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Medication Therapy Adherence Among Outpatient Patients with Hypertension

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Hypertension is a chronic disease with an increasing prevalence and is a major risk factor for cardiovascular complications, including stroke, kidney failure, and premature mortality. Medication adherence is an important factor in achieving optimal blood pressure control and preventing long-term complications. This study aimed to determine the level of medication therapy adherence among outpatient patients with hypertension at R.A. Basoeni Regional General Hospital, Mojokerto. This study used a descriptive observational design with a cross-sectional approach. The sample consisted of 97 outpatient hypertensive patients selected using purposive sampling based on the inclusion and exclusion criteria. The variable in this study was the level of adherence to antihypertensive medication therapy. Data was collected using a newly developed medication adherence questionnaire that had been tested for validity and reliability prior to use. The data were analyzed descriptively and presented as frequency and percentage distributions. The results showed that most respondents had a moderate level of adherence, accounting for 41 respondents or 42.3 percent. This was followed by low adherence in 30 respondents or 30.9 percent, high adherence in 19 respondents or 19.6 percent, and non-adherence in 7 respondents or 7.2 percent. Moderate to low adherence was mainly related to patients forgetting to take medication, not taking medication on time, discontinuing treatment when they felt healthy without consulting a physician, and stopping medication due to perceived side effects. In conclusion, medication adherence among outpatient patients with hypertension remains suboptimal. Continuous patient education, medication counselling, and family support are needed to improve adherence and optimize hypertension therapy outcomes.

Hypertension is one of the most common non communicable diseases worldwide. It contributes substantially to the burden of cardiovascular diseases, including stroke, disability, kidney failure, and premature mortality [1]. According to the 2023 Indonesian Health Survey, the prevalence of hypertension based on physician diagnosis and blood pressure measurements reached 30.8 percent among individuals aged 18 years and older [2]. In East Java Province, approximately 11,702,478 individuals aged 15 years and above were reported to have hypertension, with a prevalence of 48.8 percent among males and 51.2 percent among females [3]. Furthermore, data from the Mojokerto District Health

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Office in 2022 showed that out of 322,512 residents who underwent blood pressure measurement, 30.96 percent or 99,852 individuals were diagnosed with hypertension [4]. Several factors contribute to the development of hypertension, including non-modifiable risk factors such as age, sex, race, and genetic predisposition, as well as modifiable risk factors such as obesity, stress, smoking, physical inactivity, alcohol consumption, high salt intake, and insufficient dietary fiber [5]. Blood pressure control is therefore essential for successful hypertension management, including lifestyle modification.

Patient adherence is a key determinant of therapeutic outcomes. Medication adherence is generally defined as the extent to which patients take medications and follow all prescribed instructions. Factors that may influence adherence to antihypertensive treatment include age, sex, educational level, occupation, duration of illness, and family support [6]. Long term therapy is required in patients with hypertension, as adherence to medication is crucial for controlling blood pressure and reducing the risk of complications. Medication nonadherence refers to a condition in which patients do not comply with pharmacological therapy as recommended by healthcare professionals [7]. Forms of nonadherence may include not taking medication according to the prescribed schedule, reducing or increasing the dose without medical guidance, and discontinuing therapy independently [7]. This condition may be influenced by various factors such as limited patient knowledge regarding the disease, perceived drug side effects, and treatment fatigue due to prolonged therapy duration. Nonadherence to medication negatively affects therapeutic outcomes, resulting in suboptimal treatment effectiveness [7].

