



THE RELATIONSHIP BETWEEN SELF-CARE MANAGEMENT AND DECLINING OF BLOOD PRESSURE AMONG HYPERTENSIVE PATIENTS IN SUKAMAKMUR COMMUNITY HEALTH CENTER

HUBUNGAN *SELF CARE MANAGEMENT* DENGAN PENURUNAN TEKANAN DARAH PADA PASIEN HIPERTENSI DI PUSKESMAS SUKAMAKMUR ACEH BESAR

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Abstract

Hypertension is a non-communicable disease indicated by high blood pressure above 140/90 mmHg. This condition leads to major complications if treatment is not received. As a result, managing health is essential to control hypertension. The study aims to investigate the relationship between self-care and the decrease in blood pressure among hypertensive patients in Sukamakmur Public Health Center. The population was 110 hypertensive patients, and 86 respondents were selected as the sample using a random sampling technique. The research was conducted from 15 to 21 April 2025. A quantitative correlational research design was used with a cross-sectional approach. The research instruments were the Hypertension Self-Management Behavior Questionnaire (HSMBQ) and blood pressure assessed using a digital sphygmomanometer. The data that was analyzed from the Chi-Square test analysis showed a p-value of 0.020 ($p < 0.05$). This finding indicated a relationship between self-care management and blood pressure decline in hypertensive patients at the Sukamakmur Community Health Center. This study suggests that patients should be more active and consistently do self-care management to help maintain stable blood pressure levels.

Keywords: self-care management, hypertension.

Abstrak

Hipertensi salah satu penyakit tidak menular yang ditandai dengan peningkatan tekanan darah di atas 140/90 mmHg dan berisiko menimbulkan komplikasi serius apabila tidak ditangani, sehingga *self care management* berperan penting dalam mengendalikan hipertensi. Penelitian ini bertujuan untuk mengetahui hubungan *self care management* dengan penurunan tekanan darah pada pasien hipertensi di Puskesmas Sukamakmur. Populasi penelitian berjumlah 110



penderita hipertensi dengan sampel 86 responden yang dipilih menggunakan teknik *random sampling*. Penelitian dilaksanakan pada tanggal 15 sampai dengan 21 April 2025. Desain penelitian *korelasional* menggunakan metode kuantitatif dengan pendekatan *Cross-Sectional*. Instrumen penelitian berupa kuesioner *Hypertension Self Management Behavior Questionnaire* (HSMBQ) dan pengukuran tekanan darah menggunakan *digital sphygmomanometer*. Data yang diperoleh dengan analisis menggunakan uji *Chi-Square* dengan hasil nilai *p-value* sebesar 0,020 ($p < 0,05$). Kesimpulan ada hubungan *self care management* dengan penurunan tekanan darah pada pasien hipertensi di Puskesmas Sukamakmur. Peneliti menyarankan agar pasien hipertensi lebih aktif dalam menerapkan *self care management* secara konsisten untuk membantu menjaga kestabilan tekanan darah.

Kata Kunci: *Self Care Management*, Hipertensi

1. INTRODUCTION

The emergence of epidemiological transition in line with demographic growth in Indonesia has led to a shift from communicable diseases to non-communicable diseases (NCDs). According to the World Health Organization (WHO, 2020), non-communicable diseases are estimated to account for 73% of global deaths and 60% of the global disease burden (Akbar, 2018). One of the major non-communicable diseases that has become a global health concern is hypertension. Hypertension is a condition in which blood pressure in the arteries increases persistently over a long period of time. This condition is characterized by a systolic pressure greater than 140 mmHg and a diastolic pressure greater than 90 mmHg (Afrilia & Kholifah, 2023).

According to WHO (2020), there were approximately 1.28 billion people aged 30–79 years worldwide suffering from hypertension, meaning that one in three people globally has been diagnosed with the condition. This prevalence is expected to continue rising, with an estimated 1.5 billion people predicted to have hypertension by 2025 (Zhou et al., 2021). In Southeast Asia, the prevalence of hypertension in 2020 reached 39.9%. Based on Indonesia's 2018 Basic Health Research data, with a population of around 260 million, the prevalence of hypertension was 34.11%, with an estimated 63,309,620 cases and approximately 427,218 deaths caused by hypertension (Wulandari et al., 2023).

Data from the Aceh Provincial Health Office shows that hypertension cases reached 464,839. The highest number of hypertension cases was recorded in Aceh Tamiang Regency with 110,190 cases, followed by Aceh Timur Regency with 73,318 cases, and Simeulue Regency with 33,161 cases. The lowest number of cases was found in Sabang City, with 1,441 cases (Afriana et al., 2023).

