JIS: Jurnal Ilmu Sosial
ISSN: 2548-48xx (Printed)
ISSN: 2548-489x (Online)

THE RELATIONSHIP BETWEEN FAMILY SUPPORT AND MEDICATION ADHERENCE AMONG PATIENTS WITH CHRONIC KIDNEY DISEASE

Rini Dwi Astuti, Ani Rosita

Prodi Ilmu Keperawatan,
STIKES Buana Husada Ponorogo, Indonesia

*Corresponding Author:
rinidwiastuti242@gmail.com

Abstract.

Chronic Kidney Disease (CKD) is a progressive condition requiring lifelong treatment and continuous medication adherence. However, the complexity of therapeutic regimens, polypharmacy, medication fatigue, and prolonged treatment duration frequently reduce patients' adherence to prescribed medications. Family support has been recognized as an essential external factor that enhances patients' motivation, confidence, and commitment to maintaining long-term treatment. This study employed a quantitative correlational design using a cross-sectional approach. The study population consisted of hospitalized patients with Chronic Kidney Disease who met the predetermined inclusion criteria. A total of 40 respondents were selected using purposive sampling. Data were collected using a Family Support Questionnaire based on the Guttman Scale and the Morisky Medication Adherence Scale-8 (MMAS-8). Descriptive statistics were used for univariate analysis, while the relationship between variables was analyzed using Spearman's Rank correlation test with a significance level of $p < 0.05$. Among the 40 respondents, 25 (62.5%) reported receiving good family support, whereas 15 (37.5%) received poor family support. Regarding medication adherence, 24 respondents (60.0%) demonstrated good adherence, while 16 respondents (40.0%) were classified as non-adherent. Spearman's Rank correlation analysis revealed a statistically significant relationship between family support and medication adherence ($r = 0.738$; $p < 0.001$), indicating a strong positive correlation. Patients who received better family support were more likely to adhere to their prescribed medication regimen. Family support is significantly associated with medication adherence among patients with Chronic Kidney Disease. Emotional, informational, instrumental, and appraisal support provided by family members play a crucial role in improving patients' adherence to medication and facilitating successful long-term disease management.

Keywords: Family Support; Medication Adherence; Chronic Kidney Disease; Chronic Illness; Patient Compliance

ISSN: 2548-48xx (Printed)
ISSN: 2548-489x (Online)

INTRODUCTION

Chronic Kidney Disease (CKD) is characterized by a progressive decline in kidney function lasting for at least three months and affects nearly 10% of the global population. The disease predominantly occurs among older adults, women, individuals of certain ethnic backgrounds, and patients with diabetes mellitus or hypertension, all of which are recognized as major contributors to global mortality (Kovesdy 2022). The principal risk factors include diabetes mellitus, hypertension, cardiovascular disease, obesity, family history of kidney disease, congenital renal abnormalities, previous kidney injury, advanced age, and unhealthy dietary habits (Henrianto Karolus Siregar 2022). CKD substantially increases mortality risk, both directly through renal failure and indirectly through complications such as cardiovascular disease (Bikbov et al. 2020).

Globally, CKD has become a major public health concern. In 2024, approximately 9.5% of the world's population was estimated to be affected by CKD, largely driven by the increasing prevalence of diabetes mellitus, particularly in South Asia, where diabetes cases are projected to rise by more than 150% (Shyauqy et al. 2021). China and India carry the greatest burden, with CKD prevalence reaching approximately 10.8% (more than 120 million people) and between 9.1% and 13% (approximately 80-90 million people), respectively (Organization 2024). In Indonesia, the prevalence of CKD is estimated at 2% of the population, with approximately 382,646 individuals (0.18% of people aged 15 years and older) having received a confirmed diagnosis (Indonesia 2023). Likewise, East Java Province reports a prevalence of approximately 2%. Local hospital records from the Seruni Ward of Dr. Harjono Regional Hospital, Ponorogo, documented 288 inpatient cases of Chronic Kidney Disease during 2025.