Regional General Hospital R.A. Basoeni is a government owned hospital in Mojokerto District that provides outpatient services to a large and diverse population, including a substantial number of patients with hypertension. One of the reasons for the persistent prevalence of hypertension is patient nonadherence to medication therapy. This nonadherence is often associated with insufficient information and understanding of treatment and all aspects of medication therapy. Adherence to antihypertensive medication is a crucial factor in achieving therapeutic success, considering that hypertension is a chronic disease requiring long term treatment to maintain controlled blood pressure. Therefore, this study aimed to identify the level of medication adherence among patients with hypertension at Regional General Hospital R.A. Basoeni Mojokerto, as well as factors influencing adherence. The findings are expected to provide deeper insight into patient adherence to antihypertensive medication therapy and serve as a basis for evaluation in improving pharmaceutical care services at the hospital.

Results and Discussion

Respondent characteristics are important components that may influence medication adherence, as demographic factors often affect individual health behaviors. These demographic characteristics include age, sex, educational level, occupation, duration of illness, and family support. The data were obtained through questionnaires completed by outpatient patients with hypertension who met the inclusion criteria of the study.

The results of this study indicate that the majority of outpatients with hypertension were in the 41–60 years age group, accounting for 45 respondents (46%), followed by those aged over 60 years with 28 respondents (29%), and those aged 24–40 years with 24 respondents (25%). The frequency distribution table shows that high medication adherence was most frequently observed among respondents aged over 60 years (8 respondents), while moderate adherence was most prevalent in the 41–60 years age group (21 respondents). Low adherence was also most found among respondents aged 41–60 years (17 respondents). Meanwhile, the nonadherence category was observed across all age groups in relatively small numbers.

Respondent Characteristics Based on Age

Table 1. Respondent Characteristics Based on Age

Age	Frequency (n)	Percentage (%)	High Adherence	Moderate Adherence	Low Adherence	Nonadherence
24-40	24	25	5	8	7	4
41-60	45	46	6	21	17	1
>60	28	29	8	12	6	2
Total	97	100	19	41	30	7

These findings suggest that age influences medication adherence, with respondents aged over 60 years tending to demonstrate higher adherence levels, whereas those in the productive age group of 41–60 years were predominantly classified within the moderate and low adherence categories. The highest proportion of respondents with hypertension was observed among individuals aged 41–60 years, with a total of 45 respondents (46%). This finding is consistent with previous research [8], which reported that the majority of individuals affected by hypertension were within the 41–60 years age range. Hypertension is a multifactorial condition resulting from a combination of several risk factors. One of the most significant contributors to physiological changes in the body is aging. After the age of 40 years, collagen accumulation occurs in the muscle layer, leading to thickening of the arterial walls, which reflects a natural degenerative process. This condition causes arterial narrowing and stiffness, thereby affecting blood flow and forcing the heart to work harder than normal [9].

In contrast, younger respondents were less frequently affected by hypertension; however, younger individuals may still develop hypertension due to genetic factors, unhealthy dietary patterns such as high fat intake, obesity, stress, and poor lifestyle habits including lack of physical activity [10]. Furthermore, a study conducted by [11] reported a strong association between age and medication adherence. Individuals in early adulthood, middle adulthood, and late adulthood may experience frustration or denial regarding their illness, which can lead to nonadherence to medical advice and prescribed treatment.

Respondent Characteristics Based on Sex

Table 2. Respondent Characteristics Based on Sex

Sex	Frequency (n)	Percentage (%)	High Adherence	Moderate Adherence	Low Adherence	Nonadherence
Male	24	25	4	11	6	3
Female	73	75	15	30	24	4
Total	97	100	19	41	30	7

Based on **Table 2**, the majority of outpatients with hypertension were female, with a total of 73 respondents (75%), while male patients accounted for 24 respondents (25%). The distribution of medication adherence by sex showed that among male respondents, the highest proportion of adherence was in the moderate category, with 11 respondents, followed by low adherence with 6 respondents, high adherence with 4 respondents, and nonadherence with 3 respondents. Meanwhile, among female respondents, 30 respondents were classified as having moderate adherence, 24

respondents as low adherence, 15 respondents as high adherence, and 4 respondents as nonadherence. These results indicate that for both male and female respondents, the highest level of medication adherence was predominantly in the moderate category.

