



OVERVIEW OF THE FAMILY'S ROLE IN SUPERVISING DRUG TAKING IN HYPERTENSION PATIENTS

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Abstract

Hypertension is one of the most common non-communicable diseases with high global and national prevalence. This study aims to describe the role of families in supervising medication adherence in hypertensive patients in a rural setting. This was a quantitative descriptive study. The research was conducted in Desa Licin, Kecamatan Cimalaka, Kabupaten Sumedang. A total of 186 family members who live with hypertensive patients participated. Data were collected using validated questionnaires and analyzed using descriptive statistics. The study found that 75.8% of families played a good role in supervising medication adherence. The majority were women aged 18–25 years. Families play a critical role in supporting hypertensive patients' adherence to therapy. Their involvement is essential for the success of long-term treatment and community-based care strategies.

What is already known

Hypertension is one of the most common non-communicable diseases and is a major cause of various health complications such as stroke, kidney failure, and heart disease. Hypertension treatment requires long-term compliance, which is often difficult for patients to maintain without support from the social environment,

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especially the family. Family support as a Drug Supervisor (DSM) has been shown to play an important role in ensuring regular medication intake, reducing the risk of complications, and improving the patient's quality of life.

Previous studies have shown a strong relationship between the role of the family and patient adherence to therapy. Laili (2022) found that the role of the family increased significantly after being given health education, which had a direct impact on adherence to antihypertensive drug consumption. Similar findings were presented by Andriyani (2023), who emphasized that DSM from family members is more effective than health workers, due to emotional closeness and daily involvement.

However, most of these studies were conducted in clinical or urban contexts, and only a few directly examined family involvement in medication supervision in rural populations. There have not been many studies that systematically map the quality of the family's role as a DSM using measurable instruments in the local context. This gap indicates the need for more in-depth, community-based research to strengthen understanding of the role of the family in supervising medication intake in hypertension patients, especially in areas with limited access to formal health services.

What this paper adds

This paper adds new insights into the importance of the family's role in supervising drug taking among hypertension patients. It emphasizes that family involvement is not only beneficial in reminding and monitoring patients to take their medication consistently but also in providing emotional support that strengthens adherence. By ensuring regular drug intake, families contribute to better treatment outcomes, prevent complications from uncontrolled blood pressure, and foster healthier lifestyles. The findings highlight that empowering families to actively participate in patient care can complement healthcare interventions and serve as a sustainable strategy in the long-term management of hypertension.

1. Background

Hypertension is one of the non-communicable diseases with high prevalence globally and nationally. According to the World Health Organization (WHO), hypertension is the leading cause of premature death worldwide, with an estimated 1.28 billion sufferers. In Indonesia, the prevalence of hypertension reached 36% in 2024, and West Java Province was the area with the highest cases, at 39.6% (Ministry of Health of the Republic of Indonesia, 2024). Sumedang Regency, as part of this province, recorded 1,197,302 cases of hypertension sufferers (Sumedang Health Office, 2024). This condition indicates the need for more attention to the management of hypertension, especially in terms of medication adherence.

The basic nursing phenomenon in this context is the importance of family involvement as Drug Supervisors (PMO) in supporting medication adherence in hypertensive patients. Families who play an active role can provide emotional support, education, and ensure the regularity and compliance of the patient's daily medication consumption. A study by Andriyani (2023) confirmed that PMOs from family circles, due to their closeness and frequency of interaction, are considered the most effective in encouraging successful therapy.

A review of previous studies, such as those conducted by Sari and Wijayanti (2020) at the Sleman Health Center, Yogyakarta, stated that the role of the family as a reminder and supervisor greatly helps patients remember their medication schedule. This strengthens the argument that family support is not only important, but can also be improved through appropriate nursing interventions. However, research on the actual picture of the role of the family as a PMO is still limited, especially in rural areas such as Licin Village, Cimalaka District, Sumedang Regency.