In Aceh Besar Regency, data from the District Health Office showed that in 2018, there were 3,125 (0.7%) hypertension cases; in 2019, this increased to 4,230 (1%); in 2020, it rose to 16,832 (4.1%); in 2021, to 25,492 (6.23%); and in 2022, the number further increased to 33,271 cases (Aceh Besar Health Office, 2023).

At the Sukamakmur Health Center, data showed that in 2020 there were 1,472 hypertension cases, the same number in 2021. In 2022, the cases decreased to 966, but in 2023, they increased again to 1,001 cases (Sukamakmur Health Center Report, 2023).

Hypertension can lead to various complications affecting vital organs, such as heart failure. These complications often arise due to poor medication adherence, irregular blood pressure monitoring, lack of physical activity, and high salt intake. Therefore, it is essential to



manage hypertension complications through self-care management to control the factors influencing hypertension and prevent the deterioration of the patient's health status. Additionally, adherence to medication is crucial to maintaining normal blood pressure (Pertiwi et al., 2021).

Self-care management plays a significant role in reducing the incidence of non-communicable diseases, including hypertension, in Indonesia. The morbidity and mortality rates caused by hypertension can be controlled through effective self-care management that regulates the factors affecting blood pressure. Self-care management refers to an individual's ability to maintain healthy behaviors and effectively manage diseases in daily life, helping patients lower and stabilize their blood pressure (Fadilah et al., 2023).

Self-care management is also considered one of the treatment methods for hypertension. According to Aprilatutini (2021), self-care involves behaviors aimed at preventing severe illness and, when necessary, includes decision-making processes to assess and treat disease symptoms. Self-care management encompasses symptom assessment, symptom management, and treatment evaluation. Effective self-care management indicates that individuals take responsibility for their own health and play an active role in maintaining it (Aprilatutini et al., 2021).

Research conducted by Sulaeman, A., Fian, & M. (2022) showed that the better the self-care management, the lower the blood pressure level. Conversely, poor self-care management is associated with higher blood pressure among hypertensive patients. Therefore, proper self-care management is essential to control one's blood pressure.

A study by Sri & Putri (2023) involving 40 respondents found that those with moderate self-care management tended to have higher blood pressure compared to those with good self-care management, whose blood pressure was well controlled. Good blood pressure control enhances adherence to self-management behaviors among hypertensive patients, while poor control decreases adherence. Hypertensive patients need to practice self-care management to manage their condition by adopting a healthy lifestyle, such as reducing stress, avoiding smoking and alcohol, maintaining a balanced diet, and regularly monitoring blood pressure.

Another study by Mufidah (2021) found a significant relationship between self-management and blood pressure, with a significance value of 0.000 for both systolic and diastolic pressures and a negative correlation coefficient of -0.409 for systolic and -0.405 for diastolic pressure. This indicates that the higher the self-management score, the lower the blood pressure among hypertensive patients.

Based on preliminary data collected at the Sukamakmur Health Center, from January to October 2024, there were 964 hypertension cases, consisting of 297 male and 667 female patients (Sukamakmur Health Center Report, 2024).

An initial observation and interview with 10 hypertensive patients revealed that three of them only visited health services when they felt dizzy, while seven reported difficulty in maintaining a healthy diet, continued consuming foods high in salt, and lacked time for exercise. Most patients adhered to their medication, although some admitted to occasionally forgetting. These findings suggest that hypertensive patients in the Sukamakmur Health Center area have not yet been able to implement effective self-care management.

2. RESEARCH METHOD

This study used a quantitative research method with a correlational design and a cross-sectional approach. The cross-sectional approach allows all variables, both independent and



dependent, to be observed simultaneously. This design was applied to determine the relationship between self-care management and blood pressure reduction among hypertensive patients at Sukamakmur Health Center, Aceh Besar.

The population of this study consisted of 110 hypertensive patients recorded from September to October 2024 at the Sukamakmur Health Center. The sample size was determined using the Slovin formula, resulting in 86 respondents who were selected through a random sampling technique, where each member of the population had an equal chance of being included. The inclusion criteria were hypertensive patients aged 30–79 years who were willing to participate, able to communicate effectively, and cooperative. The exclusion criterion was patients who were uncooperative.

