

## Analysis Of Treatment Compliance For Hypertension Patients In The City Health Center In The North Region Of Kediri City

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### ABSTRACT

Hypertension is a medical condition with high prevalence throughout the world. In Indonesia, of the 8.8% of hypertension sufferers aged  $\geq 18$  years, only 54.4% regularly take medication, while the remaining 32.3% do not regularly take medication, and 13.3% do not taking hypertension medication. Including in East Java Province and especially in Kediri City. This study aims to analyze treatment compliance for hypertensive patients at the North Region City Health Center of Kediri City in 2023 and the factors that influence the level of compliance. The type of research carried out was quantitative with a cross-sectional research design using the Medication Adherence Report Scale (MARS) questionnaire. This research was carried out in June 2023. The samples used were in accordance with the inclusion and exclusion criteria. Data analysis using SPSS, a total of 161 samples of respondents suffering from hypertension at the City Health Center in the Northern Region of Kediri City. The research results showed that as many as 161 respondents met high and moderate compliance, 146 (90.7%) of the 161 respondents had a high level of compliance and 15 respondents (9.3%) had a medium level of compliance. It was concluded that there was no significant influence between age, gender and education on compliance with hypertension treatment. Shows that hypertensive patients at the North Region City Health Center of Kediri City realize the importance of treatment in maintaining and improving patient health.

**Keywords:** Hypertension, Medication Adherence, MARS

### INTRODUCTION

Hypertension is a condition when the measured systolic pressure is  $\geq 140$  mmHg or the measured diastolic pressure is  $\geq 90$  mmHg (WHO, 2019). Hypertension is a medical condition with high prevalence. Global cases of hypertension are estimated at 22% of the total world population. Around 2/3 of hypertension sufferers come from lower middle economic countries (Ministry of Health, 2019).

In Indonesia, of the 8.8% of hypertension sufferers aged  $\geq 18$  years, only 54.4% regularly take medication, while the remaining 32.3% do not regularly take medication, and 13.3% do not take hypertension medication (Balitbang Kemenkes RI, 2018). Factors for non-adherence in taking medication are very complex, including ignorance about the disease and the treatment being carried out, costs incurred, side effects of the medication, and medication dosage regimens. The number of hypertension sufferers in East Java based on data from the East Java Provincial Health Service (2019) in 2019 reached 40.1% or around 4,792,862 people, with the proportion of men being 35% (2,001,297 people) and women being 41.6% (2,567,862 inhabitants).

In East Java, the prevalence of blood pressure measurement results increased from 26.3% to 36.3%. Meanwhile, in 2020 the incidence of hypertension has reached more than



98,613 (Dinkes.2020). In 2021 until November, it is known that the number of hypertension continues to increase. Meanwhile, hypertension in the city of Kediri is in the top 10 most common diseases in the city of Kediri.

One of the goals of hypertension treatment is to improve the patient's quality of life which can be achieved through medication adherence. Compliance with taking medication plays a part in controlling the blood pressure of hypertensive sufferers, thereby reducing long-term effects that can damage body parts. Compliance with taking medication among hypertension sufferers throughout the world is less than 50% in a year (Dzau and Balatbat, 2019).

Based on the above background, this study aims to analyze treatment compliance for hypertensive patients at the North Region City Health Center of Kediri City.

## METHODS

The type of research carried out was quantitative with a cross-sectional research design using the Medication Adherence Report Scale (MARS) questionnaire. This research was carried out in June 2023. The samples used were in accordance with the inclusion and exclusion criteria. Data analysis using SPSS, a total of 161 samples of respondents suffering from hypertension at the City Health Center in the Northern Region of Kediri City.

## RESULTS AND DISCUSSION

### A. Description of Patient Characteristics

#### 1. Distribution of Patients Based on Gender.

Distribution based on gender of Hypertension patients in the North Region City Health Center of Kediri City in 2023. Distribution based on gender can be seen in table 1.