Medication adherence among patients with chronic diseases remains a global challenge. Studies indicate that only about half of patients in developed countries adhere adequately to long-term therapy (Hemodialisa and Rsud 2023). Poor adherence is associated with suboptimal clinical outcomes, increased adverse drug reactions, and rising healthcare expenditures (Alfian et al. 2025). A national survey conducted in Indonesia reported that 66.3% of patients with chronic diseases and disabilities exhibited poor medication adherence, with age, self-perceived health status, and assistive device use identified as significant determinants (Susanti, Nita, and Rahem 2026). In East Java, medication

adherence continues to be problematic. Previous studies have reported non-adherence rates of approximately 21% among hypertensive patients experiencing polypharmacy in Malang (Susanti et al. 2026), low adherence among nearly 40% of patients in Jember (Febry Hadi Kusuma, Achmad Dafir Firdaus 2024), predominantly moderate adherence in Nganjuk (Karyo et al. 2025), and a low adherence rate of 20.5% among patients attending Candi Primary Healthcare Center in Surabaya (Kempalan 2026). Medication fatigue, inadequate supervision by medication treatment supporters, and patients' misconceptions that they have recovered are among the leading causes of poor adherence (Febry Hadi Kusuma, Achmad Dafir Firdaus 2024). Nevertheless, structured interventions implemented in Surabaya have demonstrated therapeutic success rates of up to 89.36%, highlighting the importance of effective adherence support strategies.

A preliminary study conducted by the researchers revealed that 288 patients with Chronic Kidney Disease were hospitalized at Dr. Harjono Regional Hospital, Ponorogo, during 2025. Within one week of observation in the Seruni Ward, 11 patients with CKD were receiving inpatient care. Of these patients, eight reported receiving family support. Among those who received family support, three adhered consistently to their prescribed medication regimen, whereas five exhibited poor adherence because of inadequate supervision, treatment fatigue, and reduced motivation to recover. Conversely, among the three patients who reported receiving no family support, only one demonstrated medication adherence, while the remaining two were classified as non-adherent. Overall, patients who lacked family support exhibited a higher proportion of medication non-adherence than those who received adequate family support.

Several factors contribute to the lack of family support, including financial limitations, insufficient knowledge among patients and family members regarding the importance of medication adherence, as well as physical and emotional exhaustion experienced while caring for chronically ill family members at home. In addition, many patients experience boredom and treatment fatigue due to the repetitive nature of lifelong medication, ultimately leading them to discontinue or inconsistently follow their prescribed therapy. Such behaviors may accelerate disease progression and worsen clinical outcomes (Anwar 2024).

Patients with Chronic Kidney Disease frequently experience multiple comorbidities requiring complex pharmacological treatment (Susanto, Wahyudi,

and Wulandari 2024). Consequently, many patients must consume between three and eight different medications each day (Kusniawati 2018). This therapeutic complexity, combined with medication-related adverse effects, often diminishes patients' willingness to maintain long-term treatment (Parker et al. 2019). Patients commonly discontinue medication because of forgetfulness, unpleasant medication characteristics (Kusdiani, Yasin, and Wahyuningrum 2020), treatment fatigue, or the large number of prescribed drugs (Tuloli et al. 2019). Previous studies have identified poor understanding of medication benefits, depression, anxiety, and inadequate social support as major contributors to medication non-adherence (Breendrakumar, Kumar, and Devi 2024).

Medication adherence, defined as patients' consistency in following prescribed therapeutic regimens, is a critical determinant of successful disease management. Adherence is influenced by both internal factors, including patients' knowledge and beliefs, and external factors, such as healthcare accessibility and social support (Iswara and Muflihatin 2021). Among these, family support represents one of the most influential external determinants of successful treatment outcomes in patients with Chronic Kidney Disease. Emotional, informational, appraisal, and instrumental support provided by family members serve as important motivational and facilitating factors that encourage patients to comply with long-term treatment recommendations (Fitriana, Joeliantina, and Padoli 2023).

Improving medication adherence among patients with Chronic Kidney Disease requires optimizing the family's role as the primary source of support. Informational support can be strengthened by actively involving family members in therapeutic education so they fully understand treatment protocols. Instrumental support includes supervising medication intake, ensuring medication availability, maintaining treatment schedules, and encouraging patient discipline. Furthermore, emotional support plays an essential role in sustaining patients' motivation and self-efficacy through positive reinforcement and psychological companionship. The integration of these complementary forms of support is expected to substantially improve medication adherence, thereby contributing to better clinical outcomes and reducing mortality among patients with Chronic Kidney Disease. Therefore, this study aimed to examine the relationship between family support and medication adherence among patients with Chronic Kidney Disease admitted to the Seruni Ward of Dr. Harjono Regional Hospital, Ponorogo.

METHODS

This study employed a quantitative research design with a correlational approach using a cross-sectional method to examine the relationship between family support and medication adherence among patients with Chronic Kidney Disease (CKD) at Dr. Harjono Regional Hospital, Ponorogo. The study was conducted over one month, beginning in April 2026, in the Seruni Ward of Dr. Harjono Regional Hospital, Ponorogo, Indonesia. The study population consisted of all hospitalized patients diagnosed with Chronic Kidney Disease. Participants were selected using purposive sampling based on predetermined inclusion criteria. Sampling continued throughout the study period until 40 eligible respondents meeting the inclusion and exclusion criteria were recruited. The sample size was determined using the Slovin formula.