Men are at higher risk of developing hypertension at an age younger than 45 years, whereas women experience an increased risk after menopause. This finding is consistent with a study conducted by [12], which reported that the majority of respondents with hypertension were female, accounting for 28 respondents (70%), compared to 12 male respondents (30%). The higher prevalence among women may be attributed to more complex hormonal conditions compared to men. The risk of hypertension in women increases after menopause due to a decline in estrogen levels, which leads to a reduction in High Density Lipoprotein levels. Low HDL cholesterol levels contribute to the development of atherosclerosis [13]. Postmenopausal women have lower estrogen levels, whereas estrogen plays a role in increasing HDL levels, which are essential for maintaining vascular health [12].

In line with previous research [14], there is an association between sex and adherence to antihypertensive medication therapy. This may be explained by the tendency of women to be more attentive to their health, whereas men often neglect their physical condition. Even when diagnosed with a disease, many men remain reluctant to seek regular health checkups, which may contribute to lower adherence to prescribed therapy [14].

Respondent Characteristics Based on Educational Level

Table 3. Respondent Characteristics Based on Highest Educational Level

Highest Educational Level	Frequency (n)	Percentage (%)	High Adherence	Moderate Adherence	Low Adherence	Nonadherence
No Formal Education	2	2,1	1	0	1	0
Primary School	30	30,9	7	14	8	1
Junior School	26	26,8	1	12	12	1
Senior High School	28	28,9	5	10	9	4
Diploma/ Bachelor's Degree	11	11,3	5	5	0	1
Total	97	100	19	41	30	7

The results of respondent characteristics based on highest educational level showed that the majority of outpatients with hypertension were primary school graduates, accounting for 30 respondents (30.9%). This was followed by senior high school graduates with 28 respondents (28.9%), junior high school graduates with 26 respondents (26.8%), diploma or bachelor's degree holders with 11 respondents (11.3%), and respondents with no formal education totalling 2 respondents (2.1%).

Regarding medication adherence levels, the high adherence category was predominantly observed among respondents with a primary school educational background, with 7 respondents, followed by those with senior high school and diploma or bachelor's degree education, each accounting for 5 respondents. Similarly, in the moderate adherence category, the highest number of respondents also had a primary school educational background, totaling 14 respondents, followed by those with junior high school education with 12 respondents, and senior high school education with 10 respondents. Meanwhile, in the low adherence category, the majority of respondents had a junior high school educational background, accounting for

12 respondents. In the nonadherence category, the highest frequency was observed among respondents with a senior high school educational background, with 4 respondents.

Educational level is an important indicator of an individual's ability to understand and access information obtained from external sources, particularly health related information associated with awareness of proper adherence to hypertension treatment. Educational level indirectly influences blood pressure by affecting lifestyle behaviors, including smoking habits, alcohol consumption patterns, dietary intake, and physical activity [12]. Lower educational attainment may reduce an individual's capacity to absorb information and understand the disease, its therapy, and the potential consequences of medication nonadherence. Patients with lower educational levels are more likely to be nonadherence to treatment compared to those with higher educational attainment [15]. Hypertensive patients with limited knowledge and self-awareness are at increased risk of poor blood pressure control. Uncontrolled hypertension may lead to various complications in the future [12].

Respondent Characteristics Based on Occupation

Table 4. Respondent Characteristics Based on Occupation

Occupation	Frequency (n)	Percentage (%)	High Adherence	Moderate Adherence	Low Adherence	Nonadherence
Self Employed	44	45,4	11	19	11	3
Housewife	50	51,5	7	21	18	4
Unemployed	3	3,1	1	1	1	0
Total	97	100	19	41	30	7

Based on the results presented in **Table 4**, the majority of outpatient respondents with hypertension were housewives, accounting for 50 respondents (51.5%). This was followed by self-employed respondents, including farmers, traders, and other occupations, with 44 respondents (45.5%). Respondents who were unemployed accounted for 3 respondents (3.1%).

