

## The Correlation Between Family Roles and Hypertension Control in The Working Area of Rogotrunan Public Health Center, Lumajang

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### Abstract:

Hypertension is one of the non-communicable cardiovascular diseases that many people suffer from, with a significant increase in prevalence with increasing age. Rogotrunan Lumajang Health Center is one of the health centers located in Lumajang Regency with the highest number of hypertension sufferers in Lumajang. Hypertension sufferers can experience sudden death because hypertension is the silent killer and the silent disease. Hypertension sufferers need a support system from the family to control their blood pressure and avoid conditions getting worse and avoid complications due to hypertension. The role of the family is very necessary for hypertension sufferers over a long period of time and continuously. The family roles needed to achieve optimal health include the role of the family as encouragement, initiator, coordinator, motivator and educator. The research design used correlation analytic, using a cross sectional approach, the study population was all hypertensive patients in the working area of the Rogotrunan Lumajang Community Health Center, namely 185 patients, using a simple random sampling technique. The research sample was 126 patients. The statistical test uses Spearman rank with a significance level of 0.05. The research results showed that 109 respondents had a good family role (86.5%), and 99 respondents had very good hypertension control (78.6%). After carrying out the Spearman Rank statistical test, the Sig value was obtained. (2-tailed) results at a significant level of  $0.000 < 0.05$ , meaning there is a correlation the role of the family and controlling hypertension in the working area of the Rogotrunan Lumajang Community Health Center with the level of closeness of the correlation showing a value of 0.405 in the Moderate/Fair category. It is hoped that families will be able to play their role with family members who experience hypertension in controlling hypertension to prevent recurrence of hypertension.

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## INTRODUCTION

Worldwide, cardiovascular diseases (CVDs) are among the leading causes of death each year (Pane et al., 2022). In both developed and developing countries, CVDs pose a major health challenge to their populations. One of the most common cardiovascular diseases is hypertension (high blood pressure), a type of non-communicable disease (NCD) (Arsani et al., 2022). NCDs, also referred to as degenerative diseases, are significant global health concerns due to their high morbidity and mortality rates. These diseases are typically non-infectious and develop gradually, often as a result of unhealthy lifestyle choices (Nurpalah et al., 2023).

According to a 2023 report by the World Health Organization (WHO), approximately 1.28 billion people aged 30-79 worldwide have hypertension, and this number is expected to continue rising. In Indonesia, the prevalence of hypertension among those aged 18 and older reaches 34.1%, or around 70 million people. An estimated 10.44 million people die due to hypertension and its complications. Hypertension is often called the “silent killer” because it can remain symptomless for long periods but still has the potential to cause a global health crisis (Oktaria et al., 2023).

In Indonesia, hypertension affects various age groups: 31.6% among those aged 31-44, 45.3% among those aged 45-54, and 55.2% among those aged 55-64. The East Java Provincial Health Office recorded hypertension as the most prevalent NCD in 2022, with 195,225 cases. In Lumajang Regency, the estimated number of hypertension sufferers aged over 15 in the same year was around 284,001 (Salsabila & Astutik, 2024). Rogotrnan Lumajang Health Center, a primary healthcare center, recorded the highest number of hypertension cases in Lumajang, although only about 44.7% of patients consistently undergo regular check-ups.

Studies indicate that family support plays a critical role in helping hypertension patients maintain their health and manage their condition. Family members can act as motivators, initiators, and educators in care routines, such as reminding patients to check their blood pressure and maintain a healthy lifestyle regularly. Positive family support has significantly impacted hypertension management efforts, reducing the risk of complications and improving patients' quality of life (Nisak & Daris, 2020; Nurfitasari et al., 2023; Zuraidah et al., 2024).

## METHOD

This study was conducted within the working area of Rogotrnan Lumajang Health Center, Lumajang. The research design employed was a correlational analytic approach with a cross-sectional method, where the independent variable (family role) and the dependent variable (hypertension control) were measured simultaneously at a single time point, without follow-up. The study population consisted of hypertensive patients in this region, with a sample size of 126 participants obtained through Simple Random Sampling. Data collection was carried out using questionnaires, while data analysis utilized the Spearman Rank test to determine relationships between variables.