Data were collected using two questionnaires. Family support was measured using a Guttman Scale questionnaire consisting of 16 items. Total scores were categorized as good (41-64) or poor (16-40). Medication adherence was assessed using the Morisky Medication Adherence Scale-8 (MMAS-8), which consists of eight items. The scoring system combines Guttman and Likert scales. Respondents with a score of 8 were categorized as adherent, whereas those scoring <8 were classified as non-adherent. Data collection was conducted over one month, including the stages of obtaining institutional permission, distributing the questionnaires, obtaining respondents' consent, collecting the data, and processing the data.

Data processing included editing, coding, data entry, data cleaning, and tabulation. Univariate analysis was performed using descriptive statistics to describe respondents' characteristics, including educational level, age, sex, occupation, marital status, duration of illness, family support, and medication adherence. Bivariate analysis was performed using Spearman's Rank correlation test with IBM SPSS Statistics to determine the relationship between family support and medication adherence. Statistical significance was set at $p < 0.05$. In this study, family support was treated as the independent variable, whereas medication adherence was considered the dependent variable.

RESULTS AND DISCUSSION

Univariate Analysis

Based on the results of the study conducted at Dr. Harjono Regional Hospital, Ponorogo, involving 40 respondents, the respondents' characteristics were classified according to age, occupation, duration of illness, sex, marital status, and educational level. The distributions of respondent characteristics, family support, and medication adherence are presented in the following tables.

Table 1. Frequency Distribution of Respondent Characteristics (n = 40)

Respondent Characteristics	n	Percentage (%)
Age		
Adolescents (12–16 years)	1	2.5
Young Adults (17–39 years)	6	15.0
Middle-aged Adults (40–59 years)	17	42.5
Older Adults (≥60 years)	16	40.0
Occupation		
Unemployed	4	10.0
Housewives	2	5.0
Farmers	19	47.5
Self-employed	15	37.5
Duration of Illness		
<1 year	19	47.5
1–5 years	17	42.5
5–10 years	3	7.5
>10 years	1	2.5
Sex		
Female	12	30.0
Male	28	70.0
Marital Status		
Unmarried	4	10.0
Married	36	90.0
Educational Level		
Elementary School	22	55.0
Junior High School	7	17.5
Senior High School	10	25.0
Higher Education	1	2.5
Total	**40**	**100**

Source: Primary Data (2026)

Table 1 shows that, among the 40 respondents, the majority were middle-aged adults (40-59 years), comprising 17 respondents (42.5%), whereas the smallest proportion consisted of adolescents (12-16 years), with one respondent (2.5%). Based on occupation, the largest group consisted of farmers (19 respondents; 47.5%), while housewives represented the smallest group, with two respondents (5.0%). Regarding the duration of illness, the highest proportion of respondents had suffered from Chronic Kidney Disease for less than one year (19 respondents; 47.5%), whereas only one respondent (2.5%) had experienced the disease for more than ten years. Most respondents were male (28 respondents; 70.0%), while 12 respondents (30.0%) were female. In terms of marital status, 36 respondents (90.0%) were married and 4 respondents (10.0%) were unmarried. Regarding educational level, the majority had completed elementary school (22 respondents; 55.0%), whereas only one respondent (2.5%) had attained higher education.

Table 2. Frequency Distribution of Family Support and Medication Adherence Among Patients with Chronic Kidney Disease (n = 40)

Study Variables	n	Percentage (%)
Family Support		
Good	25	62.5
Poor	15	37.5
Medication Adherence		
Adherent	24	60.0
Non-adherent	16	40.0
Total	**40**	**100**

Source: Primary Data (2026)

Table 2 shows that, among the 40 respondents, 25 respondents (62.5%) received good family support, whereas 15 respondents (37.5%) received poor family support. Regarding medication adherence, 24 respondents (60.0%) were categorized as adherent to their medication regimen during hospitalization, whereas 16 respondents (40.0%) were categorized as non-adherent.

Bivariate Analysis

Bivariate analysis was conducted to determine the relationship between family support and medication adherence among patients with Chronic Kidney Disease in the Seruni Ward of Dr. Harjono Regional Hospital, Ponorogo. The statistical test used was Spearman's Rank Correlation Test.

