



## Description of Level Medication Compliance For Hypertensive Patients at Santa Elisabeth Hospital Medan Heart Clinic

Murni Sari Dewi Simanullang<sup>1</sup>, Friska Br. Sembiring<sup>2</sup>, Amnita Anda Yanti Ginting<sup>3</sup>, Ester Kristina Sitinjak<sup>4\*</sup>

<sup>1-4</sup> Program Studi Keperawatan, Sekolah Tinggi Ilmu Kesehatan Santa Elisabeth Medan, Indonesia

Email : [sitinjaksterkristina@gmail.com](mailto:sitinjaksterkristina@gmail.com)

\*Correspondence Author: [sitinjaksterkristina@gmail.com](mailto:sitinjaksterkristina@gmail.com)

**Abstract.** Hypertension is a chronic disease that shows blood pressure above normal limits and is a global health problem and is a risk factor for cardiovascular disease. Treatment adherence is defined as the patient's level of willingness and the extent to which they strive and behave to follow medical directives, regulations, or recommendations provided by healthcare professionals in an effort to assist the patient's recovery. Adherence to taking medication allows patients to keep their blood pressure stable in order to avoid complications. This study aims to see the compliance of hypertension drug patients at the Heart Poly of Santa Elisabeth Hospital Medan in 2024. The research method used is a descriptive approach. The population in this study is 178 people, the number of samples is 82 people. Sampling technique with accidental sampling technique. The results of the study showed that from 82 respondents, the data obtained that the most age respondents were 38-53 years old with a total of 36 respondents (47.6%), the data on the most gender respondents were women as many as 48 respondents (48.5%), the data on the most education respondents was education as many as 32 respondents (39%), the data on the most respondents suffering from hypertension was 2 years of hypertension as many as 24 respondents (29.3%). The picture of the level of drug compliance of hypertension patients at the Heart Polyclinic of Santa Elisabeth Hospital Medan in 2024 is at a moderate level of 31 respondents (37.8%).

**Keywords:** Cardiology Clinic, Descriptive Study, Hypertension, Medication Compliance, Patients.

### 1. INTRODUCTION

A person's systolic blood pressure, a diastolic blood pressure level of more than 140 mmHg and arterial blood pressure of more than or equal to 90 mmHg is known as hypertension (Ministry of Health, 2016). Patients are usually unaware of the presence of hypertension before complications occur (Harahap et al., 2018). Because the blood pressure produced during the contraction of the blood heart affects the walls of blood vessels, hypertension is considered the leading cause of cardiovascular or heart disease worldwide (Haryanto et al., 2023). One way to cure it is to take antihypertensive drugs for hypertension. The success of treatment therapy is influenced by the patient's resistance to drugs. Non-compliance in consuming antihypertensive drugs leads to very dangerous side effects, such as the appearance of disorders. Adherence to medication is a high component in influencing blood pressure equality. To get good results from hypertension treatment, patients must still be able to take their medications. Patients who do not comply with their pharmacological therapy of tension are the main cause of hypertension therapy failure, which is also part of the reason for the high mortality rate in Indonesia. (Purwanto, 2022).

The success of the treatment of hypertensive patients depends on their adherence to their medications. Non-adherence to their medications can lead to serious complications (Nadzifah et al., 2020). Hypertension patients' adherence to medications is one of the factors that affect the success of hypertension treatment. Adherence to medications allows sufferers to keep their blood pressure stable. A good control inhibiting factor is low sensitivity (Anwar & Masnina, 2019).

Antihypertensive treatment should be performed by hypertensive patients to stabilize blood pressure and stop additional complications. (Oktaviani et al., 2021). Adherence determines the effectiveness of therapy. The success of treatment is influenced by the patient's ability to take their medication. An important factor in improving the health and quality of life of hypertensive patients is their resistance to their treatment. As a result of many studies, the adherence of patients suffering from chronic diseases is usually low. (Made et al., 2020). One of the studies conducted (Riani & Putri, 2023), said that the amount of medication given to patients apparently affects their level of adherence, and the dosage given to patients receiving combination drug therapy tends to be inconsistent, although this varies depending on the patient's condition.