The original aspect of this study lies in its focus on family involvement as the main support unit in

supervising medication intake for hypertension patients, with a descriptive quantitative approach in the village community environment. Preliminary studies show variations in how patients remind themselves to take medication, including the use of personal alarms and assistance from family members, but there is no quantitative data showing the extent of the family's role in real practice.

The urgency of this study lies in the need to identify and strengthen the role of the family in hypertension management in order to prevent fatal chronic complications. Family-based interventions are also in line with the community health promotion approach and the family nursing care model.

Thus, the purpose of this study was to describe the role of the family in supervising medication intake in hypertensive patients in Licin Village. The results of this study are expected to provide a basis for community nurses and policy makers in designing family-oriented interventions as partners in managing chronic diseases.

2. Literature Review

2.1 Concept of Hypertension and Medication Compliance

Hypertension is a condition of chronically increased blood pressure that is often not realized by sufferers, so it is nicknamed the silent killer (Ariyanto et al., 2020). WHO (2022) reports that more than 1.28 billion adults worldwide suffer from hypertension, and many of them do not receive adequate treatment. In Indonesia, the prevalence of hypertension has increased significantly, especially in West Java Province which reached 39.6% (Ministry of Health of the Republic of Indonesia, 2024).

Hypertension management requires long-term therapy both pharmacologically and non-pharmacologically. However, the effectiveness of therapy is highly dependent on patient compliance in taking medication regularly (Iqbal & Jamal, 2023). Low patient compliance with treatment is a serious challenge that can trigger complications such as stroke and kidney failure.

2.2 Theory and Role of Family in Health Care

According to Friedman's Family Role Theory (2003), the family has five main functions: affective, socialization, economic, reproductive, and health care. These functions are very relevant in supporting family members who experience chronic diseases, including hypertension.

The role of the family as the smallest unit of society greatly influences the health behavior of its members. The family functions as a reminder to take medication, a motivator, a psychosocial protector, and a facilitator of access to health services (Northouse et al., 2012). According to Jufrizal et al. (2016), patients with good family support have a higher level of medication adherence.

2.3 PMO (Drug Supervisor) by Family

PMO is an individual who accompanies and ensures that patients take their medication according to schedule. Initially applied in the treatment of TB, this approach is also relevant for other chronic diseases such as hypertension. WHO and the Indonesian Ministry of Health recommend the use of PMO in accompanying the treatment of hypertension patients at home (Wiranata, 2019).

According to Andriyani (2023), family members are the most effective PMO because they have intense interaction with patients, and better understand their habits and emotional conditions. However, Wiranata (2019) also emphasized that the success of PMO from the family requires adequate education and training.

2.4 Empirical Study Related to the Role of the Family

A study conducted by Sari and Wijayanti (2020) at the Sleman Health Center, Yogyakarta, which stated that the role of the family as a reminder and supervisor greatly helps patients remember their medication schedule. However, this study emphasizes more on the statistical relationship between the variables of family support and patient compliance, without describing the concrete form of the role played by family members.

However, most previous studies have limitations, such as small sample sizes and contextual limitations (for example, only in urban areas). Research on the role of the family in the context of rural communities is still minimal, even though the social, cultural, and resource dynamics in villages have unique characteristics.

2.5 Research Gaps and Study Justification

Although the importance of the role of the family has been emphasized in various studies, there is a gap in quantitative research that describes in detail the role of the family as PMO in a rural context such as Licin Village. Most of the literature still focuses on educational intervention approaches or qualitative studies that have not numerically described the level of family contribution.

Thus, this study is here to fill this gap by providing an empirical description of the role of the family in supervising the taking of medication by hypertension patients through a quantitative descriptive approach. The results are expected to be the basis for formulating a more contextual and effective family-based health promotion program.