Table 3. Relationship Between Family Support and Medication Adherence Among Patients with Chronic Kidney Disease (n = 40)

Family Support	Adherent n (%)	Non-adherent n (%)	Total n (%)
Good	22 (55.0)	3 (7.5)	25 (62.5)
Poor	2 (5.0)	13 (32.5)	15 (37.5)
Total	**24 (60.0)**	**16 (40.0)**	**40 (100)**
	α = 0.05; n = 40		
	p-value = 0.000		

Source: Primary Data (2026)

Table 3 shows the results of Spearman's Rank correlation analysis between family support and medication adherence among patients with Chronic Kidney Disease. Of the 40 respondents, 25 respondents (62.5%) received good family support, whereas 15 respondents (37.5%) received poor family support. Among respondents who received good family support, 22 respondents (55.0%) were adherent to their medication regimen, while only 3 respondents (7.5%) were non-adherent. Conversely, among respondents who received poor family support, only 2 respondents (5.0%) were adherent, whereas the majority, 13 respondents (32.5%), were non-adherent.

The results of the analysis showed a p-value of 0.000 with $\alpha = 0.05$, indicating a statistically significant relationship between family support and medication adherence. The correlation coefficient ($r = 0.738$) demonstrated a strong positive correlation, indicating that better family support was associated with higher medication adherence among patients with Chronic Kidney Disease. Conversely, inadequate family support tended to be associated with lower levels of medication adherence.

Family Support Among Patients with Chronic Kidney Disease

The results of this study showed that, of the 40 respondents, 25 respondents (62.5%) received good family support, whereas 15 respondents (37.5%) received poor family support. Good family support was reflected in the family's role in providing informational support (education and monitoring), emotional and psychosocial support (motivation, listening to patients' concerns, and providing comfort and security), instrumental support in the form of practical assistance (supervising medication intake and preparing medications), and appraisal support (providing praise and encouragement). In this study, most respondents stated that their family members consistently encouraged them and

ISSN: 2548-48xx (Printed)
ISSN: 2548-489x (Online)

listened to their concerns whenever they became tired of the routine of taking medication.

According to (Trisnadewi et al. 2022), family support is a tangible form of assistance and attention that directly contributes to the physical and psychological well-being of individuals experiencing health problems. In the present study, this support was reflected in family members who consistently encouraged patients, listened to their concerns, and prepared their medications (Trisnadewi et al. 2022). This finding is supported by Lawrence Green's theory, which identifies the presence of family members as a reinforcing factor that promotes adherence to treatment recommendations (Green 2020). Furthermore, instrumental and informational support provided by family members creates a sense of security that helps prevent treatment fatigue (Febiana et al. 2026). Based on the respondents' age characteristics, most participants were middle-aged adults (40-59 years) (17 respondents; 42.5%) and older adults (≥60 years) (16 respondents; 40.0%) (Ervina, Sartika, and Rohmah 2025). Middle-aged adults are generally still in their productive years and actively engaged in work, making them more likely to forget or neglect their medication because of daily responsibilities. In contrast, older adults are more vulnerable to irregular medication use due to declining physical function and memory; therefore, the family's role in reminding patients to take their medication becomes particularly important. Patients who consistently receive information and reminders from their family members are more motivated to take their medication regularly. Conversely, patients who are not reminded by their family members are more likely to become non-adherent because no one supervises their medication-taking behavior.

These findings are consistent with previous studies reporting that good family support improves patients' medication adherence (Gandung et al. 2025). Family members play an important role in ensuring that medication schedules are followed, providing attention and encouragement, and supporting the continuity of treatment, thereby helping patients become more disciplined and motivated to complete their therapy. These findings are further supported by the Health Belief Model, which explains that health behavior is influenced by an individual's perception of illness and the perceived benefits of health-related actions. Family support can strengthen patients' perception of the benefits of treatment while reducing barriers, such as forgetting to take medication, thereby improving adherence to therapy (Islam et al. 2025).

Based on marital status, the majority of respondents (36 respondents; 90.0%) were married. Psychologically, the presence of a spouse serves as the closest companion who not only provides emotional support when patients become fatigued with long-term treatment but also offers practical (instrumental) assistance in daily activities. This finding is consistent with previous studies showing that married patients tend to receive greater emotional and instrumental support from their spouses and other family members, which positively influences treatment adherence (Pratiwi 2018).

Based on occupational characteristics, the majority of respondents were farmers (19 respondents; 47.5%) and self-employed (15 respondents; 37.5%). Working as a farmer requires effective time management and economic stability, making family support essential to ensure that medication adherence is maintained despite work-related responsibilities. This finding is supported by previous research emphasizing that family involvement plays a crucial role in helping patients adhere to treatment more easily. The study also reported that medication adherence is influenced not only by family support but also by patients' understanding of their illness, educational level, economic conditions, and guidance provided by family members. Therefore, family involvement represents one of the key factors contributing to successful treatment outcomes (Mala et al. 2025).