Treatment of hypertension must be carried out for life, so patients are often non-compliant in consuming antihypertensive drugs (Juniarti et al., 2023). Non-compliance in taking hypertension medication can occur due to not taking medication regularly, fatigue, difficulty at work, loss of ability to remember the correct time and dose of hypertension medication, medication side effects such as drowsiness, dizziness, and nausea when taking hypertension medication, or stopping medication when your condition improves (Massa & Manafe, 2022). Another reason patients do not obey to take medication is because of urgent situations, such as the patient's work, lazy patients, or the patient himself who deliberately does not take medication. In addition, the patient may forget to take the medication because he or she does not feel the symptoms of the disease. This is due to the fact that hypertension often has no obvious or unclear symptoms. As a result, it is difficult for sufferers to identify their own condition. Since there were no complaints, their blood pressure was not controlled (Tumundo et al., 2021).

Sending messages via written text and automated voicemail can improve adherence to taking medication on a predetermined schedule. This is an effective way to improve adherence to hypertension treatment (Berek & Fouk, 2020). Factors that strengthen or encourage (reinforcing factors) of a person obediently taking medication such as how health workers encourage patients to continue their treatment. Furthermore, people with high blood

pressure are in dire need of healthcare professionals because they provide most of the information about diseases and treatments. In addition to providing information, health professionals must also provide good and friendly care during the treatment process (Nadzifah et al., 2020).

## **2. LITERATURE REVIEWS**

Results from the Basic Health Research Survey (Riskesdas North Sumatra, 2018) Hypertension patients' adherence to medications is one of the factors that affect the success of hypertension treatment. Adherence to medication allows sufferers to keep their blood pressure stable. A good control inhibiting factor is low sensitivity. In Medan City, 7,174 people have hypertension, and 121 people, or 13.3% of the total population, have it in West Pakpak. On a regular basis, 32.3% of patients with high blood pressure did not take their medications, and irregularly, 32.3% did not take their medications. Hypertensive people do not take medication just because they feel well (59.8%), go to health facilities irregularly (31.3%), and take traditional medicine (14.5%), use other medications (12.5%), forget to take medication (11.5%), cannot afford medication (8.1%), medication side effects (4.5%), and hypertension medication is not available in health facilities (2%). (Riskesdas Sumut, 2018). In the initial data carried out at Santa Elisabeth Hospital Medan by distributing questionnaires of 10 respondents, it was found that patients experienced compliance with taking high-level drugs 1 person (10%), compliance with taking medium-level drugs for 4 people (40%), and compliance with taking low-level drugs for 5 people (50%).

## **3. METHODS**

In this study, a descriptive approach was used. This means that the research does not aim to study the implications, examine hypotheses, make predictions, or provide explanations. Researchers obtained a population of patients with hypertension who have undergone outpatient services at the Heart Poly According to 2023 data, there are 178 patients at Santa Elisabeth Hospital Medan. In this study, the sample method chosen was accidental sampling. In other words, any respondent who happens to meet the researcher has the ability to be considered a sample if it is considered that the person who suddenly meets is suitable to obtain data (Nursalam, 2020).

The variable of this study is an overview of the level of medication adherence in hypertension patients at the Heart Polyclinic of Santa Elisabeth Hospital Medan in 2024. The questionnaires used in this study are the Demographic Data Questionnaire and the Morisky

Medical Adherencem Scale Questionnaire (Imanda, 2021). This MMAS-8 questionnaire consists of 8 questions, with 7 questions included with an alternative answer of "yes" or no". Numbers 1–4 and 6–7 The answer "yes" has a score of 0 and the answer "no" has a score of 1.

