitney analysis was found p-value is 0,000 that means there are differences in Medical Adherence on the Level I and Level II of Hypertension Patients.

1 PRELIMINARY

One of the non-communicable diseases is hypertension, this disease is a health problem because we are not aware that we are including hypertensive sufferers and because of this unconsciousness causes medical related diseases to be excluded. Hypertension is an increase in blood pressure which will discuss target organs such as stroke (for the brain), coronary heart disease (for heart vessels) and right ventricular hypertrophy / left ventricular hypertrophy (for the heart muscle) with the main target is the stroke that brings high mortality (Bustan, 2007).

Increased blood pressure is one of the main risk factors for global death. Increased blood pressure is a major risk factor for coronary and ischemic heart disease and hemorrhagic stroke. Blood pressure levels have been proven to be positively and continuously associated with the risk of stroke and coronary heart disease. In some age groups, the risk of cardiovascular disease doubles for every increase in blood pressure of 20/10 mmHg, starting as low as 115/75 mmHg. In addition to coronary heart disease and stroke, complications of increased blood pressure include heart failure, peripheral vascular disease, kidney disorders, retinal bleeding and vision problems. Treating systolic blood pressure and diastolic blood pressure to less than 140/90 mmHg is associated with a reduction in cardiovascular complications. Based on information released by WHO, one in three adults has high bloodpressure in the Southeast Asia region. Nearly 1.5 million people die from high blood pressure every year making it a major risk factor for death in the Southeast Asia region (WHO, 2018).

No symptoms are a major obstacle in recognizing high blood pressure and treating it. This condition does not give notice of his arrival. The damage caused continues so that you still feel healthy. Many hypertensive patients do not realize there is something wrong with them. Often, the first sign of this problem is a stroke or heart attack that actually can be prevented if hypertension is recognized and treated early on (Wade, 2016).

Globally in 2015, 1 in 4 men and 1 in 5 women. In 2015, 28% of the population in low-income countries had high blood pressure, compared to 18% of the population in high-income countries. A review of current trends shows that the number of adults with increased blood pressure increased from 594 million in 1975 to 1.13 billion in 2015, with an increase seen mostly in low and middle-income countries (WHO, 2018).

The prevalence of hypertension according to the results of measurements in the population aged ≥18 years in 2018 has increased by 8.3%. The prevalence in 2013 was 25.8% in 2018 to 34.1%. While the proportion of history of taking drugs and the reasons for not taking drugs in the population of hypertension in 2018 reached 45.6%. Reasons for non-compliance with these drugs were 59.8% feeling healthy, 31.3% did not routinely go to health care facilities, 14.5% took traditional medicine, 12.5% other reasons, 11.5% often forgot, 8.1% was not able to buy routine drugs, 4.5% cannot stand the side effects of drugs, 2% do not exist in health care facilities. The prevalence of DKI Jakarta for hypertension according to the results of measurements in the population aged ≥18 years in 2018 is above 30% (Kemenkes RI, 2018).

Hypertension is a major risk factor for coronary heart disease, chronic kidney disease, ischemic, hemorrhagic and stroke, if left uncontrolled, complications due to hypertension are heart failure, peripheral vascular disease, kidney failure, retinal bleeding, vision problems, stroke and dementia (WHO, 2018).

Hypertension not only damages blood vessels but also organs such as the heart, brain, kidneys, and eyes. The longer you suffer from hypertension the greater the chance of organ damage. As a result, serious conditions such as heart disease, stroke, kidney disease and eye damage is occurring (Casey et al., 2006)

Risk factors for hypertension can be divided into 2 (two), which are factors that cannot be changed and factors that can be changed. Factors that cannot be changed include genetics, age, gender and race, while factors that can be changed include smoking, obesity, lazy lifestyle (Less Motion), excess salt, caffeine and alcohol use (Casey et al., 2006).