Based on the findings and supporting theories, the researchers believe that good family support contributes to successful management of Chronic Kidney Disease, particularly with regard to medication adherence. The role of the family cannot be separated from the process of disease management and recovery. Family support increases patients' motivation, strengthens their enthusiasm for life, and enhances their willingness to continue living despite chronic illness. Therefore, nursing interventions should involve not only medical treatment but also a holistic approach that includes education, continuous support, and effective communication among patients, family members, and healthcare professionals. Through strong collaboration, patients are expected to develop medication adherence based on their own awareness and commitment.

Medication Adherence Among Patients with Chronic Kidney Disease

The results of this study showed that, among the 40 respondents, 24 respondents (60.0%) were classified as adherent to their medication regimen during hospitalization, whereas 16 respondents (40.0%) were categorized as non-

adherent. Although the patients were under medical supervision, some respondents had not yet achieved optimal medication adherence. Most of the respondents who adhered to their medication regimen also received good family support. This high level of adherence reflects patients' awareness of the importance of taking medication as prescribed. Based on field observations, respondents who adhered to their medication reported feeling more reassured because they were consistently reminded and monitored by both healthcare professionals and their family members. They believed that following the prescribed medication schedule would improve their physical condition and allow them to return home sooner. In contrast, respondents who were non-adherent reported difficulty following the prescribed medication schedule, mainly because they felt bored with the treatment or perceived no immediate improvement after taking their medication.

According to previous studies, medication adherence refers to patients' consistency in following their prescribed treatment regimen and is influenced by various factors, including patients' knowledge, belief in recovery, and social support from family members (Iswara and Muflihatin 2021). The findings of the present study demonstrate that treatment is more likely to be successful when patients understand the benefits of their medication and when family members actively participate in monitoring medication use during hospitalization.

The duration of Chronic Kidney Disease was also associated with medication adherence. In this study, respondents had experienced Chronic Kidney Disease for periods ranging from less than one year to more than five years. Based on the findings obtained in the field, the longer a patient had suffered from Chronic Kidney Disease, the greater the likelihood of developing complications and requiring multiple medications, which often resulted in boredom and fatigue related to long-term medication use.

These findings are consistent with previous studies reporting that the burden of long-term treatment may lead to psychological fatigue and boredom. Patients often feel that continuous treatment has reduced their quality of life, causing them to intentionally skip medication doses in order to obtain temporary relief from the prescribed treatment regimen (Fitriana et al. 2014). Conversely, patients who had experienced Chronic Kidney Disease for less than one year tended to be more sensitive to changes in their physical condition after taking medication. When they felt physically better, some of them decided to discontinue their medication. This finding is consistent with previous research

indicating that patients in the early stages of the disease often have limited health literacy regarding the progressive nature of Chronic Kidney Disease (Mailani and Andriani 2017).

Ideally, hospitalization should improve medication adherence because patients receive direct supervision from healthcare professionals. However, the findings of this study indicate that the strategies currently implemented have not yet achieved optimal effectiveness and have not comprehensively addressed patients' internal factors influencing medication adherence.

Relationship Between Family Support and Medication Adherence Among Patients with Chronic Kidney Disease

Based on the results of the Spearman's Rank correlation test, the p-value was 0.000 ($p < 0.05$). Since the p-value was less than 0.05, H_0 was rejected and H_1 was accepted. This finding indicates a statistically significant relationship between family support and medication adherence among patients with Chronic Kidney Disease in the Seruni Ward of Dr. Harjono Regional Hospital, Ponorogo. The results suggest that better family support is associated with higher levels of medication adherence among patients with Chronic Kidney Disease. Field observations also revealed that patients who received better family support demonstrated higher levels of medication adherence. Family members actively served as medication supervisors by ensuring that medications were taken at the correct dosage and according to the prescribed schedule. Respondents who received positive family support also reported increased feelings of security and self-confidence, which directly enhanced their motivation and willingness to remain disciplined in following long-term treatment, thereby enabling their health condition to be monitored more effectively.

These findings are consistent with a previous study involving 40 respondents, in which Spearman's Rank correlation analysis showed a p-value of 0.000 (<0.05) with a correlation coefficient of 0.660, indicating a strong relationship between family support and medication adherence.(33) Similarly, another study involving 453 respondents reported a Chi-square test p-value of 0.001 (<0.05), demonstrating a significant relationship between family support and medication adherence (Guo et al. 2021).

Based on the respondents' educational characteristics, the majority had completed elementary school (22 respondents; 55.0%). This condition may limit patients' knowledge regarding the importance of medication adherence and their

understanding of health-related information. Therefore, adequate family support is essential to facilitate successful long-term treatment. Respondents who received good informational support from their families were more motivated to adhere to their medication regimen than those who did not receive such support.

