

THE RELATIONSHIP BETWEEN FAMILY SUPPORT AND ADHERENCE TO TAKING MEDICATION IN HYPERTENSION PATIENTS IN LANGGENHARJO VILLAGE, HEALTH CENTER WORKING AREA JUWANA PATI

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Abstract

Introduction: Hypertension stands as a prominent contributor to premature mortality worldwide. Only 42% of individuals with hypertension are identified and receive treatment, and among them, just 21% achieve controlled blood pressure. Alarming, 46% of adults are unaware they have hypertension. Approximately two-thirds of the 1.28 billion individuals worldwide suffering from hypertension reside in middle- and low-income nations (World Health Organization (WHO), 2023). Langgenharjo Village, based on data from the Juwana Health Center (2023), ranks among the top three locations for hypertension patients in the Juwana sub-district over the past three months. This study looked at the connection between patients's adherence to their prescription regimen and the assistance they received from their families. **Methods:** This research utilized a descriptive correlational methodology in conjunction with a cross-sectional approach. Purposive sampling was utilized to select 46 respondents from a total population of 185. Family support was assessed using a 25-statement questionnaire, while medication compliance was measured with an 8-question MMAS questionnaire. **Results:** The study revealed a high level of family support (68.1%), with a majority of patients (61.7%) falling into the obedient category. A statistically significant relationship (p -value of $0.019 < 0.05$) was identified through the chi-square test between patients' medication adherence and the support provided by their family members for hypertensive patients in Langgenharjo Village. **Conclusion:** Families play a crucial role in assisting patients in managing their hypertension. Supporting these patients can significantly enhance their adherence to medication regimens.

Keywords: Hypertension, family support, medication adherence.

INTRODUCTION

The worldwide premature death rate is greatly increased by hypertension, substantially increasing the likelihood of heart attacks, strokes, kidney failure, and blindness. Due to its association with heart attacks, strokes, renal failure, and blindness, hypertension emerges as a significant global determinant of early death. It is noteworthy that an estimated 1.28 billion individuals worldwide suffer from hypertension, with the majority, approximately two-thirds, residing in nations with medium to low incomes. It's shocking to learn that just 42% of people with hypertension obtain a diagnosis and appropriate care, while 46% remain unaware of their condition. Merely 21% of individuals effectively manage their high blood pressure (World Health Organization (WHO), 2023).

In Southeast Asia, people aged between 30 and 79 years have a hypertension prevalence of 32.4%, with the highest rates seen in Thailand (29.5%), Myanmar (37.8%), Indonesia (40.3%), Vietnam (29.5%), Malaysia (40.8%), the Philippines (33.8%), Brunei Darussalam (46.4%), and Singapore (31.5%) (WHO, 2022). Every year, 8 million people lose their lives due to high blood pressure, including 1.5 million in the Southeast Asian region, where one-third of the population has high blood pressure (Ministry of Health, 2020). According to data from the Healthy Indonesia Application and the Non-Communicable Disease Information System, 13.57% of people aged 15 years and over have had early detection of hypertension (28,364,181 out of 208,982,372). In Indonesia, 63,309,620 people are suffering from hypertension, and 427,218 people have died due to hypertension. The percentage of patients with hypertension who can be detected is around 34.1%. Of these, 8.8% undergo examination, 13.3% suffer from hypertension but do not take medicine, and 32.3% take medicine but not routinely according to the schedule (Ministry of Health, 2022). There are 34.1% of Indonesians who have hypertension. South Kalimantan has the highest proportion of hypertensive patients at 44.1%, whereas Papua has the lowest prevalence at 22.2%. Central Java registers a hypertension rate of 37.57% among its population.

The approximate count of individuals aged 15 and above afflicted with hypertension in Pati Regency is 101,579, comprising 46,680 male patients and 54,899 female patients. As per the health service

records from the Pati Regency Health Center, the Juwana Health Center accounted for the largest population of hypertension patients, totaling 23,825 individuals (Pati Regency Health Office, 2022). Target data of hypertension patients in the Juwana Health Center area (2023) revealed that Langgenharjo Village ranked among the top three for hypertension patients in the Juwana sub-district over the last three months. In December, the number of patients with hypertension who received health services increased to 2,013 people. Langgenharjo Village ranked first with 185 patients, followed by Growong Lor Village with 160 patients, Bakaran Kulon Village with 155 patients, and Kauman Village with the lowest number of 5 patients.