Adherence to taking medication in hypertensive patients is very important because blood pressure can be controlled by taking regular antihypertensive medication so that in the long run the risk of damage to important body organs such as the brain, heart and kidneys can be reduced (BPOM, 2006). Compliance with the treatment of hypertension patients is important because hypertension is an incurable disease but must always be controlled or controlled so that complications do not occur that can lead to death (Palmer & Williams, 2007).

According to a research journal entitled Determinants of adherence to hypertension treatment patients at first-level health facilities in Palembang in 2017 concluded that patient compliance in undergoing hypertension treatment is also a determinant that influences blood pressure control (Liberty et al., 2017)

Kalideres Sub-district Primary Health Center is one of the working areas of the West Jakarta District Health Office, based on interviews conducted with one of the Kalideres District Primary Health Center staff, one of the causes of high hypertension rates in Kalideres Sub-District Primary Health Center is because the Kalideres Sub-District Primar Health Center is a referral Health Center of 12 (two twelve) Village Office of Primary Health Center in the Kalideres sub-district area.

Based on data found during direct observation of the primary health center there is an increase in the number of hypertensive patients. In 2017, hypertension patients numbered 12,171 cases, increasing in 2018 to 13,648 cases. From the last two months data which is in February 2019 and March 2019, there is an increase in the number of cases of hypertension from 555 cases to 588, which is an increase of 5%.

Based on the results of interviews with the Kalideres District Primary Health Center staff one of the causes of the increasing number of hypertension patients with level II is due to the non-compliance of hypertension patients with the treatment control schedule, this causes patients not to receive antihypertensive drugs which they should consume until the next control schedule. One of the effects of level II hypertension is death, from interviews with the Kalideres District Primary Health Center staff supported by a 2018 surveillance report, 36 cases of patients died from hypertension in 2018.

2 THEORY REVIEW

2.1 Hypertension

Hypertension is an increase in blood pressure which will discuss target organs such as stroke (for the brain), coronary heart disease (for heart vessels) and right ventricular hypertrophy / left ventricular hypertrophy (for the heart muscle) with the main

target is the stroke that brings high mortality (Bustan, 2007).

Basic hypertension is a steady increase in blood pressure specifically, diastolic pressure exceeds 95mm of mercury that cannot be connected with other organic causes (Wade, 2016).

Hypertension is often called a silent killer because patients with hypertension are usually asymptomatic. The main physical discovery is an increase in blood pressure. The average of measurement at twice or more times in two times of control is determined to diagnose hypertension (Muchid, 2006). In primary health services, a diagnosis of hypertension is made by a doctor, after getting an increase in blood pressure in twice measurements with a distance of one week. The diagnosis of hypertension is made when the blood pressure is ≥ 140/90 mmHg if one of both systolic and diastolic increases is sufficient to establish a diagnosis of hypertension (Departemen Kesehatan RI, 2013).

Table 1: Classification of Blood Pressure.

Classification of Blood Pressure	Systolic and Diastolic Pressure (mmHg)
Normal	< 120 and < 80
Pre-	120 – 139 or 80 – 89
Stage I	140 – 159 or 90 – 99
Stage II	> 160 or > 100

2.2 Hypertension Risk Factors

2.2.1 Risk Factors That Cannot Be Changed

- Genetic
  A close family history of suffering from hypertension (heredity) also increases the risk of hypertension, especially primary (essential) hypertension. Genetic factors are also related to metabolism of salt regulation and cell membrane renin (Departemen Kesehatan RI, 2013).

- Age
  Age affects the occurrence of hypertension. With increasing age, the risk of developing hypertension becomes greater. In the elderly, hypertension is mainly found only in the form of an increase in systolic blood pressure. This incident was caused by structural changes in large blood vessels (Departemen Kesehatan RI, 2013).