The research variables included an independent variable, family role, and a dependent variable, hypertension control. The study took place from June 24 to July 3, 2024, in Tompokersan Village, Lumajang, with subjects who met the specified inclusion and exclusion criteria, such as being registered hypertensive patients and willing to participate as respondents. The research was ethically approved under protocol number 264/KEPK-UNHASA/VIII/2024.

## RESULT

The general data reveals that the majority of respondents are aged between 51-65 years (81.7%), with a smaller percentage aged 17-35 years (3.2%). In terms of gender, 54.0% are male and 46.0% female. Regarding employment, 57.9% work in the private sector, while the fewest (1.6%) are retirees. Education levels vary, with 42.9% holding a high school diploma and only 2.4% having completed higher education. All respondents (100%) have a history of hypertension.

Table 1. Characteristics of Respondents (n=126)

Characteristics	Frequency	Percentage (%)
<b>Age</b>		
17-35 years	4	3.2
36-50 years	19	15.1
51-65 years	103	81.7
<b>Gender</b>		
Male	68	54
Female	58	46
<b>Occupation</b>		
Unemployed	47	37.3
Farmer	4	4
Private Employee	73	57.9
Civil Servant	0	0
Retired	2	1.6
<b>Education</b>		
Primary School	26	20.6
Middle School	43	34.1
High School	54	42.9
Higher Education	3	2.4
<b>Hypertension History</b>		
Yes	126	100
No	0	0

Table 2. Role of the Family of Hypertensive Patients at Rogotruman Lumajang Health Center (n=126)

Category	Frequency	Percentage (%)
Good	109	86.5
Fairly Good	14	11.1
Poor	3	2.4
Total	126	100

Based on the data in Table 2, it can be seen that there are 109 respondents (86.5%) with a good family role, while 14 respondents (11.1%) have a fairly good family role, and 3 respondents (2.4%) have a poor family role.

Table 3. Hypertension Control of Patients at Rogotruman Lumajang Health Center (n=126)

Category	Frequency	Percentage (%)
Very Good	99	78.6
Good	17	13.5
Fairly Good	10	7.9
Poor	0	0
Very Poor	0	0
Total	126	100

Based on the data in Table 3, it can be observed that the majority of patients have very good hypertension control, with 99 respondents (78.6%). There are 17 respondents (13.5%) with good hypertension control, and 10 respondents (7.9%) with fairly good hypertension control.

Table 4. Correlation Between Family Role and Hypertension Control in the Working Area of Rogotruman Lumajang Health Center (n=126)

Role of the Family	Hypertension Control					Total
	Very Good	Good	Fairly Good	Poor	Very Poor	
Good	94 (74.6%)	9 (7.1%)	6 (4.8%)	0	0	109 (86.5%)
Fairly Good	4 (3.2%)	7 (5.6%)	3 (2.4%)	0	0	14 (11.1%)
Poor	1(0.8%)	1(0.8%)	1(0.8%)	0	0	3 (2.4%)
Total	99 (78.6%)	17 (13.5%)	10 (7.9%)	0	0	126 (100%)

P-value = 0.000, r = 0.405

Based on the data in Table 4 using the Spearman Rank test reveals a significant moderate correlation (p-value = 0.000, r = 0.405) between family role and hypertension control, indicating that a supportive family role positively impacts hypertension management in this community.

## DISCUSSION

### Family Role in Hypertension Patients

Findings show that 109 respondents (86.5%) have strong family support, evidenced by actions like escorting them to health facilities, preparing medication as prescribed, reminding them to check blood pressure, preparing meals according to diet, ensuring a safe environment, recognizing condition changes, understanding hypertension symptoms, and ensuring consistent eating habits. Another 14 respondents (11.1%) receive moderate family support, such as motivation, daily needs provision, financial help for medication, and reminders to take medication. Meanwhile, 3 respondents (2.4%) have low family support, which includes diet-appropriate meal preparation and financial assistance for hypertension treatment.

Family support in health care involves two main aspects: fulfilling physical needs for family health maintenance and health practices that affect the family's health status. This includes practices like diet, exercise, sleep, self-care, medication, and a healthy environment (Watingrum et al., 2022). Friedman (2010) also noted that family health and the health status of individual members influence one another. Thus, the family role is crucial, helping prevent recurrent hypertension through a healthy lifestyle (Susanti et al., 2024).