3. Methods

This study uses a quantitative approach with a descriptive design. This approach was chosen to describe objectively and systematically the role of the family in supervising medication intake in hypertension patients in Licin Village, Cimalaka District, Sumedang Regency. Data were collected by distributing questionnaires to respondents who were family members of hypertension patients. This method allows researchers to obtain quantitative information that can be measured statistically.

3.1 Research Participants

Participants in this study were family members who cared for hypertension patients in Licin Village, which is included in the Cimalaka Health Center's working area. Based on data from village officers, the population of hypertension patients in the village was 391 people. Using the Krejcie and Morgan table, a sample size of 186 respondents was obtained.

The inclusion criteria in this study included: (1) family members who live in the same house and are directly involved in caring for hypertension patients; (2) willing to be participants and sign an informed consent form; and (3) domiciled in Licin Village. Meanwhile, the exclusion criteria included families who did not live with the patient or were not involved in treatment, as well as those who experienced communication disorders.

The research was conducted from February to June 2025. The entire research process has received ethical approval from the Health Research Ethics Committee with the number: 074/KEP/FITKes-Unjani/III/2025.

3.2 Research Procedure

The research procedure was carried out in several stages. First, the researcher took care of the research permit to the relevant institutions, starting from the Indonesian Education University to the Sumedang Regency Health Office and the Cimalaka Health Center. After that, the researcher approached the village head and health cadres to facilitate data collection. Data collection was carried out by distributing questionnaires directly (door to door) to 186 respondents. The researcher first explained the intent and purpose of the research, then provided an informed consent sheet to be signed. After that, respondents were asked to fill out the questionnaire according to the instructions given. Data from the completed questionnaires were then collected, checked, and analyzed.

3.3 Instrument

The instrument used in this study was a closed questionnaire consisting of 10 question items. This questionnaire was adapted from Cahyawaty's (2017) research which has been used previously in similar studies and proven to be valid and reliable. Each question is designed to measure aspects of the family's role in reminding people to take medication, providing medication, monitoring side effects, and providing emotional

support to people with hypertension.

This instrument uses a Likert scale with four answer choices. The total score from 0 to 50 is classified into three categories: 0–15 (poor family role), 16–30 (sufficient), and 31–50 (good). Validity and reliability tests have been conducted previously to ensure the accuracy and consistency of the instrument.

3.4 Data Analysis

Data were analyzed univariately using descriptive analysis. The analysis technique was carried out by calculating the frequency distribution and percentage to describe the respondent's profile and the level of family role. Scoring was carried out based on predetermined category criteria. The analysis process was carried out manually and assisted by a simple spreadsheet computer program.

The validity of the results was strengthened by the data cleaning stage to avoid input errors and data bias. Previous reliability tests showed a Cronbach's Alpha value > 0.60 , which indicates that the instrument is reliable for use in this study.

4. Results

This study aims to determine the description of the role of the family in supervising the consumption of medication by hypertension patients in Licin Village, Cimalaka District, Sumedang Regency. Data were collected from 186 respondents using a questionnaire, then analyzed descriptively. The following are the findings of the study.

Table 4.1 Frequency Distribution of Respondents' Gender and Age

No	Respondent Characteristics	category	Frequency (f)	Percentage (%)
1	gender	man	84	45.2
		woman	102	54.8
2	Age	18-25 years	53	28.5
		26- 35 years	36	19.4
		36-45 years	23	12.4
		46-55 years	48	25.8
		56-65 years	21	11.3
		➤ 65 years	5	2.6

Source: Processed by Researchers, 2025

Description:

1. Gender shows that the distribution of respondents is dominated by women.
2. The largest age group is 18–25 years (28.5%).

Table 4.2 Frequency Distribution of Family Roles in Supervising Drug Consumption

No	Family Role Category	Range Score	Frequency (f)	Percentage (%)
1	Good	31-50	141	75.8
2	Enough	16-30	29	15.6
3	Not Enough	0-15	16	8.6

Source: Processed by Researchers, 2025

Description:

1. The “good” category indicates that the majority of families have an active role in supervising medication intake.
2. The “sufficient” and “less” categories were still found, indicating the need for increased education.