Among the self-employed group, 19 respondents were classified in the moderate adherence category, 11 respondents in the high and low adherence categories, and 3 respondents in the nonadherence category. In the housewife group, 21 respondents were classified as having moderate adherence, 18 respondents as low adherence, 7 respondents as high adherence, and 4 respondents as non-adherent. Meanwhile, among unemployed respondents, there was 1 respondent in each of the high adherence, moderate adherence, and low adherence categories. These findings indicate that occupational status influences variations in medication adherence among respondents.

A study conducted by [16] reported that the majority of respondents who were employed did not consume antihypertensive medication as prescribed by physicians. This behavior was influenced by internal factors related to respondents' attitudes, particularly the tendency to prioritize work over attending healthcare services for regular checkups and taking medication on time. Working respondents are more likely to forget to take their medication and often do not carry their medication while working. In addition, work related demands may prevent respondents from taking medication at the scheduled time or cause doses to be missed [17].

Based on the data presented in **Table 5**, the majority of respondents with hypertension had a duration of diagnosis of less than five years, totaling 80 respondents (82%). In contrast, respondents who had been diagnosed with hypertension for more than

five years accounted for 17 respondents (18%). Among respondents with a duration of hypertension of less than five years, the majority demonstrated a moderate level of medication adherence, with 34 respondents, followed by low adherence in 22 respondents, high adherence in 17 respondents, and nonadherence in 7 respondents. Meanwhile, among respondents who had been diagnosed with hypertension for more than five years, the highest proportion was observed in the low adherence category, with 8 respondents, followed by moderate adherence in 7 respondents and high adherence in 2 respondents.

Respondent Characteristics Based on Duration of Hypertension

Table 5. Respondent Characteristics Based on Duration of Hypertension

Duration of Diagnosis	Frequency (n)	Percentage (%)	High Adherence	Moderate Adherence	Low Adherence	Nonadherence
< 5 years	80	82	17	34	22	7
> 5 years	17	18	2	7	8	0
Total	97	100	19	41	30	7

According to a study conducted by [13], the duration of illness may have both positive and negative effects on patient adherence to antihypertensive medication. The longer patients suffer from hypertension, the higher their level of adherence may become, as they become more accustomed to taking antihypertensive medication. In line with findings reported by [12], most patients tend to be more diligent in adhering to treatment when they have experienced hypertension over a long period, due to increased awareness of their condition, which encourages them to pay greater attention to their health and undergo regular check ups. Furthermore, a study by Putri and Mulyono (2022) demonstrated that the duration of hypertension is substantially associated with adherence to antihypertensive therapy [18]. Conversely, Jayanti et al. (2024) found no significant relationship between the duration of hypertension and medication adherence [19]. However, based on proportional analysis, respondents with a hypertension duration of five years or more exhibited a lower percentage compared to those with a duration of five years or less.

Respondent Characteristics Based on Family Support

Table 6. Respondent Characteristics Based on Family Support

Family Support	Frequency (n)	Percentage (%)	High Adherence	Moderate Adherence	Low Adherence	Nonadherence
Always	59	60,8	16	24	15	4
Sometimes	18	18,6	0	9	7	2
Never	20	20,6	3	8	8	1
Total	97	100	19	41	30	7

Based on **Table 6**, the majority of respondents received family support regarding hypertension medication therapy. Most patients selected the response “Always,” with a frequency of 59 respondents (60.8%), followed by “Never” with 20 respondents (20.6%), and “Sometimes” with 18 respondents (18.6%). Respondents who always received family support showed medication adherence distributed across 24 respondents with moderate adherence, 16 respondents with high

adherence, 15 respondents with low adherence, and 4 respondents with nonadherence. Among respondents who reported receiving family support sometimes, 9 respondents demonstrated moderate adherence, 7 respondents showed low adherence, and 2 respondents were classified as non-adherent. Meanwhile, among respondents who never received family support, 8 respondents were classified as having moderate and low adherence, 3 respondents had high adherence, and 1 respondent was categorized as non-adherent. These findings indicate that family support plays an important role in improving medication adherence among patients with hypertension. Respondents who consistently received family support demonstrated better adherence compared to those who did not receive such support.