This finding is consistent with Lawrence Green's theory, which states that health-related behaviors are influenced by predisposing factors and reinforcing factors. In the present study, the predominance of respondents with only an elementary school education represents a predisposing factor that may limit patients' knowledge. Consequently, family support functions as a reinforcing factor by providing information and encouragement that help maintain patients' motivation to adhere to treatment. Patients with higher educational attainment generally have a better understanding of complex clinical instructions, thereby reducing errors in treatment. Education contributes to improved health literacy, which influences decisions regarding treatment continuation (Mala et al. 2025). Although several studies have reported that formal education is not always the primary determinant of medication adherence, most evidence suggests that educational level is an important predictor of adherence (Mansyur and Suminar 2022). Therefore, other researchers have recommended that health education should be tailored to patients' educational background and level of understanding (Santoso 2022). Furthermore, social support from family members has been identified as one of the main predictors of long-term medication adherence because it reduces patients' psychological barriers to treatment (Oktaviani et al. 2021).

The researchers believe that these findings are influenced by the psychological condition of patients with Chronic Kidney Disease, who are required to undergo lifelong treatment and are therefore vulnerable to reduced motivation and anxiety regarding the possibility of not recovering. The researchers assume that the role of the family extends beyond providing physical assistance; it also serves as a fundamental source of support in maintaining patients' psychological well-being so that they do not feel alone in coping with the limitations associated with their illness and limited knowledge. Family involvement in daily care helps maintain patients' motivation and self-efficacy. Therefore, future nursing interventions should not focus solely on patient education but should also actively involve family members as the primary support system to ensure successful and holistic disease management.

ISSN: 2548-48xx (Printed)
ISSN: 2548-489x (Online)

CONCLUSION

This study was conducted to determine the relationship between family support and medication adherence among patients with Chronic Kidney Disease. Based on the findings obtained from 40 respondents, it can be concluded that 25 respondents (62.5%) received good family support, while 24 respondents (60.0%) demonstrated good medication adherence. The results showed a significant relationship between family support and medication adherence among patients with Chronic Kidney Disease, with a correlation coefficient of $r = 0.738$ and a p-value = 0.000 ($p < 0.05$) in the Seruni Ward of Dr. Harjono Regional Hospital, Ponorogo.

Healthcare professionals are encouraged to optimize comprehensive educational interventions by actively involving family members and providing psychosocial support to minimize the risk of treatment fatigue among patients with chronic diseases. Collaboration between patients and their families is expected to enhance patients' self-confidence and medication adherence, thereby preventing complications through consistent practical and emotional support that helps maintain patients' psychological well-being and internal motivation.

ACKNOWLEDGMENTS

The authors would like to express their sincere gratitude to their supervisors for their guidance, support, and valuable feedback throughout the preparation and completion of this study. The authors also extend their appreciation to Dr. Harjono Regional Hospital, Ponorogo, for granting permission, providing the opportunity, and supporting the implementation of this research, which enabled the study to be conducted successfully.

CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest to disclose.

REFERENCES

Alfian, S. D., M. Griselda, M. A. A. Pratama, W. N. Insani, R. Abdulah, and M. Wawruch. 2025. “Factors Influencing Medication Non-Adherence in Patients with Chronic Diseases and Disabilities: Insights from a National Survey in Indonesia.” *Patient Preference and Adherence* 19:1557–72.

Anwar, Andrian Hoerul. 2024. “Skrining Risiko Masalah Terapi Obat Pada Pasien Hipertensi Rawat Jalan Di Poliklinik Penyakit Dalam Rsud

Kabupaten Bandung." *Indonesian Journal of Health Research Innovation* 01(03):190–200. doi: 10.64094/x3gheq19.

Bikbov, B., C. Purcell, A. S. Levey, M. Smith, A. Abdoli, and M. Abebe. 2020. "Global, Regional, and National Burden of Chronic Kidney Disease, 1990–2017: A Systematic Analysis for the Global Burden of Disease Study 2017." *The Lancet* 395(10225):709–33.

Breendrakumar, S., R. Kumar, and P. Devi. 2024. "Investigation of Psychosocial Factors Hindering Medication Adherence Among Patients with Chronic Diseases." *Journal of Clinical Pharmacy and Therapeutics* 25(1):45–55.

Ervina, E., I. Sartika, and M. Rohmah. 2025. "Hubungan Dukungan Keluarga Dengan Kepatuhan Menjalani Terapi Hemodialisa Pasien Gagal Ginjal Kronik Di RS Metari Tangerang." *Jurnal Riset Media Keperawatan* 8(1):1–10.