This study used descriptive univariate analysis and did not test inferential hypotheses because it aimed to describe the role of the family in general. Therefore, no statistical tests such as chi-square or regression were performed. However, the distribution of values showed that the role of the family was mostly good. summary of main findings 1) Most families (75.8%) carried out the role of supervising medication intake in the good category. 2) Family support was given more by women, especially from the younger age group. 3) These results support the importance of strengthening the role of the family in hypertension management strategies in the communit

The findings indicate that most families exhibit a high level of concern toward the treatment of their hypertensive relatives. Their roles include reminding patients to take medication on time, providing emotional support, and monitoring side effects—demonstrating that families serve not only as reminders but also as companions and motivators in the treatment process.

According to Friedman’s family role theory (2010), these actions reflect four core family functions:

1. **Affective Function:** Most respondents strongly agreed that they offer empathy, motivation, and emotional presence to patients, creating a sense of safety and comfort that supports long-term adherence. This aligns with Sari et al. (2020), who emphasized the psychological importance of affective support for quality of life.
2. **Health Care Function:** Families were actively involved in reminding medication schedules, monitoring physical conditions, and ensuring compliance with treatment routines. This supports Nursalam’s (2017) findings that family health support plays a significant role in managing chronic illnesses like hypertension.
3. **Educational Function:** A majority of families reported understanding the types of medication and actively discussing treatment, indicating basic medical literacy that enables them to educate patients about the importance of adherence. Pratiwi & Rahayu (2019) also found repeated family education enhances patient awareness.
4. **Regulatory Function:** Families were involved in organizing lifestyle patterns such as diet, activity schedules, and healthcare visits. The collaboration between families and medical professionals was also acknowledged as crucial. This supports Setiawan & Widodo’s (2021) conclusion that family-based interventions significantly influence blood pressure control.

These findings are consistent with Laili (2022), who found that family education enhances involvement in patient adherence. Compared to previous research that focused primarily on statistical relationships, this study offers a richer picture of concrete family roles. In summary, family involvement in supervising medication is essential for ensuring treatment success and preventing complications such as stroke, kidney failure, or heart disease (Yuliana, 2020). A comprehensive role that encompasses emotional, practical, educational, and regulatory support forms the foundation of effective hypertension management at the household level (Nursalam, 2017). Therefore, community-based approaches that empower families through education and collaboration with health workers are recommended, in line with the principles of family-centered care (Yani et al., 2021; Astuti & Handayani, 2020). The Ministry of Health of Indonesia (2018) also highlights strengthening the family’s role as a national strategy for controlling non-communicable diseases.

5. Discussion

This study shows that the majority of respondents (75.8%) have a good family role in supervising medication intake for hypertension patients. This finding indicates that the family is an important element in supporting the success of hypertension therapy, especially in rural communities such as Licin Village. In general, these results are in accordance with the objectives of the study, namely to empirically describe how family involvement can contribute to the regularity of medication consumption in hypertension patients. The family role that is classified as good includes reminders of medication times, provision of medication, emotional support, and monitoring of side effects. Thus, the family not only functions as a caregiver, but also as an active partner in chronic disease management, emphasizing the importance of a family-based approach in community nursing.

This result is consistent with the findings of Laili (2022) which shows that the role of the family in medication adherence can increase significantly after education. In the study, the level of family role before education was in the moderate category, but increased to the good category after the intervention. Similar findings were also shown by Puspita & Rustanti (2020), who stated that family support is positively related to patient compliance with hypertension treatment regimens. This study strengthens the results of these studies by presenting quantitative data from respondents in rural areas, which are often overlooked by previous studies. This geographic context provides added value, considering that the social dynamics and availability of access to health services in villages are different from those in cities. In contrast, several differences emerged when compared to the study by Rahman et al. (2021) in urban areas, where individual factors such as education and income were more dominant in influencing patient compliance than the role of the family. This difference can be explained contextually—in villages, family values and emotional closeness are stronger, so that the family has a more significant role than in more individualistic cities.