The family's involvement in health maintenance is particularly crucial for family members with health issues. When symptoms of hypertension arise, family members can identify and take appropriate health service actions to prevent serious complications (Maria et al., 2022; Noor et al., 2022). The family's role includes being an encourager, initiator, coordinator, motivator, and educator.

The study found that the majority of respondents were aged 51–65, a period when family support is crucial. This aligns with research by (Laili et al., 2022), which indicates that respondents require family support for making appropriate decisions regarding hypertension. Additionally, 54 respondents (42.9%) had a high school education. Individuals with a high school education may require more information about hypertension and its management, making family support crucial to provide the necessary information. All 126 respondents had a history of hypertension, and long-term family involvement in managing this condition often makes routine care easier.

The low family role among hypertension patients may be due to a lack of knowledge or information, affecting the family's ability to play an active role. Therefore, it is essential to provide clear information on the role of the family in managing hypertension.

### **Hypertension Management in Hypertension Patients**

Results indicate that 99 respondents (78.6%) demonstrate excellent hypertension management, such as regular blood pressure monitoring, healthy lifestyle practices, consistent treatment, and a balanced diet. Another 17 respondents (13.5%) show good management, such as limiting salt intake, consuming fruits, limiting organ meats, and engaging in physical activity. Ten respondents (7.9%) have fair management, such as reducing oil intake, avoiding smoke, and eating vegetables.

The study found that the most common age group was 51–65. Age is a significant risk factor for hypertension; as people age, their blood pressure tends to rise, especially after age 40 (Muhammad Yunus et al., 2021; Nurhayati et al., 2023). The majority of respondents were male, a group more susceptible to hypertension due to lower levels of HDL influenced by estrogen in women, which provides some protection against hypertension. Additionally, a majority of 109 respondents had strong family support, which positively impacted their hypertension management, helping to prevent recurrence.

Hypertension, known as the "silent killer," is a major cause of stroke, heart failure, kidney failure, and other diseases. Many people are unaware they have hypertension until they check their blood pressure. Thus, hypertension can lead to sudden death if blood pressure is not properly managed (W. Azizah et al., 2022; Elsi Setiandari L.O, 2022; Nanda et al., 2024). Effective management involves both pharmacological and non-pharmacological approaches to reduce blood pressure and prevent recurrence.

According to the author, managing hypertension is crucial to prevent deterioration. If a hypertension patient maintains a healthy lifestyle, takes medication, and gets enough rest, they can avoid recurrence and carry out daily activities without disruption. Conversely, failure to maintain a healthy lifestyle, take medication, and get sufficient rest can lead to recurrence, affecting daily life and even causing complications or death.

### **Relationship Between Family Role and Hypertension Management**

Based on Table 5.8, the relationship between family role and hypertension management was evaluated using the Spearman rank test, yielding a p-value or significance level (2-tailed) of  $0.000 < 0.05$  with an r-value of 0.405, indicating a moderate correlation. This result rejects the null hypothesis and accepts the alternative hypothesis, confirming a relationship between family role and hypertension management in the working area of Rogotrunan Lumajang Health Center.

Family support in managing hypertension plays a significant role, as patients cannot handle it alone. Effective management begins with education, which raises awareness among patients and their families about hypertension prevention and control (Fahmi et al., 2021; Rahman et al., 2021)

Research by Chacko shows that family role and support in self-care activities are key factors in controlling blood pressure. Families that encourage adherence to self-care routines can improve blood pressure control (L. W. N. Azizah & Kristinawati, 2023; Bangu et al., 2021).

According to the author, families that provide effective support, particularly in encouragement, initiation, coordination, motivation, and education, can positively impact the health status of family members. For hypertension patients, family support can make blood pressure control easier, preventing recurrence.

