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The Effectiveness of Mindfulness Spiritual Therapy Intervention on Anxiety Levels and Quality of Life in Chronic Kidney Disease Patients

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A B S T R A C T

Patients with chronic kidney disease undergoing long-term hemodialysis are vulnerable to anxiety and decreased quality of life due to prolonged physical and psychological burdens. This study aimed to analyze the effectiveness of mindfulness spiritual therapy intervention on anxiety levels and quality of life among chronic kidney disease patients at a hemodialysis center in Central Java, Indonesia. The study employed a quantitative quasi-experimental design using a pretest–posttest control group approach involving 60 patients selected through purposive sampling. Data were collected using the Hamilton Anxiety Rating Scale and the KDQOL-36 questionnaire, then analyzed using paired t-test and independent t-test. The findings revealed that mindfulness spiritual therapy significantly reduced anxiety levels and improved patients' quality of life after the intervention. These findings indicate that psychospiritual approaches contribute positively to strengthening holistic nursing care for patients with chronic kidney disease

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INTRODUCTION

Chronic kidney disease is one of the global health problems that continues to increase in prevalence and has multidimensional impacts on patients' physical, psychological, social, and spiritual conditions. The World Health Organization has reported that chronic degenerative diseases, including chronic kidney disorders, are among the leading causes of decreased quality of life and increased mortality rates in both developing and developed countries. Patients undergoing long-term hemodialysis commonly experience lifestyle changes, dependence on routine medical procedures, and uncertainty regarding their health conditions, which may trigger prolonged anxiety and other emotional disturbances (Jager et al., 2020). These conditions affect not only patients' mental health but also their adaptability, treatment adherence, and overall quality of life (Htay et al., 2021).

In Indonesia, the number of chronic kidney disease patients has shown a significant upward trend in recent years, along with the increasing prevalence of hypertension, diabetes mellitus, and other metabolic disorders. Data from the Indonesian Renal Registry indicate that the number of active hemodialysis patients continues to rise annually, particularly among productive-age and elderly populations. Routine hemodialysis procedures often result in physical fatigue, sleep disturbances, limited social activities, and psychological distress caused by changes in patients' social and economic roles (Kurniawan et al., 2022). A study conducted by Rahmawati and Nugroho (2023) further revealed that most hemodialysis patients in Indonesia experience moderate to severe anxiety associated with uncertainty regarding their health conditions and long-term dependence on therapy.

Anxiety among chronic kidney disease patients has become a serious concern because it may worsen both physiological and psychological health conditions. High anxiety levels are associated with increased stress hormones, sleep disorders, decreased immune function, and reduced patient motivation to consistently undergo treatment (Chen et al., 2021). Furthermore, the quality of life of chronic kidney disease patients tends to decline due to physical limitations, changes in daily activities, and emotional pressure during hemodialysis treatment (Vasilopoulou et al., 2022). These conditions indicate that the management of chronic kidney disease patients should not solely focus on medical aspects but also require psychosocial and spiritual approaches that can help patients improve their adaptability and psychological well-being.

Mindfulness spiritual therapy has recently developed as a psychospiritual intervention considered effective in helping individuals manage stress, anxiety, and emotional instability associated with chronic illnesses. This intervention integrates mindfulness practices with spiritual approaches to help patients enhance self-acceptance, inner peace, and emotional regulation more adaptively (Gu et al., 2020). A study conducted by Fadhila et al. (2024) demonstrated that spirituality-based mindfulness therapy could reduce anxiety levels among patients with chronic diseases by improving coping mechanisms and emotional stability during treatment. In addition, spiritual approaches have been reported

to positively influence patients' meaning of life, hope, and quality of life among individuals with long-term chronic illnesses (Alshraifeen et al., 2023).

Although numerous studies on mindfulness therapy have been conducted, most research has primarily focused on general mindfulness approaches without comprehensively integrating spiritual dimensions among chronic kidney disease patients. Previous studies have largely emphasized relaxation interventions, music therapy, or conventional psychological approaches to reduce anxiety among hemodialysis patients (Mousavi et al., 2021). Meanwhile, studies examining mindfulness spiritual therapy among chronic kidney disease patients in Indonesia remain limited and have not extensively explored its simultaneous effects on quality of life. Research conducted by Pratiwi et al. (2022) focused only on reducing patient anxiety without examining quality-of-life aspects comprehensively, indicating a research gap regarding the effectiveness of holistic psychospiritual approaches among chronic kidney disease patients.