The validity test of the instrument by comparing the value of the r calculation is said to be valid. Where the result of r table is greater than r calculation and the accuracy of the table = 0.361. The validity value obtained from the validity analysis of the drug adherence questionnaire of hypertensive patients was  $r = > 0.45$ . A feasibility test is the reliability of a research instruction on the alignment and harmony of the measurement method. A tool that performs a realism test is considered tested if its alpha constant is higher than or equal to 0.70 To evaluate reliability, the following cronbach alpha formula is used. If the value is more than 0.7, then it is considered reliable. The reliability value of the questionnaire of adherence to medications in hypertensive patients was 0.764. No validity and realism tests were conducted in this study because the researchers already used questionnaires derived from (Vika et al., 2016) with a survey of drug adherence in patients with hypertension that had been tested and feasibility. Based on the results of the tests that have been carried out, the MMAS-8 questionnaire is said to be valid and realistic.

The form of single-variable analysis is determined by the type of data used. One of the objectives of univariate analysis is to provide an explanation of the properties of each variable studied. One of the independent studies is an overview of the level of compliance of hypertension patients with their medications in 2023 at the Heart Polyclinic of Santa Elisabeth Hospital Medan This method was used in this study univariate.

This research has also been ethically feasible from the health research commission of STIKes Santa Elisabeth Medan with letter number No: 119/KEPK-SE/PE-DT/IV/2024.

#### 4. RESULT AND DISCUSSIONS

**Table 1.** Frequency distribution of respondent demographic data based on Hypertension Medication Compliance Rate in Hypertension Patients at the Heart Poly of Santa Elisabeth Hospital Medan .

Characteristics	Frequency	Percentage(%)
<b>Age</b>		
22-37	29	35,4
38-53	36	47,6

54-69	12	14,6
70-82	2	2,4
<b>Total</b>	<b>82</b>	<b>100</b>
<b>Gender</b>		
Male	34	41.5
Female	48	48.5
<b>Total</b>	<b>82</b>	<b>100</b>
<b>Education</b>		
SD	1	1.2
SMP	7	8.5
SMA	32	39.0
D3	10	12.2
D4	1	1.2
Post Graduate	1	1.2
S1	25	30.5
S2	4	4.9
S3	1	1.2
<b>Total</b>	<b>82</b>	<b>100</b>
<b>Long Suffering</b>		
1 Year	16	19.5
2 Year	24	29.3
3 Year	21	25.6
4 Year	13	15.9
5 Year	8	9.8
<b>Total</b>	<b>82</b>	<b>100</b>

Based on Table 1, it shows that from 82 respondents, the most age respondents were 38-53 years old with a total of 36 respondents (47.6%) and the lowest number of 70-82 age groups of 2 respondents (2.4%). The data of female respondents was 48 respondents (48.5%), male was 34 respondents (41.5%). The data on the most recent education respondents were high school with 32 respondents (39%) and the lowest last education was Elementary School (SD) with 1 respondent (1.2%), Diploma Four (D4) with 1 respondent (1.2%), Postgraduate with 1 respondent (1.2%), Doctoral Program (S3) with 1 respondent (1.2%). The data of

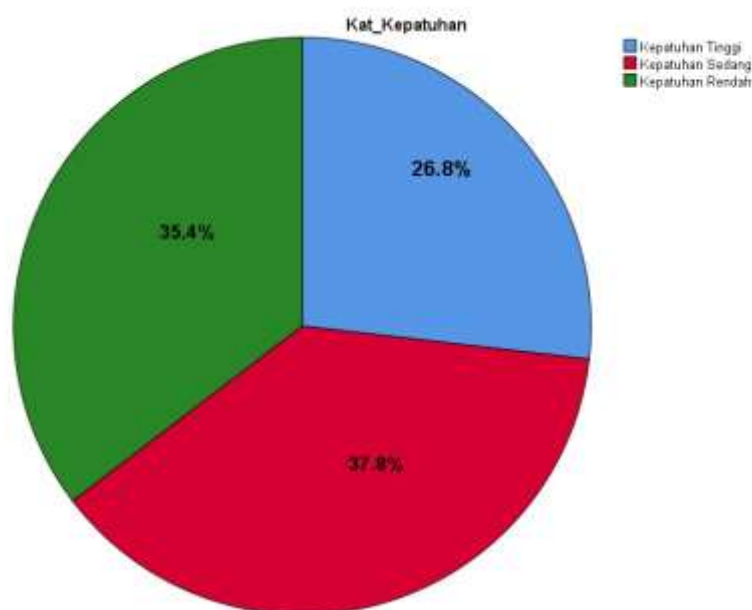
long-time respondents suffering from hypertension was 2 years as many as 24 respondents (29.3%) and the lowest 5 years as many as 8 respondents (9.8%).