## **CONCLUSION**

In conclusion, the study highlights the significant role of family support in managing hypertension among patients, with 86.5% of respondents experiencing strong family involvement

that includes accompanying them to healthcare appointments, assisting with medication adherence, and promoting healthy lifestyle choices. While 11.1% received moderate support, 2.4% reported low levels of family assistance. Effective management of hypertension, which affects the majority of respondents aged 51-65, was observed in 78.6% of participants who maintained regular blood pressure monitoring and healthy habits. The findings reveal a moderate correlation between family support and hypertension management, emphasizing the importance of educating families about their roles in promoting health and preventing complications. Overall, active family involvement can significantly enhance the effectiveness of hypertension management, thereby reducing the risk of adverse health outcomes.

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### CONFLICT OF INTEREST

The authors declared no competing interests in the production of this manuscript.

### REFERENCES

- Arsani, N. L. K. A., Wahyuni, N. P. D. S., Agustin, N. N. M., & Budiawan, M. (2022). Deteksi Dini dan Pencegahan Penyakit Kardiovaskular. *Proceeding Senadimas Undiksha*, 1(1), 663–668.
- Azizah, L. W. N., & Kristinawati, B. (2023). Hubungan Dukungan Keluarga Dan Kepatuhan Pengobatan Dengan Status Tekanan Darah Pada Penderita Hipertensi Lina. *HEALTH INFORMATION JURNAL PENELITIAN*, 15.
- Azizah, W., Hasanah, U., & Pakarti, A. T. (2022). Pengaruh Slow Deep Breathing Terhadap Tekanan Darah Pada Pasien Hipertensi. *Jurnal Cendikia Muda*, 2(4). <https://doi.org/10.52523/maskermedika.v8i2.414>
- Bangu, Yuhanah, Tulak, G. T., & Program, H. J. S. (2021). PERAN KELUARGA DALAM MERAWAT ANGGOTA KELUARGA DENGAN HIPERTENSI PUSKESMAS KOLAKAASI KELURAHAN KOLAKAASI KECAMATAN LATAMBAGA. *Jurnal Kesmas Indonesia*, 13, 126–143.
- Elsi Setiandari L.O. (2022). Hubungan Pengetahuan, Pekerjaan dan Genetik (riwayat hipertensi dalam keluarga) Terhadap Perilaku Pencegahan Penyakit Hipertensi. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*, 5(4), 457–462. <https://doi.org/10.56338/mppki.v5i4.2386>
- Fahmi, Z. Y., Nusadewiarti, A., Kedokteran, F., Lampung, U., Ilmu, B., Komunitas, K., Kedokteran, F., & Lampung, U. (2021). Penatalaksanaan Pasien Laki-Laki Usia 59 Tahun dengan Hipertensi Urgensi Melalui Pendekatan Kedokteran Keluarga. *Jurnal Medula*, 13, 1120–1130.
- Laili, N., Lestari, N., & Heni, S. (2022). Peran Keluarga terhadap Kepatuhan Mengonsumsi Obat Anti Hipertensi pada Pasien Hipertensi. *Jurnal Abdi Masyarakat ERAU*, 1(1), 7–18.
- Maria, K., Widuri, & Islamarida, R. (2022). Peran Keluarga Sebagai Caregiver Pada Pasien Stroke: Studi Literatur. *Jurnal Keperawatan*, 14(1), 1–8.
- Muhammad Yunus, Aditya, I. W. C., & Eksa, D. R. (2021). HUBUNGAN USIA DAN JENIS KELAMIN DENGAN KEJADIAN HIPERTENSI DI PUSKESMAS HAJI PEMANGGILAN KECAMATAN ANAK TUHA KAB. LAMPUNG TENGAH. *Jurnal Ilmu Kedokteran Dan Kesehatan*, 35(3), 229–239.
- Nanda, G. A. D., Hartutik, S., & Haryani, N. (2024). Penerapan Slow Deep Breathing Exercise Terhadap Tekanan Darah pada Pasien Hipertensi di Kelurahan Joyotakan Application of Slow Deep Breathing Exercise on Blood Pressure in Hypertension Patients in Joyotakan Village. *Jurnal Kolaboratif Sains*, 7(8), 3353-3360 Homepage. <https://doi.org/10.56338/jks.v7i8.5705>
- Nisak, R., & Daris, H. (2020). Peran aktif keluarga dalam mengendalikan penyakit hipertensi. *Journal Of*

*Community Health Development*, 1(1), 49–53.