There are pharmacological and non-pharmacological management strategies to treat hypertension. Treatment with medications is known as pharmacological management. Antihypertensive medications are prescribed to patients with high blood pressure. These medications include diuretics like hydrochlorothiazide and spironolactone, beta-blockers like propranolol immediate-release and long-acting propranolol, calcium channel blockers (CCB) like non-dihydropyridine CCB and CCB-dihydropyridine, ACE inhibitors like captopril, ARB inhibitors, and peripheral alpha-blockers like terazosin (Ainurrafiq et al., 2019). To get the most out of pharmacological treatment, non-pharmacological treatment can be employed to enhance compliance with preventive measures. These include a low-sodium diet, quitting alcohol, quitting smoking, regular exercise, and adhering to hypertension medication regimens. Patients suffering from hypertension should adopt non-pharmacological measures to improve their overall health (Fitria et al., 2023). Antihypertensive drugs must be taken regularly to avoid complications. It is important to remember that the use of antihypertensive drugs does not guarantee long-term blood pressure control if the drugs are not taken as prescribed (Makatindu et al., 2021).

The level of compliance of hypertensive patients can be assessed by their behavior in taking antihypertensive drugs, dietary habits, exercise, participation in health programs such as Posbindu, and visits for routine check-ups at the Puskesmas (Nurhanani et al., 2020). Hypertensive patients are considered compliant with medication if they understand the potential impacts of their disease and therefore adhere to taking antihypertensive drugs regularly. Conversely, non-compliant patients are those who stop treatment at any time, frequently feel lazy, or forget to take their medication regularly (Indriana et al., 2020). For hypertensive patients who do not follow treatment and take antihypertensive drugs daily, their symptoms can worsen. If medication is not taken consistently, their condition can become very dangerous. Unregulated blood pressure increases the likelihood of complications associated with hypertension and mortality (Santi et al., 2023).

Patient treatment requires an important role from the family to prevent disease in other family members and improve health. The family acts as a system that supports its members and is always willing to assist if needed (Hanum et al., 2019). Encouraging patient compliance during treatment involves providing support to their families, as family members are the closest to the patient. Hypertension sufferers need support from their family members because, when someone feels sick, they want to feel cared for by their family. Family support can take various forms, such as behaviors, attitudes, and feelings of acceptance toward their sick family members. Patients who receive support from their families are more likely to receive the care they need compared to those who do not receive such support (Efendi & Larasati, 2017). All family members play an important role in shaping beliefs and values related to health and in choosing the most appropriate treatment plan for the patient (Saputera et al., 2021). Family support involves an attitude and sense of caring and appreciation, as well as providing information to patients so they feel valued and are motivated to recover from their illness or prevent it from recurring. Family support is also very influential in increasing compliance with taking antihypertensive drugs (Susanti et al., 2022).

Interviews with five hypertensive respondents who received treatment at the Juwana Health Center yielded the following results: two hypertensive patients with supportive families reported that their families always reminded them to take their medication, accompanied them to routine check-ups when the medication ran out, and occasionally drove them to appointments. Three hypertensive patients with less supportive families reported that their families were sometimes uncaring and seldom reminded them to take their medication. Two of these patients mentioned that their families seldom paid attention, such as by not giving them treatment when they were ill or reminding them to take their medication. The interview results on the level of non-compliance with taking medication among the five hypertensive respondents found that three patients were non-compliant because they forgot their medication

schedules, often forgot to bring their medicine when traveling, and sometimes deliberately reduced or stopped taking their medicine. One patient claimed that he purposefully stopped taking his hypertension medication because, after taking one to three doses, he felt that his blood pressure had stabilized and he no longer needed it. Additionally, this patient did not experience worsening symptoms after stopping the medication. Two patients with hypertension who were not compliant with taking their medication revealed that they sometimes forgot, and when they did not take their hypertension drugs, they sometimes felt dizzy and experienced chest pain. Meanwhile, two patients were compliant with their medication because they were afraid that their hypertension would worsen if they did not take the drugs. These patients would return to the Juwana Health Center for more hypertension medication when their supply ran low.