Febiana, Ceria, Hadi Juwanda, Leni Herfiyanti, and Muhamad Rendi Hakim. 2026. "Utilizing a Patient Data-Based Digital System." *Jurnal Manajemen Kesehatan Yayasan RS.Dr. Soetomo* 12 No 1:35–47. doi: 10.29241/jmk.v12i1.2437.

Febry Hadi Kusuma, Achmad Dafir Firdaus, Andi Surya Kurniawan. 2024. "The Relationship Of Family Support With Medication Adherence In Puskesmas Sawahan Kabupaten Nganjuk." *Jurnal Keperawatan Muhammadiyah* 9(4). doi: 10.30651/jkm.v9i4.23844.

Fitriana, Erdila, Santi Herlina, Program Studi, S. Keperawatan, and Fakultas Ilmu Kesehatan. 2014. "Dukungan Keluarga Dengan Kepatuhan Pembatasan Cairan Pada Pasien Gagal Ginjal Kronik YangMenjalani Hemodialisis Family Support with Fluid Restriction Compliance in Patients Chronic Renal Failure Undergoing Hemodialysis." *Jurnal Ilmiah Kesehatan Masyarakat* 11:206–13. doi: 10.52022/jikm.v11i2.31.

Fitriana, S. N. F., A. Joeliantina, and P. Padoli. 2023. "Hubungan Dukungan Keluarga Dengan Kepatuhan Diit Pada Klien Hipertensi Di Wilayah Kerja Puskesmas Pacitan." *Jurnal Keperawatan* 15(3):112–18.

Gandung, P. A., K. Lidia, D. A. Deo, and I. M. Artawan. 2025. "Hubungan Dukungan Keluarga Dengan Kepatuhan Pasien Gagal Ginjal Kronis Menjalani Hemodialisis Di RSUD Prof. Dr. WZ Johannes." *Jurnal Kesehatan Tambusai* 6(4):14938–47.

Green, L. W. 2020. *Health Behavior and Health Education: Theory, Research, and Practice*. Jossey-Bass.

Guo, L., X. Hu, J. Lu, and L. Ma. 2021. "Effects of Customer Trust on Engagement in Live Streaming Commerce: Mediating Role of Swift Guanxi." *Internet Research* 31(5):1718–44.

Hemodialisa, Menjalani, and D. I. Rsud. 2023. "Hubungan Dukungan Keluarga Dengan Kepatuhan Pembatasan Asupan Cairan Pada Pasien Gagal Ginjal Kronik Yang Menjalani Hemodialisa Di RSUD Tabanan." *Journal Nursing Research Publication Media (NURSEPEDIA)* 2:156–66. doi: 10.55887/nrpm.v2i3.46.

Henrianto Karolus Siregar, Sri Wahyuni Siregar. 2022. "Hubungan Dukungan Keluarga Terhadap Kepatuhan Minum Obat Pada Penderita Diabetes Mellitus Di RSUD Sawah Besar Jakarta Tahun 2022 Henrianto." *ASJN (Aisyiyah Surakarta Journal of Nursing)* 3:83–88. doi: 10.30787/asjn.v3i2.1061.

Indonesia, Kementerian Kesehatan Republik. 2023. *Survei Kesehatan Indonesia Tahun 2023*. Kementerian Kesehatan Republik Indonesia.

Islam, M. T., S. M. Arafat, A. Chowdhury, K. Orchi, and S. Sultana. 2025. "Role of the Health Belief Model in the Management of Hypertension: A Systematic Review." *Cureus* 17(10):1–15. doi: 10.7759/cureus.94139.

Iswara, L., and S. Muflihatin. 2021. "Hubungan Kepatuhan Menjalani Terapi Hemodialisa Dengan Kualitas Hidup Pasien Gagal Ginjal Kronik Yang Menjalani Hemodialysis: Literature Review." *Borneo Studies and Research* 2(2):958–67.

Karyo, K., A. Yusuf, I. Krisnana, Nursalam, M. Munir, and T. Y. F. Damayanti. 2025. "Correlation Between Self-Efficacy and Medication Adherence with Treatment Continuity Among Tuberculosis Patients in East Java, Indonesia." *Health Leadership and Sustainability* 13(S2):1357. doi: 10.4081/hls.2025.1357.

Kempalan. 2026. "Capaian Pemeriksaan Suspek TBC Di Surabaya Mencapai 71,54 Persen."

Kovesdy, C. P. 2022. "Epidemiology of Chronic Kidney Disease: An Update." *Kidney International Supplements* 12(1):7–11.