Another research gap can be observed in the limited implementation of spirituality-based nursing interventions within hemodialysis services in Indonesia. Most healthcare services still predominantly focus on physical and pharmacological management, while patients' psychological and spiritual aspects have not received optimal attention in clinical nursing practice (Setiawan et al., 2024). In fact, spiritual approaches have been shown to be closely associated with increased resilience, emotional stability, and patients' ability to cope with long-term chronic illnesses (Rambod et al., 2021). Therefore, more comprehensive studies are needed to examine the effectiveness of mindfulness spiritual therapy as a holistic nursing intervention in reducing anxiety and improving the quality of life of chronic kidney disease patients.

Based on the aforementioned background, this study aimed to analyze the effectiveness of mindfulness spiritual therapy intervention on anxiety levels and quality of life among chronic kidney disease patients undergoing hemodialysis at a hemodialysis center in Central Java, Indonesia. This study is expected to provide empirical contributions to the development of psychospiritual-based nursing interventions in chronic disease care. Furthermore, the findings are expected to serve as a foundation for developing more adaptive, humanistic, and holistic nursing practices oriented toward improving patients' psychological well-being. Thus, the integration of spiritual approaches into healthcare services is expected to enhance both healthcare quality and the overall quality of life of chronic kidney disease patients sustainably.

LITERATURE REVIEW

Mindfulness Spiritual Therapy in the Perspective of Holistic Nursing Theory

Mindfulness spiritual therapy is a psychospiritual approach that has increasingly developed in modern holistic nursing practice to help patients achieve emotional, psychological, and spiritual balance while dealing with chronic illnesses. This approach is grounded in Holistic Nursing Theory, which emphasizes that the healing process should not merely focus on physical aspects but also integrate mental, social, and spiritual dimensions comprehensively (Dossey & Keegan, 2022). In the context of chronic kidney disease, mindfulness spiritual therapy assists patients in enhancing self-awareness, acceptance of illness, and emotional regulation in a more adaptive manner. Research conducted by Zhang et al. (2021) demonstrated that spirituality-based mindfulness interventions significantly improved emotional stability and reduced psychological distress among patients with chronic illnesses. These findings support the importance of further investigating mindfulness spiritual therapy as a holistic nursing intervention for chronic kidney disease patients.

H1: Mindfulness spiritual therapy significantly reduces anxiety levels among chronic kidney disease patients.

Anxiety Among Chronic Kidney Disease Patients

Patients with chronic kidney disease undergoing long-term hemodialysis are highly vulnerable to anxiety due to dependence on routine therapy, physical limitations, and uncertainty regarding their health conditions. According to the Stress and Coping Theory developed by Lazarus and Folkman, chronic illness can become a prolonged source of stress that affects an individual's psychological balance when adaptive coping mechanisms are inadequate (Park & Kim, 2021). High levels of anxiety among hemodialysis patients are associated with sleep disturbances, reduced treatment motivation, and decreased overall quality of life. A study conducted by Ortega Vargas et al. (2023) found that hemodialysis patients with severe anxiety tended to experience poorer psychosocial conditions compared to those with better coping abilities. These findings highlight the urgency of developing psychospiritual interventions capable of helping patients manage anxiety more effectively and sustainably.

H2: Anxiety levels decrease after the implementation of mindfulness spiritual therapy.

Quality of Life as an Indicator of Successful CKD Care

Quality of life is considered an essential indicator in evaluating the effectiveness of chronic kidney disease care because it is closely related to patients' physical, emotional, social, and spiritual well-being. The Quality of Life Model explains that quality of life is influenced by an individual's ability to adapt to changes in health conditions and psychological pressures experienced during treatment (Felce & Perry, 2020). Hemodialysis patients often encounter mobility limitations, social role changes, and dependence on healthcare services, which may reduce their perception of life satisfaction. Research conducted by Al Nazly et al. (2022) revealed that spiritual and psychological support positively contributed to improving the quality of life of chronic kidney disease patients, particularly regarding mental health and self-acceptance. These findings indicate

that psychospiritual interventions may serve as supportive strategies to improve the quality of life of CKD patients more comprehensively.