METHODS

The research, which employed a cross-sectional design, was carried out in Pati's Juwana Health Center and Langgenharjo Village in April 2024. Purposive sampling was used to choose the research sample. Out of a population of 185 respondents, 46 were selected as samples for this study. A questionnaire was used as the research instrument, and data were collected through home visits and patient assessments in medical facilities. Data were analyzed by univariate and bivariate means, with the significance level of the Chi-Square test below 0.05.

RESULTS AND DISCUSSION

Results

Results in April 2024 were conducted on patients with high blood pressure in Langgenharjo Village, Juwana Pati Health Center's working area, with a sample of 46 respondents.

Table 1. Gender Characteristics of Respondents

Gender	Frequency	Percentage
Male	15	32,6%
Female	31	67,4%
Total	46	100%

The findings in Table 1 reveal that among the 46 participants, 31 (67.4%) were female, while 15 (32.6%) were male.

Table 2. Age Characteristics of Respondents

Age	Frequency	Percentage
40-49 Years	12	26,1%
50-59 Years	34	73,9%
Total	46	100%

Table 2 indicates that among the 46 respondents, 34 (73.9%) were in the 50-59 age group, while 12 (26.1%) were in the 40-49 age group.

Table 3. Education Characteristics of Respondents

Last Education	Frequency	Percentage
Elementary School	26	56,5%
Junior High School	17	37%
Senior High School/Vocational	2	4,3%
High School		
Not in school	1	2,2%
Total	46	100%

According to Table 3, out of 46 respondents, 26 (56.5%) finished primary education, 17 (37%) completed junior high school, 2 (4.3%) graduated from senior high school or vocational school, and 1 (2.2%) did not receive any formal education.

Table 4. Job Characteristics of Respondents

Job	Frequency	Percentage
Entrepreneur	6	13%
Fisherman	11	23,9%
Farmer	7	15,2%
Not Working	22	47,8%
Total	46	100%

The results of Table 4 show that respondents who have jobs as fishermen are 11 respondents (23.9%), farmers are 7 respondents (15.2%), self-employed are 6 respondents (13%), and out of 46 respondents, 22 respondents (47.8%) do not work.

Table 5. Respondents' level of family support

Family Support	Frequency	Percentage
Good	32	69,6%
Fair	14	30,4%
Total	46	100%

Table 5 reveals that 32 respondents (69.6%) received strong family support, while 14 respondents (30.4%) had adequate family support.

Table 6. Respondents' level of compliance with taking medication

Medication Adherence	Frequency	Percentage
Compliant	29	63%
Non-compliant	17	37%
Total	46	100%

Table 6 shows that the number of respondents who have an obedient attitude toward taking drugs is significantly higher, namely 29 respondents (63%), compared to respondents who do not have an obedient attitude toward taking medications, namely 17 respondents (37%).

Table 7. Analysis of the Relationship between Support Provided by the Family and Adherence to Taking Medication Patients with high blood pressure in Langgenharjo Village

Medication Adherence						
Family Support	Compliant		Non-compliant		Total	
	F	%	F	%	F	%
Good	24	75%	8	25%	32	100%
Fair	5	35,7%	9	64,3%	14	100%
Less	0	0%	0	0%	0	0%
Total	29	63%	17	37%	46	100%

The analysis results in Table 7 show that 24 respondents (75%) in the good family support category exhibited high compliance with taking medication. Among respondents with sufficient family support, 5 (35.7%) showed high compliance, while 8 respondents (25%) with good family support exhibited non-compliance in taking medication. In comparison, 9 respondents (64.3%) with sufficient family support also showed non-compliance with taking medication.

A substantial link between patient adherence to medications and support from family members was shown by the chi square test, which a p-value of 0.019, rejecting the null hypothesis that patients in Langgenharjo Village, within the jurisdiction of the Juwana Health Center, suffer from hypertension.