Individuals who are ill naturally require attention from their families; therefore, family support is essential. Family members can act as motivators for patients, encouraging them to maintain a positive outlook toward their illness and to adhere to the therapy recommended by healthcare professionals. In line with a study conducted by Prihatin et al. (2022), family members who provide strong and compassionate support to relatives with hypertension have a significant influence on medication adherence [20]. Family support forms such as accompanying patients to healthcare facilities, assisting with treatment costs, and reminding patients to take their medication have been shown to improve adherence among patients with hypertension compared to those who receive limited family attention [20].

This finding is also consistent with a study by Puteri et al. (2024), which reported a significant relationship between family support and medication adherence [21]. Greater family support increases the likelihood that patients will continue hypertension treatment. Family support can enhance self-confidence and motivation when facing health problems or illness. Patients with hypertension are more motivated to improve their health when they receive emotional support from their families. Furthermore, a study by Wahyu et al. (2023) also confirmed that family support is associated with medication adherence [22]. Families play an active role in the recovery process of their members by helping them recognize and manage ongoing health problems.

Level of Antihypertensive Medication Adherence

Table 7. Level of Antihypertensive Medication Adherence

Medication Adherence	Frequency (n)	Percentage (%)
High	19	19,6
Moderate	41	42,3
Low	30	30,9
Nonadherence	7	7,2
Total	97	100

The highest level of patient adherence to antihypertensive medication therapy was found in the “moderate adherence” category, with a total of 41 patients (42.3%), followed by the “low adherence” category with 30 patients (30.9%). Furthermore, 19 patients (19.6%) were classified as having “high adherence,” while 7 respondents (7.2%) were categorized as “non-adherent.” Adherence levels were assessed based on the total score obtained from the questionnaire, where high adherence was defined as a score of 8, moderate adherence as a score of 6 to less than 8, low adherence as a score of 4 to less than 6, and non-adherence as a score of 4 or below.

Based on **Table 7**, it can be observed that the majority of hypertensive patients demonstrated a

moderate level of adherence to antihypertensive medication therapy, accounting for 41 individuals (42.3%). This finding indicates that most respondents followed the prescribed treatment regimen reasonably well, although inconsistencies in its implementation were still evident. The analysis revealed that many patients discontinued their medication when they felt healthy without first consulting a physician. In addition, patients also stopped taking their medication when they experienced side effects perceived as harmful. Non-adherence to medication consumption was further attributed to patients forgetting to take their medication on time or failing to bring it with them while traveling. This was reflected in responses to questionnaire items number 1 and 4, where a considerable number of respondents answered "yes."

Such behavior represents inappropriate use of antihypertensive medication, as these medications should not be discontinued without a physician's approval. Forgetfulness in taking medication may be caused by urgent situations such as work demands, intentional non-adherence, or patient reluctance to take medication. This finding is consistent with the study conducted by Mura et al. (2023), which reported that 90 respondents (65.7%) had a moderate level of adherence, with non-adherence primarily caused by discontinuing medication when patients felt healthy [23]. Intentional discontinuation of treatment may result from various factors, including daily activities that make it difficult for patients to manage medication schedules, boredom or fatigue from long-term therapy, insufficient knowledge regarding proper medication use, lack of supervision, and a tendency to forget to take medication on time [24]. Boredom was identified as the most common reason for patients failing to take their medication as prescribed [24].