The research instruments consisted of a demographic data questionnaire and the Hypertension Self-Management Behavior Questionnaire (HSMBQ) developed by Akhter (2010) and adapted into Indonesian by Hidayat and Hastuti (2016). The HSMBQ includes 40 items divided into five indicators: self-integration (13 items), self-regulation (9 items), interaction with health professionals (9 items), blood pressure monitoring (4 items), and adherence to recommended guidelines (5 items). Each item was rated on a four-point Likert scale ranging from 1 (“never”) to 4 (“always”). Total scores were classified as good (121–160), moderate (81–120), or poor (40–80). Blood pressure was measured using a digital sphygmomanometer according to the Joint National Committee (JNC 7) standards.

The validity and reliability tests of the Indonesian version of the HSMBQ showed that all statements were valid with correlation coefficients ranging from 0.375 to 0.781, and reliable with a Cronbach’s alpha value of 0.949.

The research was conducted at Sukamakmur Health Center, Aceh Besar, from April 15 to 21, 2025. Data collection involved administrative procedures including research permits from Abulyatama University, the Aceh Besar District Health Office, and the head of the Sukamakmur Health Center. After obtaining approval, respondents were informed about the study’s purpose, signed informed consent forms, and completed the questionnaires. Their blood pressure was then measured, and the researcher verified the completeness of the responses.

Data processing included editing, coding, transferring, tabulating, and analyzing. Data were analyzed using the Chi-Square statistical test to determine the relationship between self-care management and blood pressure reduction, with a significance level set at $p < 0.05$.

Ethical considerations were maintained throughout the research process, ensuring confidentiality, informed consent, and the voluntary participation of all respondents.

3. RESULTS AND DISCUSSION

Results of the Study

1. Respondents’ Demographic Data

The demographic data of respondents in this study included age, gender, educational level, and employment status. The distribution can be seen in the following table:

Table 4.1

Frequency Distribution of Age, Gender, Educational Level, and Employment Status of Hypertensive Patients at Sukamakmur Health Center (n = 86)

| No | Age | Frequency | Percentage (%) |
|---|---------------------|-----------|----------------|
| Age Category (According to the Ministry of Health, 2009) | | | |
| 1 | Adult (36-45 years) | 7 | 8.1 |



| | | | |
|--|-----------------------------|------------------|-----------------------|
| 2 | Early Elderly (46-55 years) | 28 | 32.6 |
| 3 | Late Elderly (56-65 years) | 25 | 29.1 |
| 4 | Elderly (>65 years) | 26 | 30.2 |
| Total | | 86 | 100.0 |
| No | Gender | Frequency | Percentage (%) |
| 1 | Male | 33 | 38.4 |
| 2 | Female | 53 | 61.6 |
| Total | | 86 | 100.0 |
| No | Education | Frequency | Percentage (%) |
| Education Level (According to Permendikbud, 2013) | | | |
| 1 | Primary Education | 27 | 31.4 |
| 2 | Secondary Education | 47 | 54.6 |
| 3 | Higher Education | 12 | 14.0 |
| Total | | 86 | 100.0 |
| No | Employment Status | Frequency | Percentage (%) |
| 1 | Employed | 27 | 31.4 |
| 2 | Unemployed | 59 | 68.6 |
| Total | | 86 | 100.0 |

Source: Primary Data (Processed in 2025)

Based on the distribution in table 4.1, it can be seen that the largest distribution of the age of respondents suffering from hypertension at the Sukamakmur Health Center is the early elderly period with 28 respondents (32.6%), for the gender category, the largest distribution is women with 53 respondents (61.6%), for the education level category, the largest distribution is secondary education with 47 respondents (54.6%), for the employment status category, the largest distribution is unemployed with 59 respondents (68.6%).

2. Univariate Analysis

a. Hypertension

Based on the data from 86 respondents, the distribution of hypertension categories is presented below:

Table 4.2
Frequency Distribution of Hypertension Data at Sukamakmur Health Center, Aceh Besar (n = 86)

| No | Hypertension Category | Frequency | Percentage(%) |
|--------------|--------------------------------------|-----------|---------------|
| 1 | Pre Hipertensi (120-139 mmHg) | 21 | 24.4 |
| 2 | Hipertensi, Stadium I (140-159 mmHg) | 41 | 47.7 |
| 3 | Hipertensi, Stadium II (>160 mmHg) | 24 | 27.9 |
| Total | | 86 | 100.0 |

Source: Primary Data (Processed in 2025)

Based on Table 4.2, the majority of respondents were classified as having Hypertension Stage I (47.7%).

b. Self-Care Management

The results of data processing on self-care management among 86 respondents are shown below:



Table 4.3
Frequency Distribution of Self-Care Management among Hypertensive Patients at Sukamakmur Health Center, Aceh Besar (n = 86)

| No | Self Care Management | Frequency | Percentage(%) |
|---------------|----------------------|-----------|---------------|
| 1 | Good | 25 | 29.1 |
| 2 | Moderate | 33 | 38.4 |
| 3 | Poor | 28 | 32.6 |
| Jumlah | | 86 | 100.0 |

Source: Primary Data (Processed, 2025)

As shown in Table 4.3, most respondents had **moderate self-care management** (38.4%).