Discussion

Characteristics of Respondents

The bulk of the responders were women who were starting menopause, according to the data. Menopausal women experience hormonal changes, especially a decrease in the estrogen/androgen ratio, which increases renin release and blood volume (Pratama et al., 2020). Margareta's research (2022)

indicated that gender is a significant factor influencing blood pressure. Women face a heightened risk of developing hypertension after menopause, particularly beginning at age 45. Postmenopausal women have low estrogen levels. These low estrogen levels impact high-density lipoprotein (HDL) levels, which play an important role in maintaining vascular health. Thus, decreases in estrogen cause postmenopausal women's LDL to rise and their HDL to fall. This might result in the development of atherosclerosis, which elevates blood pressure. This is reinforced by RISKESDAS data (2018), which found that women (36.85%) have a higher percentage of hypertension compared to men (28.80%).

The study's conclusions indicated that the bulk of participants were in their senior years of life. Muslimin's research (2024) also obtained results indicating that as individuals age, the likelihood of developing hypertension increases due to various risk factors that elevate blood pressure. These factors include the reduced elasticity of tissues experiencing arteriosclerosis and vasodilation, making old age one of several factors contributing to increased blood vessel pressure. Nita's research (2018) found that advancing age can elevate blood pressure due to increased pressure within the blood, coupled with a decline in bodily functions, decreased activity levels, increased stress, and emotional fluctuations. As individuals enter their later years, they may develop hypertension, which can be attributed to various risk factors including age, physical activity level, weight, and stress levels. (Amelia & Kurniawati, 2020).

The results also showed that many respondents had only received a primary school education. According to Hanum et al. (2019), the extent of respondents' knowledge regarding hypertension was linked to their educational attainment. This included knowledge about hypertension risk factors, health screenings, medication use, adherence to Personal and Environmental Hygiene (PHBS) guidelines, and health consultations. This underscores how education level affects one's knowledge; individuals with higher education tend to possess more information.

The research's conclusions showed that most of the participants did not have a job. Sijabat et al.'s research (2019) suggested that respondents without employment demonstrated a more compliant attitude toward drug consumption compared to those with jobs. This is because active workers have a higher risk of forgetting to take medication on schedule or missing treatment compared to unemployed respondents. Work or other activities undertaken by individuals can potentially disrupt treatment programs, such as medication schedules, thereby hindering the achievement of treatment goals.

Family Support

The majority of respondents reported strong family support, according to the data. When families provide good support, it may aid in the patient's healing process, particularly for individuals with hypertension. However, patients also require assistance from their families regarding health knowledge to decide on the best treatment measures and make decisions based on their understanding. This is supported by Susanto & Purwantingrum's research (2022), which found that most respondents' families provided good support: 259 respondents (64.6%) reported strong support, while 142 respondents (35.4%) lacked support from their family members. Similarly, Veradita & Faizah's research (2022) revealed that a significant portion of respondents (64.9%) had strong familial support, while 6 respondents (16.2%) lacked support, and 7 respondents (18.9%) had sufficient support from family members. Based on these findings, most respondents reported that their families provided excellent support during treatment, and families also provided education about the conditions patients experience during treatment programs.

In Friedman's research, as cited in Alam & Jama (2020), it is suggested that patients require support from their families because individuals in pain need a caring attitude from their family members. Family members can provide motivation, encourage them to adopt an optimistic view of their suffering, and adhere to the treatment program recommended by healthcare providers. Saleh et al.'s research (2021) showed that patients with hypertension desire the presence of their closest person at home during extended treatment to receive strong support, including instrumental, emotional, and appreciation support. This helps patients feel loved, cared for, and reassured that people are willing to make time for them. Support from all family members serves a valuable function in the patient's life.