The differences between the results of this study and several other literatures can be reviewed from various factors:

1. **Socio-Cultural Context:** In rural areas such as Licin Village, communal lifestyles and strong family ties contribute to the high role of the family. Conversely, in urban communities, a more individual lifestyle causes family interactions to be more limited.
2. **Methodology:** Some previous studies used a qualitative or intervention approach, while this study used a quantitative descriptive design. This allows for a broader mapping of actual conditions without external intervention.
3. **Health Literacy:** Family knowledge about hypertension and how to treat it is also a determinant. In environments with good educational coverage, families tend to be more active in the role of PMO (Drug Supervisors).

A recent study by Andriyani (2023) emphasized that PMO from family circles has high effectiveness in supporting therapy adherence, due to emotional closeness and high interaction time. Friedman's theory (2003) also explains that the family has five basic functions, in this context, the health care and affective functions play a very important role in supporting hypertension patients. In modern community nursing practice, family involvement is seen as one of the crucial social determinants of health (WHO, 2022). This finding is in line with the approach that places the family at the center of intervention in chronic disease management.

This study makes an important contribution to the development of nursing science, especially in the context of family-based care in rural areas. These findings reinforce the urgency of strengthening health education for families as an integral part of health promotion and chronic disease management. In addition, this study also introduces a practical approach to quantitatively measuring the role of the family as a PMO, which can be adapted in similar studies in other areas. In a policy context, these data can be used as a basis for developing

community-based intervention programs, including training family cadres in supervising hypertension patient therapy.

These findings suggest that:

1. Health education for families needs to be continuously strengthened by health workers through routine counseling, home visits, and community-based programs.
2. The use of family cadres as formal PMOs needs to be considered in primary health programs in the regions.
3. Further research is recommended to use a mixed-method approach in order to explore the qualitative dimensions of the family's role, such as their motivation, challenges, and perceptions of care.

6. Limitations

This study was conducted using a quantitative descriptive approach to describe the role of the family in supervising medication intake in patients with hypertension. Although it makes a significant contribution to the community nursing literature, this study has several limitations that are important to be conveyed transparently as part of scientific integrity,

1) Geographical Scope and Generalization of Findings

This study is limited to one village, namely Licin Village in the working area of the Cimalaka Health Center, Sumedang Regency. Therefore, the results of this study cannot be generalized widely to the entire population of hypertension sufferers in other areas, especially in urban areas or communities with different cultural, social, and economic characteristics. Contextual factors such as family structure, access to health services, and education levels in other areas may affect different results.

2) Limitations of Design and Methodology

This study uses a quantitative descriptive design without a control group or intervention, so it cannot explain the causal relationship between the role of the family and medication adherence directly. In addition, the cross-sectional design limits understanding of the dynamics of family roles that may change over time. Data collection was conducted using a closed self-report questionnaire, which is prone to reporting bias and social desirability bias, where respondents tend to answer according to what is considered “good” or “correct”. This can cause the data obtained to not fully reflect actual behavior.

3) Sample Size and Selection

Although the number of respondents has been adjusted to the Krejcie and Morgan table, the sample size of 186 respondents is still relatively limited for a study that aims to understand the role of families on a wider community scale. In addition, strict inclusion and exclusion criteria—only including families living with people with hypertension—can cause selection bias, which excludes groups of families who live separately but still contribute to monitoring.

4) Time and Resource Constraints

This study was conducted in a relatively short period of time (February–June 2025), with limited human resources and logistics. Door-to-door data collection in villages requires a lot of time and effort, so that data coverage is limited. These limitations can have an impact on the depth of analysis and the detail of information that can be obtained from respondents.