**Table 2.** Distribution of Respondent Frequency Based on Medication Adherence Level in Hypertensive Patients at the Heart Poly of Santa Elisabeth Hospital Medan .

Medication Compliance Rate	<i>F</i>	(%)
High	22	26.8
Medium	31	37.8
Low	29	35.4
<b>Total</b>	<b>82</b>	<b>100</b>

## DISCUSSIONS

### Distribution of Respondent Frequency Based on Medication Adherence Level in Hypertensive Patients at the Heart Poly of Santa Elisabeth Hospital Medan



Based on Diagram 1, it shows that of the 82 respondents who complied with taking medication in the low category, 29 respondents (35.4%), the medium category was 31 respondents (37.8%), and 22 respondents were in the high category (26.8%). The researcher assumes that medication adherence to hypertension patients at Santa Elisabeth Hospital Medan is at a moderate level, this is due to patients who are controlled by poly-heart most BPJS users. The data obtained from respondents did not comply with control because

Elisabeth Hospital was included in type B where the process for a visit to the poly must be from a referral to the BPJS level 1 health facility resulting in lazy patients in the registration process at the Heart Poly of Santa Elisabeth Hospital Medan. The data received from the response was non-compliant in consuming hypertension medication because most patients felt that the situation had improved so that the patient did not maintain a healthy lifestyle such as consuming excess salt food and exercising.

In the aspect of forgetting, there were 55 respondents (67.1%) who stated that they took all drugs yesterday and 19 respondents (23.2%) who stated that they were obedient to taking drugs. Data obtained from patients said that they were obedient in taking medication because the patient felt that he was unwell so the patient reminded him to always take medication. Obedient in taking medicine and when the patient begins to despair in obeying to continue taking medicine, the patient's family always gives encouragement and in the aspect of carelessness, there are 49 respondents (59.8%) who stated that sometimes they forget to take medicine, 43 respondents (52.4%) in the last two weeks have forgotten to take medicine, and 51 respondents (62.2%) said that they forgot to bring medicine when leaving the house. Data obtained from patients sometimes forget to take or forget to bring medicine when leaving the house due to the busyness of daily activities and the absence of family support such as in reminding patients to take medicine.

In the aspect of stopping the drug when feeling better, or starting the drug when feeling worse, there were 42 respondents (51.2%) who had reduced or stopped using the drug without telling the doctor because they felt worse/uncomfortable, 51 respondents (62.2%) stopped taking the drug when they felt better, and 39 respondents (47.6%) Some people felt uncomfortable if they had to take the drug every day. Data obtained from patients said that patients decided to take medication because they felt better and also felt disturbed due to daily activities and work. So that the patient takes medication if his blood pressure is high and stops when he has recovered.

In line with the results of Fitri's research, et al. (2023) said that the medication compliance rate of 50 hypertensive patients at BMCI Malang Clinic using the MMAS-8 questionnaire obtained a low compliance rate of 26%, more than half of the respondents had a moderate compliance rate (60%) and a high compliance rate (14%). It is known that as many as 24 respondents (48%) have had occasional difficulty in remembering the time to take anti-hypertensive drugs, 10 respondents (20%) have had difficulty remembering the schedule of taking medication 1-2 times in 1 week, and 16 respondents (32%) always remember the schedule of taking anti-hypertensive drugs. Not taking anti-hypertensive drugs can be caused

by various factors, such as a busy work schedule, patients do not feel symptoms that cause laziness to take anti-hypertensive drugs (Fitri et al., 2023).

According to Research by Indriana et al, (2020), it shows that the characteristics of 79 respondents at X Cilacap Hospital for high compliance levels were 36 respondents (45.6%), moderate compliance as many as 29 respondents (36.7%), and low compliance as many as 14 respondents (17.7%). This research is the same as the results of Bianti, (2015) research related to medication adherence, there are patients who are already aware of the consequences of their disease so they are obedient and routinely take medication (Indriana & Swandari, 2021).