Kusdiani, Y. S., N. M. Yasin, and R. Wahyuningrum. 2020. "Kepatuhan Pasien Gagal Ginjal Kronik Yang Menjalani Hemodialisis Di Rumah Sakit Daerah Gunung Jati." *Jurnal Ilmiah Ners Indonesia* 5(4):1–12.

Kusniawati, K. 2018. "Hubungan Kepatuhan Menjalani Hemodialisis Dan Dukungan Keluarga Dengan Kualitas Hidup Pasien Gagal Ginjal Kronik Di Ruang Hemodialisa Rumah Sakit Umum Kabupaten Tangerang." *Jurnal Medikes (Media Informasi Kesehatan)* 5(2):206–33.

Mailani, Fitri, and Rika Fitri Andriani. 2017. "Hubungan Dukungan Keluarga Dehubungan Dukungan Keluarga Dengan Kepatuhan Diet Pada Pasien Gagal Ginjal Kronik Yang Menjalani Hemodialisis Ngan Kepatuhan Diet." *Jurnal Endurance* 2(October):416–23. doi: 10.22216/jen.v2i3.2379.

Mala, H. A., N. H. Kapantow, E. D. Kaunang, G. E. C. Korompis, and J. M. F. Tahulending. 2025. "Faktor-Faktor Yang Mempengaruhi Kepatuhan Minum Obat Pada Pasien Hipertensi Di Fasilitas Pelayanan Kesehatan Primer, Kota Manado, Indonesia." *Jurnal Promotif Preventif* 8(5):1335–45.

Mansyur, M., and E. Suminar. 2022. "Faktor-Faktor Yang Berhubungan Dengan Kepatuhan Pasien Hipertensi Dalam Minum Obat Antihipertensi Yang Berobat Di Klinik PKU Muhammadiyah Dukun." *Jurnal Keperawatan Suaka Insan* 7(2):103–9.

Oktaviani, N. P. W., N. P. Nopindrawati, N. W. Trisnadewi, and I. M. S. Adiputra. 2021. "Dukungan Keluarga Mengontrol Kepatuhan Minum Obat Anti Hipertensi Pada Lansia Selama Pandemi COVID-19." *Jurnal Keperawatan* 13(2):69–78.

Organization, World Health. 2024. *World Health Statistics Report 2024*. World Health Organization.

Parker, K., I. Bull-Engelstad, W. Aasebo, N. von der Lippe, M. Reier-Nilsen, I. Os, and K. Stavem. 2019. "Medication Regimen Complexity and Medication Adherence in Elderly Patients with Chronic Kidney Disease." *Hemodialysis International* 23(3):333–42.

Pratiwi, I. 2018. "Hubungan Dukungan Keluarga Dengan Kepatuhan Menjalani Hemodialisa Di RSUD Syamsudin SH Kota Sukabumi." *Jurnal Keperawatan Publikasi* 6(2):89–95.

Santoso, T. 2022. "Faktor-Faktor Yang Berhubungan Dengan Kepatuhan

Pengobatan Pada Penderita Hipertensi." *Jurnal Kesehatan Dan Sains Terapan* 8(2):1–8.

Shyauqy, A., C. Y. Hsu, H. A. Lee, H. H. Rau, and J. C. J. Chao. 2021. "Association Between Dietary Patterns and Kidney Function Parameters in Adults with Metabolic Syndrome: A Cross-Sectional Study." *Nutrients* 13(40):1–14.

Susanti, I., Y. Nita, and A. Rahem. 2026. "Assessing the Impact of Polypharmacy on Medication Adherence Among Elderly Hypertensive: Evidence from Primary Healthcare Setting." *Journal of Advanced Pharmaceutical Education and Research* 16(1):156–61.

Susanto, G., D. A. Wahyudi, and R. Y. Wulandari. 2024. "Penyakit Komorbid Dan Survival Rate Pada Pasien Gagal Ginjal Kronik Di Ruang Hemodialisa RSUD Dr Abdul Moeloek Provinsi Lampung." *Jurnal Rekam Medis Dan Informasi Kesehatan* 1(1):1–8.

Trisnadewi, N. W., P. P. Januraga, G. N. I. Pinatih, and D. P. Duarsa. 2022. *Modul Manajemen Diabetes Berbasis Keluarga*. Baswara Press.

Tuloli, T. S., M. Madania, M. A. Mustapa, and E. P. Tuli. 2019. "Evaluasi Penggunaan Obat Pada Pasien Gagal Ginjal Kronik Yang Menjalani Hemodialisis Di RSUD Toto Kabila Periode 2017–2018." *Parapemikir: Jurnal Ilmiah Farmasi* 8(2):25–32.