A high level of knowledge can be demonstrated by patients who understand and are aware of the objectives of their treatment [23]. The results of this study are also consistent with findings reported by Sumiasih et al. (2020), which showed that respondents predominantly exhibited a moderate level of adherence [13]. The primary reason for non-adherence to antihypertensive medication in that study was forgetfulness. Forgetfulness can be defined as the inability to recall previously acquired information or knowledge. In the context of medication adherence, forgetfulness is a major factor contributing to low adherence levels. The more frequently a patient forgets to take their medication, the poorer their adherence becomes [25]. Patients often forget to take medication due to busy schedules, and the habit of delaying medication intake may further increase the likelihood of forgetfulness [25].

Insufficient knowledge regarding treatment can complicate medication adherence. Low adherence to antihypertensive therapy can have serious consequences, including uncontrolled blood pressure, which may lead to long-term complications such as stroke and chronic kidney failure [26]. This study is also in line with the findings of Fany S et al. (2023), which reported that patient adherence was predominantly in the moderate or sufficient category, with a percentage of 59.65% [27]. That study revealed that non-adherence was caused by forgetfulness and a lack of understanding regarding hypertension complications and management. Additional reasons included discontinuing antihypertensive medication when patients felt better, consuming medication only when symptoms appeared, and stopping treatment due to side effects.

In the study conducted by Khairunnisa and Fayuning (2025), it was found that most hypertensive patients had a moderate level of adherence [28]. Several respondents admitted that they frequently forgot to take their medication and believed that medication was only necessary when symptoms occurred [28]. Others reported forgetting to bring medication while traveling and missing routine follow-up visits to healthcare facilities. These findings are supported by the study conducted by Rahmedani and Dwi (2024), which showed that most respondents undergoing antihypertensive therapy were categorized as having moderate adherence [29]. Non-adherence occurred because patients felt their condition had improved and independently decided

to discontinue treatment without consulting a healthcare professional [29].

Regular and consistent medication use significantly influences the success of antihypertensive therapy and subsequently affects patients' quality of life. The success of hypertension treatment is influenced by various factors, one of which is medication adherence, enabling patients to maintain normal blood pressure levels [30]. Poor adherence to hypertension treatment may hinder the achievement of controlled blood pressure and increase the risk of cardiovascular diseases [31]. Adherence to antihypertensive therapy plays a crucial role in determining therapeutic outcomes. Patients who take antihypertensive medication according to physicians' recommendations have a higher likelihood of achieving optimal blood pressure control. Effective blood pressure control reduces the risk of long-term complications such as stroke, coronary heart disease, kidney failure, and other organ damage. Conversely, non-adherence behaviors such as forgetting medication schedules, discontinuing therapy without consultation, or irregular medication use can impede blood pressure control. Therefore, improving patient adherence is a key strategy in long-term hypertension management through collaboration among patients, healthcare providers, and family members.

The distribution of questionnaire responses showed that the majority of respondents answered correctly on most items. The highest percentage of correct responses was observed for item 7, with 91 respondents (93.8%), followed by item 2 with 82 respondents (84.5%) and item 5 with 76 respondents (78.4%). In contrast, the highest proportion of incorrect responses was found in item 1, with 46 respondents (47.4%), followed by item 4 and item 6, which had 39 respondents (40.2%) and 30 respondents (37.1%), respectively.

For item 8, a total of 88 respondents (90.7%) reported that they never experienced difficulty in taking their medication. Only a small proportion of respondents reported occasional difficulty, including 5 respondents (5.1%) who answered "rarely," 3 respondents (3.1%) who answered "sometimes," and 1 respondent (1.0%) who answered "always." These findings indicate that most respondents demonstrated good understanding and adherence to antihypertensive medication therapy. However, several aspects still require further evaluation, particularly items with a high proportion of incorrect responses.