Table 1. Distribution of patients by gender

Gender	Frequency (Patient)	Percentage(%)
Man	43	26.7
Woman	118	73.3
Total	161	100.0

The number of hypertension patients is listed in Table 1. In this study, it was found that 43 male hypertension patients were found (26.7%), while the number of female hypertension patients was 118 patients (73.3%). Based on table 3 of the distribution of patients based on gender above, it is known that hypertensive patients with female gender have a high frequency of 118 patients (73.3%).

#### 2. Distribution of Patients Based on Age Groups

Characteristics of the age of respondents and their relationship with the distribution of hypertension in the North Region City Health Center of Kediri City. The respondent's age group was divided into early adulthood (26 – 35 years), late adulthood (36 – 45), early elderly (46 – 55), late elderly (56 – 65 years), and seniors (> 65 years), as a representation of teenagers to late old age. Age characteristics have an important role in this research because the body's physiological functions tend to decline due to degenerative processes that occur during aging. This process can affect individual health and increase the risk of hypertension table 2. as follows:

Table 2. Distribution of patients by age

Age		
Early Adulthood	Frequency (Patient)	Percentage (%)
26-35 years old	0	0
Late adulthood 36-45 years old	3	1.9
Early seniors 46-55 years old	29	18
Late seniors 56 – 65 years old	60	37.3
Seniors >65 years	69	42.9
Total	161	100

The number of hypertension patients is in Table 2. In this study, hypertensive patients based on early adult age (26 - 35 years) there were 0 patients (0%), late adults (36 - 45) there were 3 patients (1.9%), Early elderly (46 – 55) had 29 patients

(18%), late elderly (56 – 65 years) had 60 patients (37.3%), and seniors (>65 years) had 69 patients (42.9%). Based on table 2, the distribution of patients based on age above shows that hypertensive patients aged >65 years have the highest frequency at 69 patients (42.9%).

### 3. Distribution of Patients Based on Educational History

Distribution based on educational history of Hypertension patients at the North Region City Health Center of Kediri City in 2023. Distribution based on educational history can be seen in table 3.

Table 3. Distribution of Patients Based on Educational History

Educational Background	Frequency (Patient)	Percentage(%)
No School	5	3.1
Elementary School	67	41.6
Junior High School	28	17.4
Senior High School	55	34.2
College	6	3.7
Total	161	100

The number of hypertension patients is shown in Table IV.5. In this study, there were 5 patients with a history of no school education (3.1%), 67 patients in elementary school (41.6%), 28 patients in junior high school (17.4%). %, SMA had 55 patients (34.2%), while at university there were 6 patients (3.7%).

### 4. Distribution of Patients Based on Occupational Groups

Distribution based on occupation of Hypertension patients at the North Region City Health Center of Kediri City in 2023. Distribution based on patient occupation can be seen in table 4.

Table 4. Distribution of Patients Based on Occupational Groups

From table 4. It was found that there were 1 patient (0.6%) of patients with a work

History	Frequency (Patient)	Percentage (%)
<b>Work</b>		
Government employees	1	0.6
Private sector employee	18	11.2
Entrepreneurial Employees	4	2.5
Trader	25	15.5
Housewife	88	54.7
Etc	25	15.5
<b>Total</b>	<b>161</b>	<b>100.0</b>

History as civil servants, 18 patients (11.2%), 18 patients (11.2%), 4 patients (2.5%), 25 patients as traders, 25 patients (15.5%) as traders. (%), Housewives 88 Patients (54.7%), Others 25 Patients (15.5%). The majority of patients suffering from hypertension are housewives, 88 patients (54.7%). On the other hand, civil servants (PNS, TNI, Polri) have a frequency of at least 1 patient (0.6%).

This research was conducted using a cross-sectional observational research method, the aim of the research was to analyze treatment compliance of hypertensive patients with factors that influence the level of compliance of hypertensive patients (Gender, Age, Education and Occupation) in the North Region City Health Center of Kediri City in 2023.