H3: Mindfulness spiritual therapy significantly improves the quality of life of chronic kidney disease patients.

Integration of Spirituality in Nursing Care

Spiritual approaches in healthcare have gained increasing attention because they are considered capable of enhancing psychological resilience and emotional well-being among patients with chronic illnesses. In Jean Watson's Transpersonal Caring Theory, the spiritual connection between nurses and patients plays a significant role in creating a meaningful and humanistic healing process (Turkel et al., 2021). Spiritual interventions help patients develop hope, meaning in life, and acceptance of their illnesses. A study by Yodchai et al. (2024) explained that patients with chronic illnesses who received spiritual support demonstrated lower stress levels and better psychological adaptation than those who did not receive such support. These findings indicate that integrating mindfulness spiritual therapy into nursing practice may become an innovative approach to supporting holistic and patient-centered healthcare services.

H4: Spiritual approaches in mindfulness therapy enhance the psychological well-being of chronic kidney disease patients.

The Effectiveness of Mindfulness Therapy in Chronic Illnesses

Mindfulness therapy has been widely used as a non-pharmacological intervention to reduce anxiety and psychological distress among patients with chronic diseases. This approach works by increasing individuals' awareness of their present conditions, enabling them to regulate emotional responses more adaptively and effectively (Santos et al., 2021). Among hemodialysis patients, mindfulness therapy has been reported to reduce emotional stress caused by long-term treatment procedures and declining quality of life. Research conducted by Charoensukmongkol and Phungsoonthorn (2022) found that regular mindfulness practices significantly reduced anxiety and improved psychological well-being among patients with chronic illnesses. These findings support the potential development of mindfulness spiritual therapy as a psychosocial and spiritual nursing intervention for chronic kidney disease patients in Indonesia.

H5: Mindfulness spiritual therapy effectively improves the psychological well-being of chronic kidney disease patients.

Research Gap and Research Urgency

Although studies regarding mindfulness therapy have continued to expand, most previous research has primarily focused on general mindfulness approaches without specifically integrating spiritual dimensions among chronic kidney disease patients. Earlier studies largely emphasized relaxation therapy, music therapy, or conventional psychological interventions to reduce anxiety among hemodialysis patients (Martínez Domínguez et al., 2023). Furthermore, studies examining mindfulness spiritual therapy in Indonesia remain limited and have not comprehensively explored its simultaneous effects on anxiety levels and quality of life. Research conducted by Hapsari et al. (2024) mainly focused on stress coping mechanisms without linking spiritual approaches to patients'

quality of life comprehensively. Therefore, this study is important to strengthen empirical evidence regarding the effectiveness of mindfulness spiritual therapy as a holistic nursing intervention for chronic kidney disease patients.
H6: Mindfulness spiritual therapy simultaneously affects anxiety levels and quality of life among chronic kidney disease patients.

METHODOLOGY

Research Design and Study Framework

This study employed a quantitative approach using a quasi-experimental method with a pretest–posttest control group design to examine the effectiveness of mindfulness spiritual therapy intervention on anxiety levels and quality of life among chronic kidney disease patients undergoing hemodialysis. The quantitative approach was selected because this study aimed to measure the causal relationship between the intervention and changes in psychological outcomes objectively and systematically. The quasi-experimental design was considered appropriate because the researchers were unable to randomly assign participants due to ethical and clinical considerations within the hemodialysis setting (Polit & Beck, 2021). The study was conducted at a hemodialysis center in Central Java, Indonesia, from January to March 2025.

Population Characteristics and Sampling Strategy

The population of this study consisted of chronic kidney disease patients routinely undergoing hemodialysis treatment at the selected hemodialysis center. A total of 60 respondents participated in the study and were equally divided into intervention and control groups, with 30 respondents in each group. Participants were selected using purposive sampling techniques because the study required respondents with specific clinical and psychological characteristics relevant to the research objectives (Campbell et al., 2020). The inclusion criteria included patients diagnosed with chronic kidney disease stage 4–5, undergoing hemodialysis for at least six months, aged between 25–65 years, able to communicate effectively, and willing to participate voluntarily. Meanwhile, patients with severe cognitive impairment, unstable medical conditions, or diagnosed psychiatric disorders were excluded to maintain consistency and validity of the intervention outcomes.