5) Ethical and Practical Considerations

In the process of recruiting participants, researchers faced practical challenges, such as refusal from some families due to concerns about privacy or unwillingness to undergo interview procedures. Ethical constraints also prevented the use of direct observation methods of family behavior in supervising medication taking, which could have enriched the validity of the data.

7. Conclusion

This study aims to describe the role of the family in supervising medication intake in hypertension patients in Licin Village, Cimalaka District, Sumedang Regency. The results showed that most families (75.8%) have a good role in accompanying, reminding, and monitoring compliance of hypertension patients with treatment. This finding indicates that family involvement plays an important role in maintaining the continuity of pharmacological therapy and preventing long-term complications.

This finding directly answers the formulation of the research problem, while emphasizing the scientific contribution that family-based care, especially the role as a Drug Swallowing Supervisor (PMO), is an effective and relevant approach in the context of community nursing. By understanding and optimizing this role, nurses can improve the quality of care that focuses on the patient's social support system.

However, limitations in the scope of the area, cross-sectional approach, and self-report method need to be recognized as part of the limitations that limit the generalization and depth of interpretation. Therefore, further research development is needed to expand the validity and applicability of the findings.

Based on the research results and their significance to the practice and development of nursing science, here are some recommendations that can be followed up:

1) Nursing Practice

Community nurses are advised to more actively involve families as part of nursing interventions, by providing ongoing education regarding their role in supervising medication intake. Strengthening the role of families as PMOs can be used as a supporting strategy in the implementation of community-based chronic disease management programs.

2) Nursing Education

Nursing educational institutions need to include modules on family-based care and family empowerment in the curriculum, to equip students with a collaborative approach in community nursing practice.

3) Health Policy

Local governments and health centers are advised to integrate training for cadres or families as PMOs in promotive and preventive programs, especially in areas with a high prevalence of hypertension. It is necessary to create technical guidelines that regulate the mechanism of family involvement in the management of non-communicable diseases (NCDs), which can be used as a basis by health workers in the field.

4) Further Research

It is recommended to conduct further research with a mixed-method or longitudinal approach to explore the dynamics and long-term effectiveness of the role of the family in the treatment of hypertension. Expansion of the area and diversity of respondents will enrich the generalization of findings and provide a comprehensive view of medication supervision practices in various social contexts.

These conclusions and recommendations strengthen the research position in supporting efforts to improve the quality of life of hypertension patients through family-based care, while providing a foundation for the development of more responsive, participatory, and sustainable community nursing.

References

- Andriyani, N. (2023) 'Community Empowerment Through Drug Swallowing Supervisory Program (PMO) in Hypertension Patients', *Community Empowerment Journal*, 2, pp. 58–65.
- Ariwibowo, A. (2023) 'Effectiveness of Herbal Treatment in Hypertension Patients', *Surya Medika Journal*, 9(2),