Based on age, it shows that out of 82 respondents, the most are 39-53 years old, as many as 38 respondents (47.6%). Researchers assume that the longer the patient's lifespan, the longer they will be treated so that they have a lot of experience in doing treatment and are more aware of the consequences of the disease experienced so that at that age they are familiar with the treatment they are doing. In line with research conducted by Riani and Putri, in 2023 the highest level of compliance is in the age group of  $\leq 65$  years. This is because both systolic blood pressure (TDS) and diastolic blood pressure (TDD) increase in line with age. Systolic blood pressure increases progressively until the age of 70-80 years, while diastolic blood pressure increases until the age of 50-60 years and then tends to settle down or decrease slightly. The risk of hypertension increases with age. Increasing age will cause some physiological changes. This is the influence of degeneration that occurs in people who get older (Riani & Putri, 2023).

Based on gender, it shows that out of 82 respondents, the most female gender is 48 respondents (58.5%). This is in accordance with research by Riani and Putri, 2023 explains that hypertension in women is higher than in men due to hormonal factors. Women experience a decrease in the hormone estrogen after menopause. Women who have not gone through menopause are protected by the hormone estrogen which has a protective effect on the heart. Gender is closely related to the prevalence of hypertension in women when the woman goes through menopause. When women enter the menopausal phase, it will increase the risk of hypertension caused by reduced production of the hormone estrogen which will have an impact on increasing blood pressure (Fitri et al., 2023).

Based on education, it shows that out of 82 respondents, most of the high school education is 32 respondents (39.0%). Researchers assume that high school graduates tend to have hypertension more than those with lower education likely due to ignorance of a good diet. However, S3 education was also obtained for 1 respondent (1.2%) who did not comply



in consuming hypertension drugs. The data obtained from respondents said that non-compliance occurred due to the patient's busy work, so that patients felt uncomfortable in taking medication every day and sometimes forgot to take hypertension medication. The patient sometimes stops the medication because he thinks he has recovered.

Education level is one of the factors that can affect a person's understanding of the absorption of information. In line with the research conducted by Ottawa, et al. (2020) explained that based on the last education, most of the hypertension patients in this study have the last education of high school/equivalent. The last education taken has an effect on a person's level of awareness in preventing hypertension. However, awareness of implementing a healthy lifestyle in preventing hypertension can also be influenced by the personality and lifestyle of each individual. Currently, information on a healthy lifestyle is very easy to obtain from various media such as posters, the internet or promotions carried out by health workers, so it can be concluded that the last education does not completely affect a person's mindset in living life (Ottawa et al., 2022).

Based on the length of time they suffered from hypertension, it showed that out of 82 respondents, the most respondents had 24 respondents (29.3%). Researchers assume that this may be caused if the longer a person suffers from hypertension, then most sufferers will feel bored to go for treatment, especially if the level of recovery that has been achieved is not as expected. This is in accordance with the research of Rasyid, et al. (2022) explaining that more respondents have suffered from hypertension for a long time. Patients who have experienced hypertension for one to five years tend to obey the process of taking medication because of great curiosity and a great desire to recover, therefore they will regularly come to the health center, while patients who have experienced hypertension for more than five years have a tendency to take worse medication adherence. This is due to more patient experience, where patients who have complied with the treatment process but the results obtained are not satisfactory, so patients tend to give up and do not comply with the treatment process undergone (Al Rasyid et al., 2022).

## **5. CONCLUSION AND SUGGESTION**

Based on the results of the study from a total of 82 respondents, it was concluded that the results of the study showed that the level of adherence to taking medication in hypertensive patients at the Heart Polyclinic of Santa Elisabeth Hospital Medan in 2024 was at most moderate compliance as many as 31 respondents (37.8%), low compliance was 29 respondents (35.4%), and high compliance was 22 respondents (26.8%).

For Further Researchers related to the patient's level of medication adherence, it is recommended to identify the factors that affect medication adherence.

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