Table 8. Distribution of Questionnaire Responses

Question Item	Correct	Incorrect
Have you ever forgotten to take your medication for your illness?	51 (52,6%)	46 (47,4%)
During the past two weeks, have you intentionally not taken your medication?	82 (84,5%)	15 (15,5%)
Have you ever reduced or stopped taking your medication without informing your doctor because you felt worse when taking it?	67 (69%)	30 (31%)
When you travel, do you ever forget to bring your medication?	58 (59,8%)	39 (40,2%)
Did you take your medication yesterday?	76 (78,4%)	21 (21,6%)
When you feel better, do you stop taking your medication?	61 (62,9%)	36 (37,1%)
Do you feel bothered or inconvenienced by having to follow your treatment?	91 (93,8%)	6 (6,2%)
Do you have difficulty taking all of your medication? a. Never b. Rarely c. Sometimes d. Usually e. Always	Never = 88 (90,7%) Rarely = 5 (5,1%) Sometimes = 3 (3,1%) Usually = 0 Always = 1 (1%)	

Conclusion

Based on the results of this study, the majority of patients receiving antihypertensive medication therapy at RSUD RA Basoeni Mojokerto were classified as having a moderate level of adherence, accounting for 41 respondents (42.3%). This was followed by low adherence in 30 respondents (30.9%), high adherence in 19 respondents (19.6%), and non-adherence in 7 respondents (7.2%). These findings indicate that a substantial proportion of patients do not adhere optimally to antihypertensive medication therapy.

Materials and Methods

The instrument used in this study was a medication adherence questionnaire developed by researchers based on indicators of adherence to antihypertensive therapy. The questionnaire consisted of adherence-related items with structured response options. The items assessed patient behavior in taking antihypertensive medication, including taking medication according to schedule, forgetting to take medication, discontinuing medication without consulting a physician, stopping medication when feeling better, and adherence to long-term treatment.

Before being used for data collection, the questionnaire was tested for validity and reliability. The validity test was conducted using the Pearson product-moment correlation test. Each questionnaire item was considered valid if the calculated R-value was greater than the R-table value at a significance level of 0.05. The reliability test was conducted using Cronbach's alpha coefficient. The questionnaire was considered reliable if the Cronbach's alpha value was greater than 0.60. The results of the validity and reliability tests indicated that the questionnaire was valid and reliable for measuring medication adherence among outpatient patients with hypertension.

Each response was scored according to the predetermined scoring criteria. The total adherence score was obtained by summing the scores of all questionnaire items. The obtained score was then converted into a percentage using the following formula:

Percentage score = obtained score / maximum score × 100%

The percentage score was categorized into four levels of medication adherence. A score of 76–100% was categorized as high adherence, 56–75% as moderate adherence, 40–55% as low adherence, and less than 40% as non-adherence. Higher scores indicated better adherence to antihypertensive medication therapy. [31]

Sampling Technique

The sampling technique used in this study was non-probability sampling with a purposive sampling approach. The sample was selected based on the following inclusion and exclusion criteria.

Sample Size Calculation

The sample size in this study was determined using the Slovin formula because the study population was known. The formula used was as follows:

$n = N / 1 + N(e^2)$

Where:

n = required sample size

N = total population

e = margin of error

Based on the population of outpatient hypertensive patients at R.A. Basoeni Regional General Hospital, Mojokerto, the minimum sample size was calculated using a 10% margin of error. The calculation resulted in a minimum sample size of 97 respondents. Therefore, this study included 97 outpatient hypertensive patients who met the inclusion and exclusion criteria.

Inclusion Criteria:

1. Hypertensive patients receiving outpatient treatment at RSUD R.A. Basoeni, Mojokerto.
2. Patients aged 19–80 years.
3. Patients who were willing to participate as respondents in the study, as indicated by completing the questionnaire and signing a

written informed consent form after receiving an explanation regarding the objectives, procedures, benefits, confidentiality of data, and voluntary nature of participation in the study.

4. Patients who were able to communicate, read, and write adequately, with no language barriers.

Exclusion Criteria:

1. Patients who did not complete the questionnaire in full.

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