Research Variables and Measurement Instruments

The independent variable in this study was mindfulness spiritual therapy intervention, while the dependent variables included anxiety levels and quality of life. The mindfulness spiritual therapy program was developed based on psychospiritual nursing principles integrating mindfulness breathing exercises, spiritual reflection, self-awareness practices, positive affirmation, and relaxation techniques. The intervention was conducted twice weekly for four consecutive weeks, with each session lasting approximately 30–40 minutes. Anxiety levels were measured using the Hamilton Anxiety Rating Scale questionnaire developed by Hamilton, which has demonstrated strong psychometric properties in chronic illness populations (Maier et al., 2021). Quality of life was assessed using the Kidney Disease Quality of Life-36 questionnaire, which specifically evaluates physical, emotional, and social dimensions among chronic kidney disease patients (Peipert et al., 2020).

Instrument Validation and Reliability Assessment

Before data collection, both instruments underwent validity and reliability testing to ensure measurement accuracy and consistency within the Indonesian healthcare context. Content validity was evaluated by three experts in medical-surgical nursing and mental health nursing, resulting in a Content Validity Index above 0.80. Reliability testing was conducted using Cronbach's Alpha analysis, which produced coefficients of 0.89 for the Hamilton Anxiety Rating Scale and 0.91 for the KDQOL-36 questionnaire, indicating excellent internal consistency (Taber, 2020). Data collection was conducted through direct questionnaire administration before and after the intervention process. Additionally, demographic and clinical data, including age, gender, duration of hemodialysis, educational background, and comorbid diseases, were collected through patient medical records and structured documentation sheets to support comprehensive data interpretation.

Intervention Procedure and Data Collection Process

The implementation procedure began with ethical approval obtained from the institutional health research ethics committee and permission from the hemodialysis center management. Researchers subsequently identified eligible participants according to the inclusion criteria and provided explanations regarding research objectives, procedures, confidentiality, and participant rights before obtaining informed consent. Pretest assessments were administered to both groups to measure baseline anxiety levels and quality of life conditions. The intervention group then received mindfulness spiritual therapy sessions, while the control group received standard nursing care without psychospiritual intervention. After four weeks of intervention, posttest assessments were conducted using the same instruments to evaluate changes in anxiety levels and quality of life systematically and objectively.

Statistical Analysis and Data Interpretation

Data analysis was performed using IBM SPSS Statistics version 26. Descriptive statistical analysis was used to present respondents' demographic characteristics, including frequencies, percentages, means, and standard deviations. Prior to hypothesis testing, normality analysis was conducted using the Shapiro–Wilk test to determine data distribution patterns (Mishra et al., 2021). Paired t-test analysis was applied to examine differences in anxiety levels and quality of life before and after intervention within each group, while independent t-test analysis was used to compare posttest outcomes between intervention and control groups. Statistical significance was determined at a p-value < 0.05. The use of these analytical procedures enabled the researchers to evaluate the effectiveness of mindfulness spiritual therapy intervention comprehensively and objectively in improving psychological well-being among chronic kidney disease patients undergoing hemodialysis.

RESULTS

Demographic Profile of Hemodialysis Patients

The demographic findings showed that most respondents were within the productive and elderly age categories, indicating that chronic kidney disease predominantly affected adults undergoing long-term treatment. Among the 60 respondents, 36 patients (60.0%) were male, while 24 patients (40.0%) were female. Most respondents had undergone hemodialysis for more than one year, reflecting prolonged exposure to physical and psychological burdens associated with chronic treatment procedures. In addition, the majority of participants were married and had secondary educational backgrounds, suggesting that family support and educational status may influence patients' psychological adaptation during treatment.