- Gender
  The gender affects the occurrence of hypertension. Men have a risk of about 2.3 times more systolic blood pressure increases compared to women because men are suspected of having a lifestyle that tends to increase blood pressure. However, after entering menopause, the prevalence of hypertension in women increases (Departemen Kesehatan RI, 2013).

- Race
  African Americans show higher levels of hypertension than other populations and tend to develop more early and aggressively. They are nearly twice as likely to have a fatal stroke, one and a half times as likely to die of heart disease, and four times more likely to experience kidney failure compared to the caucasian race. Hypertension is the number one cause of death in African-Americans

2.2.2 Changeable Risk Factors

- Smoke
  Toxic chemicals such as nicotine and carbon monoxide inhaled through cigarettes that enter the blood stream can cause high blood pressure. Smoking will increase heart rate, so the oxygen demand of the heart muscles increases (Departemen Kesehatan RI, 2013).

- Obesity
  Bodyweight and body mass index (BMI) correlates directly with blood pressure, especially systolic blood pressure where the relative risk for hypertension in obese people is 5 times higher for hypertension compared to a normal person. Meanwhile, in patients with hypertension found about 20-30% overweight (Departemen Kesehatan RI, 2013).

- Lifestyle (less motion)
  Regular exercise can help lower blood pressure and benefit people with mild hypertension. By doing regular aerobic exercise your blood pressure can drop, even if you haven't lost weight (Departemen Kesehatan RI, 2013).

- Excess Salt
  Salt causes a build up of fluid in the body because it draws fluid outside the cell so that it is not released, thus increasing the volume of blood pressure (Departemen Kesehatan RI, 2013).

- Caffeine

  Caffeine is a methylxanthine derivative found in tea, coffee, and chocolate. Coffee is a beverage ingredient that contains caffeine. Coffee also has a bad impact on the heart. Caffeine can stimulate the heart to work faster so it drains more fluid every second. The habit of drinking coffee is obtained from one cup of coffee containing 75-200 mg of caffeine.

- Alcohol Use

  The effect of alcohol on rising blood pressure has been proven. Allegedly increased cortisol levels, increased red blood cell volume and increased blood viscosity play a role in raising blood pressure (Departemen Kesehatan RI, 2013).

2.3 Management of Hypertension Disease

2.3.1 Primary Stage

Primary prevention is an effort to modify risk factors or prevent the development of risk factors, before the start of pathological changes with the aim of preventing or delaying the occurrence of new cases of disease. The primary stage of managing hypertension is an initial prevention effort before a person suffers from hypertension through a counseling program and controlling risk factors to the wider community by prioritizing high-risk groups.

2.3.2 Secondary Stage

Early detection of disease is often called screening. Early detection in the preclinical stage allows immediate treatment (prompt treatment) which is expected to provide a better prognosis about the end of the disease than given late. In the prevention of this secondary stage, blood pressure checks are carried out regularly as a form of screening and also compliance with treatment for people who have suffered from hypertension.

2.3.3 Tertiary Stage

Management of the tertiary stage is an effort to prevent more severe complications or death. Tertiary prevention is an effort to prevent diseases that lead to worse diseases, with the aim of improving the quality of life of patients. Tertiary prevention is focused on rehabilitation and recovery after illness to minimize morbidity, disability and improve quality of life.

3 RESEARCH METHODS

The sampling technique in this study is by accidental sampling. Accidental sampling is a sampling technique based on coincidence, i.e. consumers who incidentally meet with researchers can be used as samples if viewed by people who happen to be found suitable as sources of data (Sugiyono, 2016).

The research instrument using medical and medication adherence was obtained from a questionnaire. The compliance questionnaire is the standard Morisky Medication Adherence Scale (MMAS) questionnaire consisting of 8 questions that have been translated into Indonesian.

4 RESULTS AND DISCUSSION

Table 2: Overview of the Distribution of Hypertension Frequencies in the Kalideres District Primary Health Center in 2019.