3. Bivariate Analysis

Bivariate analysis was conducted to determine the relationship between self-care management and blood pressure reduction among hypertensive patients at the Sukamakmur Health Center using the Chi-Square test with a 3×3 contingency table. The decision rule was:

- If $p\text{-value} > 0.05$, then H_0 is accepted (no significant relationship).
- If $p\text{-value} < 0.05$, then H_0 is rejected (there is a significant relationship).

The detailed results are presented below:

Table 4.4
The Relationship between Self-Care Management and Blood Pressure Reduction among Hypertensive Patients at Sukamakmur Health Center, Aceh Besar (n = 86)

| No | Self Care Management | Hypertension Occurrence | | | | | | Total | P – Value | α | |
|-------|----------------------|-------------------------|------|----------------------|------|-----------------------|------|-------|-----------|----------|------|
| | | Pre Hipertensi | | Hipertensi Stadium I | | Hipertensi Stadium II | | | | | |
| | | N | % | N | % | N | % | | | | |
| 1 | Good | 11 | 44.0 | 12 | 48.0 | 2 | 8.0 | 25 | 100.0 | 0,020 | 0,05 |
| 2 | Moderate | 7 | 21.2 | 14 | 42.4 | 12 | 36.4 | 33 | 100.0 | | |
| 3 | Poor | 3 | 10.7 | 15 | 53.6 | 10 | 35.7 | 28 | 100.0 | | |
| Total | | 21 | 24.4 | 41 | 47.7 | 24 | 27.9 | 86 | 100.0 | | |

Sumber: Data Primer (Diolah tahun 2025)

Based on Table 4.4, among 25 respondents with good self-care management, 12 (48.0%) had stage I hypertension. Among 33 respondents with moderate self-care management, 14 (42.4%) had stage I hypertension. Among 28 respondents with poor self-care management, 15 (53.6%) had stage I hypertension. The chi-square test yielded a p-value of 0.020 ($p < 0.05$), indicating a significant relationship between self-care management and blood pressure reduction among hypertension patients at Sukamakmur Health Center, Aceh Besar.

DISCUSSION

Based on Table 4.4, among 25 respondents with good self-care management, 12 (48.0%) had stage I hypertension. Among 33 respondents with moderate self-care management, 14 (42.4%) had stage I hypertension, while among 28 respondents with poor self-care management, 15 (53.6%) had stage I hypertension. The chi-square test yielded a p-value of 0.020 ($p < 0.05$), indicating a significant relationship between self-care management and blood pressure reduction among hypertensive patients at Sukamakmur Health Center, Aceh Besar.

These findings are consistent with Sri's (2022) study involving 40 respondents, which revealed that those with moderate self-care management tended to have increased blood



pressure, whereas respondents with good self-care management were able to maintain controlled blood pressure levels. Effective blood pressure control enhances adherence to self-management behaviors among hypertensive patients, while poor control can lead to decreased compliance. Hypertensive patients are encouraged to implement proper self-care management through healthy lifestyle practices such as stress reduction, avoiding smoking and alcohol, maintaining a balanced diet, and regularly monitoring blood pressure (Sri, A., W., & Putri, A., 2023).

Similarly, Mufidah (2021) found a significant correlation between self-management and blood pressure, with p-values of 0.000 for both systolic and diastolic pressures and negative correlation coefficients of -0.409 and -0.405 , respectively. This indicates that higher levels of self-management are associated with lower blood pressure among hypertensive patients.

The researcher assumes that self-care management behaviors greatly influence blood pressure levels among hypertensive patients at Sukamakmur Health Center. Based on respondent characteristics, it can be inferred that self-care management remains suboptimal, as most participants were elderly (92%), unemployed (68.9%), and had low to moderate education levels (86%). These factors contribute to limited understanding of hypertension management. Respondents with moderate and poor self-care management were mostly classified under stage I and II hypertension, reflecting poor blood pressure control and inconsistent habits, such as consuming salty foods, lack of exercise, and irregular medication use. Low education levels and older age further hinder effective self-care due to limited comprehension and memory difficulties, especially without external support.

4. CONCLUSION

The study results showed a p-value of 0.020 ($p < 0.05$), indicating a significant relationship between self-care management and blood pressure reduction among hypertensive patients at Sukamakmur Health Center, Aceh Besar.

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