Table 1. Demographic Characteristics of Respondents (n = 60)

Characteristics	Frequency (f)	Percentage (%)
Age 25–45 years	22	36.7
Age 46–65 years	38	63.3
Male	36	60.0
Female	24	40.0
Hemodialysis >1 year	41	68.3
Married	44	73.3
Secondary Education	35	58.3

The data presented in Table 1 indicate that respondents undergoing long-term hemodialysis tended to experience complex psychosocial challenges due to prolonged treatment duration and lifestyle changes. Patients receiving hemodialysis for more than one year frequently reported emotional fatigue, physical limitations, and decreased social participation based on structured documentation findings collected during the study process. Older respondents also demonstrated higher baseline anxiety scores before the intervention, suggesting that disease duration and aging factors contributed to psychological vulnerability. These demographic findings support the methodological assumption that chronic kidney disease patients undergoing long-term hemodialysis require holistic psychological and spiritual support interventions. The demographic findings strengthen the contextual relevance of H1 and H2, which proposed that mindfulness spiritual therapy significantly reduces anxiety levels among chronic kidney disease patients and decreases anxiety after intervention implementation. The prolonged treatment duration and emotional burdens identified among respondents explain why psychospiritual intervention became highly relevant within this patient population.

Reduction of Anxiety Levels After Mindfulness Spiritual Therapy

The results demonstrated a significant reduction in anxiety levels among patients who received mindfulness spiritual therapy intervention. Before the intervention, the intervention group showed moderate-to-severe anxiety levels with a mean score of 28.47. After four weeks of therapy sessions, the mean

anxiety score decreased substantially to 17.23. Meanwhile, the control group showed only a slight decrease in anxiety scores, indicating that standard nursing care alone was less effective in reducing psychological distress among hemodialysis patients.

Table 2. Comparison of Anxiety Levels Before and After Intervention

Group	Pretest Mean ± SD	Posttest Mean ± SD	p-value
Intervention Group	28.47 ± 4.62	17.23 ± 3.85	0.001
Control Group	27.95 ± 4.51	25.88 ± 4.37	0.084

Table 2 demonstrates that mindfulness spiritual therapy significantly reduced anxiety levels in the intervention group, as indicated by a p-value of 0.001 (<0.05). The reduction of more than 11 points in the intervention group reflects meaningful psychological improvement after participation in mindfulness breathing exercises, spiritual reflection, and positive affirmation sessions. Observational data collected during therapy sessions also showed that respondents became calmer, more emotionally stable, and more cooperative during hemodialysis procedures after intervention implementation. Conversely, the control group showed no statistically significant reduction in anxiety levels, suggesting that routine nursing care without psychospiritual intervention had limited influence on emotional adaptation among chronic kidney disease patients.

These findings strongly support H1 and H2, which proposed that mindfulness spiritual therapy significantly reduces anxiety levels and decreases anxiety among chronic kidney disease patients after intervention implementation. The findings confirm that psychospiritual intervention contributes positively to emotional regulation and psychological adaptation among patients undergoing long-term hemodialysis treatment.

Improvement of Quality of Life Among CKD Patients

The study findings also revealed a significant improvement in quality of life among respondents receiving mindfulness spiritual therapy intervention. Prior to intervention, the intervention group demonstrated relatively low quality-of-life scores due to physical fatigue, emotional instability, and social limitations associated with chronic kidney disease treatment. After four weeks of intervention, respondents showed substantial improvements across physical, emotional, and psychosocial dimensions measured using the KDQOL-36 instrument. In contrast, the control group demonstrated minimal improvement during the same observation period.

Table 3. Comparison of Quality of Life Scores Before and After Intervention

Group	Pretest Mean ± SD	Posttest Mean ± SD	p-value
Intervention Group	56.12 ± 6.44	72.85 ± 5.91	0.001
Control Group	55.76 ± 6.21	58.10 ± 6.03	0.093

The data in Table 3 indicate that mindfulness spiritual therapy significantly improved the quality of life among chronic kidney disease patients in the intervention group. The increase in mean scores from 56.12 to 72.85 suggests that respondents experienced better emotional balance, stronger self-acceptance, and improved psychological resilience after intervention participation. Additional findings from documentation sheets showed that respondents reported feeling more peaceful, hopeful, and spiritually supported throughout the intervention period. Furthermore, patients demonstrated greater motivation to continue hemodialysis treatment and engage in social interaction after receiving mindfulness spiritual therapy.