Hypertension	Amount	Percentage
Hypertension Level II	22	18,8%
Hypertension Level I	95	81,2%
Total	117	100

Based on the results of the study in table 4.1 above, it shows that the proportion of respondents with hypertension level I was 95 people (81.2%) and the proportion of respondents who had hypertension level II was 22 (18.8%) with a total number of respondents of 117 people.

Table 3: Descriptions of Frequency Distribution of Treatment Compliance in Patients with Hypertension Disease in Kalideres District Primary Health Center in 2019.

Adherence	Amount	Percentage
Not Adhere	47	40,2
Adhere	70	59,8
Total	117	100

Based on the results of table 4.2 above shows that the proportion of patients with hypertension who adhered to medication as many as 70 people (59.8%) and the proportion of patients withhypertension who did not adhere with medication as many as 47 people (40.2%) with a total of 117 respondents person.

Table 4: Normality Test Compliance Score Taking Medicines in the Group I Patients with Level I and Level II Hypertension in the Kalideres District Primary Health Center in 2019.

No	MMAS – 8 Items	Yes	%	No	%
1	Do you sometimes forget to take antihypertensive medicine?	38	32,5	79	67,5
2	Think about the last 2 weeks, is there a day when you did not take antihypertensive medication?	26	22,2	91	77,8
3	Have you ever reduced or stopped treatment without telling your doctor because when you took the medicine you felt more unwell?	26	22,2	91	77,8
4	When traveling, do you sometimes forget to bring antihypertensive medicine?	13	11,1	104	88,9
5	Did you take your antihypertensive medication yesterday?	106	90,6	11	9,4
6	When you feel your blood pressure is in control, have you ever stopped your medication?	18	15,4	99	84,6
7	Have you ever felt disturbed/fed up with your routine medication schedule?	35	29,9	82	70,1
8	How difficult do you remember taking your medicine?				
	a. Never		83		70,9
	b. Once in a while		17		14,5
	c. Sometimes		12		10,3
	d. Usually		5		4,3
	e. Always		0		0

Based on the results of the distribution of the MMAS-8 questionnaire, it showed that the highest proportion of questions related to adherence to taking hypertension patients was the question "did you take antihypertensive medication yesterday?" 106 respondents answered, "Yes" (90.6%). While the highest proportion of non-compliance with taking medication is obtained from the question "do you sometimes forget to take antihypertensive medicine?" 38 respondents answered, "Yes" (32.5%).

Table 5: Normality Test Compliance Score Taking Medicines in the Group I Patients with Level I and Level II Hypertension in the Kalideres District Primary Health Center in 2019.

Variable	P-value	Remarks
Adherence	0,000	Abnormal

Based on table 4.4 it is found that the compliance score is 0,000 less than the significant value (<0.05) which means that the data is not normally distributed.

Table 6: Differences in Medication Compliance in the Level I and Level II Hypertension Patients in the Kalideres District Primary Health Center in 2019.

Variable	P-value	Remarks
Adherence	0,000	Abnormal

Based on the results of the statistical tests performed using the Mann Whitney test in table 4.5, the sig or p-value of 0,000 is obtained, which means the value <significant value is 0.05. So it can be concluded that refusing Ho, which means there is a significant difference between adherence to taking medication in the group of patients with hypertension level I and hypertension level II.

Based on the results of observations in the Kalideres District Primary Health Center, hypertension entered into the 10 biggest diseases. From interviews with one of the health workers,

when hypertension patients are found to be medically in need of more serious help where the primary health center feels that patients need to get treatment from specialists or subspecialists, these patients will be given a referral letter to the hospital or health facility level 2.

Based on interviews with several respondents the reasons for their non-compliance with the above questions are due to forgetting about taking medication schedules, fear of the effects caused by antihypertensive medicine such as dry cough, nausea and dizziness and there are those who prefer to treat hypertension by using herbal medicines.