Adherence to Taking Medicine

The research revealed that most participants demonstrated a positive compliance with their medication regimen, suggesting a high level of adherence among certain individuals attending the

Juwana Health Center. Rismayati et al., research (2023) yielded results from 36 respondents: 28 individuals (77.8%) demonstrated a high level of compliance in medication adherence; 7 respondents exhibited a moderate level of obedience in taking medication (19.4%) and 1 respondent showed a low level of obedience in medication adherence (2.8%). Similarly, the research by Kapoh et al. (2023) found that 130 respondents (96.3%) exhibited an obedient attitude, while 5 respondents (3.7%) showed non-obedient behavior. These findings are also supported by research conducted by Fadhillah and Rohita (2020), which focused on patients suffering from hypertension.

The patient's adherence to medication is directly influenced by numerous factors, including their active engagement, willingness to undergo health checks according to a predetermined schedule, and willingness to adopt a healthier lifestyle, as well as the presence of supportive family members. The level of compliance among hypertensive patients with therapy increases the effectiveness of treatment programs and helps prevent complications. When patients with hypertension adhere to the treatment plan, particularly by maintaining an obedient attitude towards taking their medication consistently over an extended period, morbidity and mortality rates can be reduced.

The Relationship Between Family Support and Adherence to Taking Medication in Hypertensive Patients

On analysis results, it was found that there was a strong correlation between the compliant attitude of patients towards medication and the support they received from their families. Molintao et al. (2019) obtained a lower p-value result of 0.028, indicating a relationship between the support from patients' families and their medication adherence. Anjalina et al. (2024) also found a p-value of 0.006, demonstrating the link between patient compliance with hypertension treatment and support from families. A family's support is essential for encouraging a cooperative attitude toward medicine.

In particular, family members can offer social support in the form of encouragement, love, affection, and care (Utami & Raudatussalamah, 2017). Besides serving as a social support system, the family also acts as an educator. To promote a healthy lifestyle and foster obedient behavior during treatment, family members educate those experiencing hypertension (Husein et al., 2021).

Support from loved ones in maintaining disciplined behavior, especially in medication adherence, reassures hypertensive patients of their importance and desire for the patient's recovery. Family members who provide support help alleviate the boredom associated with the daily consumption of antihypertensive drugs. They remind patients to adhere to their medication regimen, emphasizing its importance for their well-being.

The results of the study revealed that many individuals with hypertension have supportive families but fail to comply with medication consumption. They often neglect to bring their medication when leaving the house, decrease the dosage, or even discontinue treatment without consulting their doctor because they believe it worsens their condition. Sometimes, they get half-treatment when they feel healthy. These findings align with those of Purnawinadi and Lintang (2020), who interviewed respondents receiving substantial family support but lacking medication adherence. Patients mentioned frequent travel, leading them to leave home without their medication, as one of several factors contributing to non-adherence among individuals with hypertension despite strong family support.

Fatih et al. (2023) identified various causes of non-adherence among respondents, including difficulty in taking medication, forgetfulness, occasionally neglecting medication while traveling, stopping medication when feeling well, deliberately skipping medication for up to two weeks, and even reducing or stopping medication during illness. These findings resonate with those of Saleh et al. (2021), who reported significant instances of non-compliance among respondents in the last two weeks, including deliberately missing doses, forgetting medication when leaving home, difficulty in medication administration, cessation of medication during periods of wellness, reduction or cessation of medication during exacerbation of symptoms, and dissatisfaction with medication requirements.

Strong family support for hypertensive patients can bolster their resilience in addressing the challenges they face, including during current and future medical treatments. Families can provide psychological assistance to patients, enabling them to develop enhanced skills and better prepare for managing and resolving health issues (Soesanto, 2021). The support that individuals with hypertension receive from their families affects how well they stick to their treatment regimens. When families offer robust support, the level of medication adherence tends to increase. Conversely, when support is lacking, the level of medication adherence tends to decrease.

CONCLUSION

The results of this study conclude that hypertensive patients in Langgenharjo Village receive a good level of support from their families. Out of 46 respondents, 32 individuals (69.6%) reported receiving substantial support from their families. Additionally, 29 respondents (63%) exhibited an obedient attitude toward medication adherence. There is a notable correlation between the support offered by family members and patients' compliance with medication adherence in Langgenharjo Village, a (P -value < 0.05) as demonstrated by the P -value of 0.019.

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