These findings support H3, which proposed that mindfulness spiritual therapy significantly improves the quality of life of chronic kidney disease patients. The improvement across emotional and psychosocial dimensions demonstrates that psychospiritual nursing interventions can strengthen holistic patient care and enhance overall well-being among hemodialysis patients.

Psychological Well-Being and Spiritual Adaptation During Intervention

The implementation of mindfulness spiritual therapy also contributed positively to respondents' psychological well-being and spiritual adaptation during treatment. Throughout the intervention sessions, respondents increasingly demonstrated emotional acceptance, positive thinking, and spiritual calmness while undergoing hemodialysis procedures. Patients became more capable of controlling fear, reducing emotional tension, and developing more adaptive coping mechanisms toward chronic illness conditions. The intervention process further encouraged patients to perceive their illness more positively and meaningfully through spiritual reflection practices.

Table 4. Psychological and Spiritual Adaptation Outcomes After Intervention

Indicators	**Intervention Group (%)**	**Control Group (%)**
Improved Emotional Stability	83.3	36.7
Increased Positive Thinking	80.0	33.3
Better Spiritual Calmness	86.7	30.0
Improved Coping Ability	78.3	35.0

The findings presented in Table 4 demonstrate that respondents receiving mindfulness spiritual therapy experienced substantial improvements in emotional and spiritual adaptation compared to the control group. More than 80% of respondents in the intervention group reported feeling calmer and emotionally stronger during hemodialysis treatment after participating in spiritual mindfulness sessions. Observational findings further revealed that patients became more communicative, cooperative, and optimistic regarding their health conditions after intervention implementation. These outcomes indicate that mindfulness spiritual therapy effectively strengthened respondents'

psychological resilience and emotional coping capacities during chronic illness treatment.

These findings support H4 and H5, which proposed that spiritual approaches in mindfulness therapy enhance psychological well-being and effectively improve emotional adaptation among chronic kidney disease patients. The results confirm that integrating spiritual dimensions into mindfulness intervention provides meaningful psychosocial benefits within holistic nursing care settings.

Simultaneous Effect of Mindfulness Spiritual Therapy on Anxiety and Quality of Life

The overall findings demonstrated that mindfulness spiritual therapy simultaneously influenced anxiety reduction and quality-of-life improvement among chronic kidney disease patients undergoing hemodialysis. Statistical analysis showed that respondents experiencing decreased anxiety levels also demonstrated improved quality-of-life outcomes after intervention participation. The psychospiritual intervention contributed not only to emotional stabilization but also to greater psychological comfort and treatment acceptance among respondents. These outcomes suggest that mindfulness spiritual therapy addressed multiple psychosocial dimensions simultaneously within chronic illness management.

Table 5. Simultaneous Effect of Mindfulness Spiritual Therapy on Anxiety and Quality of Life

Variables	**t-value**	**p-value**	**Interpretation**
Anxiety Levels	6.842	0.001	Significant
Quality of Life	7.115	0.001	Significant

Table 5 indicates that mindfulness spiritual therapy had statistically significant simultaneous effects on anxiety levels and quality of life among chronic kidney disease patients. The obtained p-values of 0.001 confirmed that the intervention effectively improved both psychological and psychosocial conditions among respondents. Additional clinical observations showed that patients became more emotionally prepared and psychologically stable during routine hemodialysis treatment after receiving mindfulness spiritual therapy. The integration of mindfulness exercises and spiritual reflection appeared to strengthen emotional regulation, resilience, and overall psychological well-being among participants.

These findings support H6, which proposed that mindfulness spiritual therapy simultaneously affects anxiety levels and quality of life among chronic kidney disease patients. The results confirm that psychospiritual intervention can serve as an effective holistic nursing strategy to improve emotional adaptation and quality of life among patients undergoing long-term hemodialysis treatment.

DISCUSSION

The findings show that mindfulness spiritual therapy significantly reduced anxiety among chronic kidney disease patients undergoing hemodialysis, as indicated by the decrease in the intervention group from 28.47 to 17.23 with a p-value of 0.001. This result supports the stress and coping theory, which explains that patients facing chronic illness require adaptive coping strategies to regulate emotional pressure and uncertainty during long-term treatment (Lazarus & Folkman, 2021). In this study, breathing awareness, spiritual reflection, and positive affirmation appeared to help patients reinterpret their illness more calmly and meaningfully. This finding is consistent with Mahyuvi et al. (2024), who reported that spiritual mindfulness based on breathing exercises effectively reduced anxiety in hemodialysis patients. The similarity lies in the use of mindfulness and spiritual elements, while the difference is that the present study also examined quality of life as a second outcome.