In regards to the results of interviews that show non-compliance, it is advisable to include family members in the treatment of patients, especially for elderly patients in order to increase the participation of family members in the treatment of hypertension, so that there are reminders of the schedule of taking antihypertensive medication according to the treatment suggested by health workers.

Based on the results of the statistical tests performed using the Mann Whitney test in table 4.5, the sig or p-value of 0,000 is obtained, which means the value <significant value is 0.05. So it can be concluded that refusing Ho, which means there is a significant difference between adherence to taking medication in the group of patients with hypertensive level I and hypertension level II.

The results of this study are in line with research conducted by Baiq Leny Nopitasari, Wirawan Adikusuma, Nurul Qiyaam and Ayu Fatmala who stated that there was a significant influence or difference in medication adherence to blood pressure with a p-value of 0,000 (Nopitasari, et al., 2018).

Adherence to taking the medication in hypertensive patients is very important because blood pressure can be controlled by taking regular antihypertensive medication so that in the long run the risk of damage to important organs of the body such as the brain, heart and kidneys can be reduced (BPOM, 2006).

Medical adherence of hypertension patients is important because hypertension is an incurable disease but must always be controlled or controlled so that complications do not occur that can lead to death (Palmer &Williams, 2007). Based on interviews with several respondents the reason for their non-compliance with taking antihypertensive medicine is because patients forget about taking medication schedules, fear of the effects caused by antihypertensive drugs such as dry cough, nausea and dizziness and there are those who prefer to treat hypertension by using herbal medicines.

Efforts have been made by the primary health center related to medical adherence on patients with hypertension, which is by reminding and educating patients to control in accordance with the time that has been scheduled or agreed, other than that the primary health center will send reminders to patients through WhatsApp group, where this activities is part of the Prolanis Program (Program Pengelolaan Penyakit Kronis).

In regards to not adherence to patients with hypertension on taking medication, it is suggested to primary health center to make a form of adherence to take anti-hypertensive medication. The form contains information and instructions about antihypertensive medicine such as drug dosages to be taken, the time to take the medication which includes the day, date and how many times the drug must be taken in a day. From the information contained in the form, we will get information related to the patient's medication adherence while the patient is outside the primary health center without asking the patient so that this activity will not interfere with consultation time and does not hamper health services. This advice is given because patients can be routinely controlled according to a predetermined time but to prevent the increased risk of hypertension, patients must also be obedient to take antihypertensive medication.

5 CONCLUSION

1. The description of hypertension in the Kalideres District Primary Health Center shows that the highest proportion in patients with hypertension level I, as many as 95 people(81.2%).
2. The description of medical adherence on patients with hypertension in the Kalideres District Primary Health Center shows that the proportion of patients with hypertension who adhered to taking medicine as many as 70 people (59.8%) and the proportion of those who did not adhere to take medication as many as 47 people (40.2%).
3. There is a difference between adherence to taking medication in the group of patients with hypertension level I and hypertension level II.

6 SUGGESTION

1. It is suggested to primary health center to make a form of adherence to take antihypertensive medication. The form contains information and instructions about antihypertensive medicine such as drug dosages to be taken, the time to take the medication which includes the day, date and how many times the drug must be taken in a day. From the information contained in the form, we will get information related to the patient's medication adherence while the patient is outside the primary health center without asking the patient so that this activity will not interfere with consultation time and does not hamper health services. This advice is given because patients can be routinely controlled according to a predetermined time but to prevent the increased risk of hypertension, patients must also be obedient to take anti-hypertensive medication

2. It is advisable to include family members in the treatment of patients, especially for elderly patients in order to increase the participation of family members in the treatment of hypertension, so that there are reminders of the schedule of taking antihypertensive medication according to the treatment suggested by health workers.

3. It is hoped that further researchers will be able to further develop research on medication adherence in patients with hypertension by using other variables such as knowledge, patient cholesterol levels, lifestyle or others with different research methods such as qualitative.

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