The research tool used a compliance questionnaire (MARS) with a questionnaire method, researchers distributed and gave questionnaires to respondents who suffered from hypertension and were undergoing treatment at the North Region City Health Center of Kediri City in 2023. Then respondents were asked to fill in an information sheet and questions indicating that the respondent participated in study. The number of respondents taken as a sample for research was 161 respondents who were tested for validity and reliability, 5 questions from the MARS (Medication Adherence Report Scale) questionnaire. The results of the validity test are declared "Valid", proven by the results of  $r_{count} > r_{table}$  (0.1538). Based on the reliability results of the MARS questionnaire using the Cronbach's Alpha Coefficient statistical test, the MARS questionnaire obtained a Cronbach's Alpha of 0.794 (0.794 > 0.6), meaning the questionnaire was declared reliable.

Analysis of respondent characteristics was carried out on 161 patients who had hypertension. The majority of people suffering from hypertension are elderly (>65 years), female, have a history of elementary school education, and work as housewives. Patients as respondents will undergo hypertension treatment at the North Region City Health Center of Kediri City in 2023.

The results of research on 161 respondents at the North Region City Health Center of Kediri City in 2023, based on analysis of the frequency distribution of respondents according to age, the highest was over 65 years of age (>65 years), namely 69 patients (42.9%), followed by the elderly. (56 – 65 years) was the second largest group, namely 60 patients (37.3%). Meanwhile, the early adult patient group was the group with a frequency of at least 3 patients (1.9%).

Based on the results of the analysis of the relationship between age and compliance in undergoing hypertension treatment, it was found that of the 69 hypertension patients as respondents aged more than 65 years (>65 years) who had high compliance with hypertension treatment, namely 61 respondents (37.9%) and those who had moderate compliance with hypertension treatment, namely 8 respondents (5%). Followed by 60 hypertensive patients as respondents aged more than 56 - 65 years as the second most hypertensive patients after seniors.

There were 54 respondents (33.5%) with high compliance followed by 6 respondents (3.7%) with moderate compliance. The results of this research are in line with Siswanti's research (2020) which examined the relationship between knowledge about hypertension and adherence to taking medication in hypertension sufferers, consisting of 52 people aged over 55 years. From the results of research at the North Region City Health Center of Kediri City in 2023, the majority of respondents were housewives, 157 respondents (52.3%). Most respondents who worked as housewives had a high level of compliance, as many as 82 respondents (50.9%) and 6 respondents (3.7%) had a moderate level of compliance with hypertension treatment. Compared to other jobs including (Civil Servants, Private Employees, Entrepreneurial Employees, Traders, etc.) with a total of 73 respondents (45.6%) most of the respondents with other jobs had a high level of compliance with 64 respondents (39.8%) and 9 respondents (5.6%) with a moderate level of compliance at the North Region City Health Center of Kediri City in 2023.

The results of this study are strengthened by research conducted by Puspita (2016) which shows that there is no relationship between work and treatment compliance in hypertensive patients with a value of  $p=0.908$ .

The results of the Chi Square test analysis obtained a  $p$  value = 0.386 ( $p < 0.05$ ), there is a significant influence between work on compliance in undergoing hypertension treatment at the North Region City Health Center of Kediri City in 2023. This research is in accordance with research conducted by Puspita, (2016) which shows that there is no significant relationship between work and adherence to medication use in hypertensive patients with a value of  $p=0.908$  ( $p < 0.05$ ).

Respondents who work as housewives have more free time to treat hypertension so that patients who work as housewives are more compliant in treating hypertension. Both housewives and other jobs have a high level of compliance with hypertension treatment. The absence of this difference is because the majority of respondents who work are in the non-formal sector where working time limits are not determined, so that respondents who work still have the same opportunity and availability of time as respondents who do not work to treat their hypertension. (Puspita, 2016).

## CONCLUSION

The results of research at the North Region City Health Center of Kediri City in 2023 using the MARS questionnaire method showed that the majority of hypertension patients had a high level of compliance with medication treatment, 146 (90.7%) of the 161 respondents had a high level of compliance and 15 respondents (9.3%) had a high level of compliance. This shows that hypertensive patients in the North Region City Health Center of Kediri City as respondents are aware of the importance of treatment in maintaining and improving patient health.

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