- pp. 34–40. doi: 10.33084/jism.v9i2.5662.
- Cahyawaty, M.I. (2017) 'Relationship between Family Support and Elderly Behavior in Hypertension Control in Pilangkenceng Health Center Area, Madiun Regency', *Accounting Journal*, 11.
- Daryanti, T.R. (2019) 'The Relationship Between the Role of the Family as a Medication Supervisor (PMO) and Medication Compliance in Hypertension Patients', *Health Services*, 2016(2014), pp. 1–6. Available at: http://library.oum.edu.my/repository/725/2/Chapter_1.pdf.
- Erlinda, R. et al. (2019) 'The Relationship Between the Role of Medication Supervisors (PMO) in the DOTS Program and the Results of BTA Smears of Pulmonary Tuberculosis Patients at the Tanggul Health Center, Jember Regency', *Nursing Journal*, [Online].
- Firdaus, I. et al. (2023) 'The Relationship Between Stress Levels and Diet and Activity Patterns in Elderly People with Hypertension', *Proceedings of the National Health Information Seminar (SIKESNas)*, pp. 513–517.
- Haekal, M. (2021) 'Efforts to Control and Prevent Hypertension in Families', *Collaboration of Community Service Journal*, 1(1), pp. 60–66. doi: 10.56359/kolaborasi.v1i1.14.
- Jufrizal, D., Hermansyah & Mulyadi (2016) 'The Role of Families as Supervisors of Medication Consumption (PMO) with the Success Rate of Treatment of Pulmonary Tuberculosis Patients', *Journal of Nursing Science*, 4(1), pp. 1–12.
- Laili, N. (2022) 'The Role of Families in Compliance with Consuming Antihypertensive Drugs in Hypertensive Patients', *ERAU Community Service Journal*.
- Lanjaraningtyas, J.P. (2024) 'Family Nursing Care at the Adult Development Stage with Health Education Intervention on Hypertension with Poster Media', *A γ α η*, 15(1), pp. 37–48.
- Megasari, D. (2023) 'The Effect of Deep Breathing Relaxation Intervention and Irama Nahawand Al-Qur'an Recitation on Reducing Blood Pressure in Hypertensive Elderly', *Jurnal Ners*, 7(1), pp. 632–638. doi: 10.31004/jn.v7i1.13991.
- Nurochman, M.A. (2024) 'Hypertension Counseling for Visitors to Posyandu RW 14, Sumber Village', *Jurnal Pengabdian Masyarakat Global*, 3(1), pp. 126–132. doi: 10.30640/cakrawala.v3i1.2122.
- Salmah, S. (2019) 'The Relationship between the Role of Parents in Stimulation and the Development of 12-Month-Old Children at the Bengkurung Health Center, Sempaja Timur Village, Samarinda', Thesis, Poltekkes Kaltim. Available at: https://repository.poltekkes-kaltim.ac.id/173/7/Skripsi_Siti_Salmah_Repository.pdf.
- Soegiyono, S. (2013) *Quantitative, Qualitative and R&D Research Methods*. Bandung: Alfabeta.
- Sundari, R.K., Latifah & Tasalim, R. (2024) 'Adherence to Taking Antihypertensive Medication in Elderly People with Hypertension', *Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal*, 14(3), pp. 1063–1072. Available at: <http://journal.stikeskendal.ac.id/index.php/PSKM>.
- Suryana, I. & Nurhayati (2021) 'The Relationship Between the Role of Drug Supervisors (PMO) and Drug Compliance in Pulmonary TB Patients', *Indonesian Journal of Nursing Sciences and Practices*, 4(2), pp. 93–98. Available at: <https://jurnal.umj.ac.id/index.php/ijnsp/article/view/14616/0>.
- Susanti, N. (2019) 'Family Caregiver Experience in Caring for Family Members with Mental Disorders', *Journal of Mental Nursing*, 7(1), pp. 1–19.
- Susilowati, D.A.Y.U. (2021) 'Description of Medication Compliance of Hypertensive Patients in Nglaseman Ngrajek Hamlet, Magelang Regency', Diploma Thesis, Muhammadiyah University of Magelang.
- Toulasik, Y.A. (2019) 'The Relationship Between Family Support and Medication Compliance in Hypertensive Patients at Prof. Dr. WZ. Johannes Kupang-NTT Hospital', Thesis, Airlangga University. Available at: <http://repository.unair.ac.id/82081/2/FKP.N.19-19%20Tu%20h.pdf>.

- Wiranata, A. (2019) 'The Relationship between PMO (Medication Supervisor) and Medication Compliance in Tuberculosis Patients in the Dimong Health Center Work Area, Madiun Regency'.
- Yuzianti, Sawitri, H. & Nadira, C. (2023) 'Level of Knowledge of Hypertension Patients about Non-Pharmacological Therapy', *Scientific Journal of Health*, 18, pp. 80–85.
- Zebua, S.E. (2024) 'Description of Medication Compliance of Pulmonary Tuberculosis Patients at the Medan Special Lung Hospital, North Sumatra'.