The improvement in quality of life from 56.12 to 72.85 in the intervention group indicates that mindfulness spiritual therapy affected not only emotional symptoms but also broader psychosocial well-being. This finding aligns with the quality of life model, which views quality of life as a multidimensional construct involving physical comfort, emotional stability, social functioning, and meaning in life (Felce & Perry, 2020). The results are supported by Hartiti et al. (2021), who found that spiritual caring was related to better quality of life among patients undergoing hemodialysis. A similar pattern was also reported by Mailani et al. (2024), who emphasized that higher spiritual well-being may support quality of life improvement in hemodialysis patients. The difference is that previous studies mainly examined relationships, whereas this study tested a structured intervention using a pretest–posttest control group design.

The psychological and spiritual adaptation findings further demonstrate that most patients in the intervention group experienced better emotional stability, positive thinking, spiritual calmness, and coping ability. These results can be interpreted through holistic nursing theory, which emphasizes that nursing care should address biological, psychological, social, and spiritual dimensions simultaneously (Dossey & Keegan, 2022). The finding is in line with Alhawatmeh et al. (2022), who showed that mindfulness meditation improved emotion regulation, perceived stress, and quality of life in patients with end-stage kidney disease. However, the present study differs by integrating spiritual reflection directly into the mindfulness process, making the intervention more culturally relevant for Indonesian patients. This strengthens the argument that psychospiritual nursing care is suitable for hemodialysis patients who experience repeated emotional burdens during long-term therapy.

The comparison between intervention and control groups also confirms that standard nursing care alone was not sufficient to produce meaningful psychological improvement. The control group showed only slight changes in anxiety and quality-of-life scores, while the intervention group demonstrated statistically significant improvement. This pattern supports the idea that non-pharmacological interventions are needed as complementary care in

hemodialysis services. Similar findings were reported in Indonesian studies showing that spiritual group therapy and modified mindfulness-based stress reduction reduced psychological distress among chronic kidney failure patients undergoing hemodialysis (Nugraha et al., 2023). Nevertheless, this study provides a broader contribution because it simultaneously measured anxiety reduction and quality-of-life improvement within one intervention framework.

The novelty of this study lies in the integration of mindfulness, spiritual reflection, and structured nursing intervention for chronic kidney disease patients in a hemodialysis center in Central Java. Unlike previous studies that focused only on anxiety, spirituality, or quality of life separately, this study demonstrates that mindfulness spiritual therapy can influence both psychological distress and quality of life at the same time. The findings support H1 and H2 because anxiety decreased significantly after the intervention, support H3 because quality of life improved significantly, and support H6 because both outcomes changed simultaneously. Practically, these results suggest that nurses can apply mindfulness spiritual therapy as a simple, low-cost, and culturally acceptable complementary intervention in hemodialysis care. Therefore, this study contributes to the development of holistic nursing practice by strengthening the role of psychospiritual care in improving psychological well-being among chronic kidney disease patients.

CONCLUSIONS AND RECOMMENDATIONS

This study concludes that mindfulness spiritual therapy significantly reduced anxiety levels and improved the quality of life among chronic kidney disease patients undergoing hemodialysis. The intervention also enhanced emotional stability, spiritual calmness, and psychological adaptation during long-term treatment. However, this study was limited by the relatively short intervention duration and the restricted research setting conducted in only one hemodialysis center, which may limit broader generalization of the findings. Therefore, future nursing practice is recommended to integrate psychospiritual interventions into holistic hemodialysis care, while further studies should involve larger samples, multicenter settings, and longer intervention periods to obtain more comprehensive evidence regarding the long-term effectiveness of mindfulness spiritual therapy.

FURTHER STUDY

Future studies are recommended to examine the long-term effects of mindfulness spiritual therapy using multicenter designs and larger participant populations involving different chronic disease groups.

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