

## **The Relationship Between Knowledge and Adherence to Antihypertensive Medication Among Patients**

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### **ABSTRACT**

Hypertension is a major public health concern with a high prevalence and significant impact on morbidity and mortality. Non-adherence to antihypertensive medication remains a critical challenge, often influenced by patients' knowledge levels. This study aimed to examine the relationship between knowledge and medication adherence among hypertensive patients in the working area of Penujak Public Health Center, Praya Barat District, Central Lombok Regency. A quantitative approach with a cross-sectional design was employed. A total of 73 respondents were selected from 267 hypertensive patients using Slovin's formula and purposive sampling technique. Data collection utilized a knowledge questionnaire and the Morisky Medication Adherence Scale (MMAS-8), both tested for validity and reliability. Data analysis applied Chi-Square with a significance level of  $p < 0.05$ . The results indicated that 47.9% of respondents had low knowledge and 71.2% demonstrated low adherence. Statistical analysis revealed a significant relationship between knowledge and medication adherence ( $p = 0.021$ ). Patients with moderate to high knowledge levels showed better adherence than those with low knowledge. These findings underscore the necessity of continuous health education to improve patients' understanding and adherence to therapy, thereby reducing long-term complications.

**Keywords:** Adherence, Antihypertensive Medication, Hypertension, Knowledge, Public Health.

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### **1. BACKGROUND**

Hypertension, defined as a persistent elevation of blood pressure above normal levels, is a chronic disease that significantly contributes to cardiovascular morbidity and mortality worldwide [1]. The World Health Organization (WHO) estimates that nearly 1.28 billion adults aged 30–79 years are affected globally, with only 42% receiving an accurate diagnosis and appropriate treatment [2]. In Indonesia, hypertension prevalence continues to increase annually, exacerbated by dietary patterns rich in salt and fat, as well as sedentary lifestyles [3].

Despite the availability of effective antihypertensive medications, patient adherence remains low. WHO reports that only about 50% of patients with chronic diseases adhere to prescribed treatments, including those for hypertension [2]. Non-adherence can lead to uncontrolled blood pressure, increasing the risk of stroke, myocardial infarction, and renal

complications [4]. Previous studies have shown that knowledge is a crucial determinant of adherence, as patients with higher awareness of hypertension and its treatment tend to be more compliant [5].

Several factors influence patients' adherence, including education level, socioeconomic status, health literacy, and social support [6]. Patients who perceive hypertension as a serious condition and understand the benefits of medication are more likely to follow medical advice. Conversely, lack of knowledge often results in irregular drug intake, especially when symptoms are not perceived [7]. This highlights the need for continuous and structured health education.

Given the high burden of hypertension in Lombok Tengah, this study investigates the relationship between knowledge and adherence to antihypertensive medication among patients in the working area of Penujak Public Health Center. The results are expected to provide evidence for designing

effective health education strategies to improve adherence and reduce complications.

**2. RESEARCH METHODS**

This study employed a quantitative cross-sectional design to examine the relationship between knowledge and medication adherence.

**2.1 Participants/Sample**

The population consisted of 267 hypertensive patients at Penujak Public Health Center. Using Slovin’s formula with a margin of error of 5%, a sample of 73 respondents was selected through purposive sampling.

**2.2 Instruments**

Data were collected using two validated questionnaires: a knowledge questionnaire and the Morisky Medication Adherence Scale (MMAS-8). Both instruments had undergone validity and reliability testing.

**2.3 Data Collection**

Data were obtained through structured interviews and self-administered questionnaires.

**2.4 Data Analysis**

Descriptive statistics were used to summarize respondents’ characteristics, knowledge, and adherence levels. The Chi-Square test was applied to determine the relationship between knowledge and adherence, with a significance level set at  $p < 0.05$ .

**3. RESULTS AND DISCUSSION**

The study found that (Table 1.) most respondents had low knowledge (47.9%) and low adherence (71.2%). The Chi-Square test revealed a significant relationship between knowledge and adherence ( $p = 0.021$ ). Patients with better knowledge tended to show higher adherence.

**Table 1.**  
Knowledge level to Adherence

Knowledge Level	Low Adherence	Moderate Adherence	High Adherence	Total
Low	28 (53.8%)	5 (31.3%)	2 (40.0%)	35 (47.9%)
Moderate	23 (44.2%)	7 (43.8%)	3 (60.0%)	33 (45.2%)
High	1 (1.9%)	4 (25.0%)	0 (0.0%)	5 (6.8%)
Total	52 (71.2%)	16 (21.9%)	5 (6.8%)	73 (100%)

The findings confirm that knowledge significantly influences adherence to antihypertensive medication. Respondents with higher knowledge exhibited better adherence, supporting health behavior theories such as the Health Belief Model (HBM), which emphasizes that perceived severity and benefits shape health actions [9].

These results align with prior studies in Indonesia and abroad. Kurniawan et al. (2021) found that patients with good knowledge were 3.5 times more likely to adhere to treatment [10]. Similarly, Mekonnen et al. (2020) reported in Ethiopia that knowledge deficits were a key barrier to adherence [11]. Sari and Puspitasari (2022) further highlighted that structured health education programs significantly improved both knowledge and adherence [12].

However, some contrasting evidence exists. Toar et al. (2023) reported no significant relationship between knowledge and adherence, suggesting that other factors such as economic constraints and family support also play important roles [13]. Despite this, the current study reinforces the importance of educational interventions, particularly in primary healthcare settings.

**4. CONCLUSION**

This study demonstrates a significant relationship between knowledge and adherence to antihypertensive medication among patients in Penujak Public Health Center. Most respondents showed low knowledge and adherence, indicating a

pressing need for continuous health education. Improving patients' understanding of hypertension and its treatment could enhance adherence, ultimately reducing the risk of complications.

## 5. THANKS

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