- Noor, M., Pusparina, I., & Asmiati. (2022). Hubungan Peran Keluarga dengan Motivasi Pasien Diabetes Militus dalam Kontrol Kadar Gula Darah The Relationship of Family Roles with Diabetes Militus Patient Motivation in Control of Blood Sugar Levels. *Journal of Intan Nursing*, 1(1), 23–27. <https://jurnalstikesintanmartapura.com/index.php/joinhttps://doi.org/10.54004/join.v1i2.xx>
- Nurfitasari, S., Handayani, L. T., & Asih, S. W. (2023). HUBUNGAN DUKUNGAN KELUARGA DENGAN SELF CARE MANAGEMENT PADA LANSIA HIPERTENSI. *Jurnal Kesmas Asclepius*, 5, 115–122.
- Nurhayati, U. A., Ariyanto, A., & Syafriakhwan, F. (2023). Hubungan Usia Dan Jenis Kelamin Terhadap Kejadian Hipertensi. *Prosiding Seminar Nasional Penelitian Dan Pengabdian Kepada Masyarakat*, 6(1), 53–59. <https://doi.org/10.30743/stm.v6i1.349>
- Nurpalah, R., Kusmiati, M., Meri, M., Kasmanto, H., Ferdiani, D., & Nurhasanah, A. (2023). Monitoring Kadar Glukosa Darah Sewaktu Sebagai Upaya Pencegahan Penyakit Degeneratif Pada Masyarakat. *JMM (Jurnal Masyarakat Mandiri)*, 7(6), 6292. <https://doi.org/10.31764/jmm.v7i6.19368>
- Oktaria, M., Hardono, H., Wijayanto, W. P., & Amiruddin, I. (2023). Hubungan Pengetahuan dengan Sikap Diet Hipertensi pada Lansia ( Correlation Between Knowledge with Attitude towards Hypertension Dietary on The Elderly ). *Jurnal Ilmu Medis Indonesia*, 2(2), 69–75.
- Pane, J. P., Simorangkir, L., & Saragih, P. I. S. B. (2022). FAKTOR-FAKTOR RISIKO PENYAKIT KARDIOVASKULAR BERBASIS MASYARAKAT. *Jurnal Penelitian Perawat Profesional*, 4(November), 1183–1192.
- Rahman, S., Azzahra, R., Hanifah, S. A., Musharyati, S. A., Rodia, S., Rahmayani, G., Fitri, A. M. R., & Muharry, A. (2021). Pemberdayaan Masyarakat Melalui Pembekalan PENGEMBANGAN DAN PEMBERDAYAAN HIPERTENSI COMMUNITY. *Jurnal Pengabdian Kepada Masyarakat: Kesehatan (JPKMK)*, 4(2), 615–619.
- Salsabila, A. C., & Astutik, E. (2024). Efektivitas Kegiatan Kemayu Pada Pra Lansia dan Lansia Penderita Hipertensi di Desa Tanjungharjo Kabupaten Bojonegoro, Jawa Timur. *Jurnal Kesehatan Tambusai*, 5, 2733–2742.
- Susanti, N., Vinanda, F., Andini, & Syahfitri, W. (2024). PENGARUH GAYA HIDUP SEHAT TERHADAP PENCEGAHAN STROKE THE INFLUENCE OF A HEALTY LIFESTYLE ON STROKE PREVENTION Histori Artikel A B S T R A K. *Jurnal Kedokteran Dan Kesehatan-Fakultas Kedokteran Universitas Islam Sumatera Utara*, 23(2), 20353.
- Watiningrum, R. Y., Denta, A. O., & Mahfud. (2022). Hubungan Peran Keluarga Dengan Tingkat Kepatuhan Diet Rendah Garam pada Penderita Hipertensi di Desa Gugul Kecamatan Tlanakan Kabupaten Pamekasan. *Jurnal Ilmiah Kesehatan Ar-Rum*, 7(1), 38–42.
- Zuraidah, Nurfitafera, P., & Sartika, L. (2024). Hubungan Peran Keluarga Sebagai Caregiver dengan Pengontrolan Tekanan. *JURNAL KEPERAWATAN STIKES HANG TUAH TANJUNGPINANG*, 14(1), 1–9.