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ORIGINAL ARTICLE

The Beneficial Effect of Spiritual Social Support on Depression and Quality of Life in Chronic Renal Failure Patients Undergoing Haemodialysis

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Abstract

Background/Aim: Patients with chronic kidney disease (CKD) undergoing haemodialysis are at a high risk of depression and diminished standard of life due to the physical, emotional and social complexities of their condition. Spiritual social support has been suggested as a potential intervention to alleviate these psychological and quality-of-life challenges. Aim of this study was to examine the influence of spiritual social support on depressive symptoms and quality of life in CKD patients receiving dialysis treatment.

Methods: The current investigation utilised a quasi-experimental approach with a pre- and post-test control group structure. Ninety-two patients from Rumah Sakit Islam Surabaya were separated into two groups: intervention (n = 46) versus control (n = 46). The therapy consisted of three sessions of spiritual social support, which focused prayer, spiritual guidance and emotional stabilisation. Depression was examined using the Beck Depression Inventory (BDI) and quality of life was determined using the Kidney Disease Quality of Life Short Form (KDQOL-SF). The data has been examined utilising paired t-tests, independent t-tests and multiple linear regression.

Results: The intervention group demonstrated a major reduction in depression levels. (pre: 18.5 ± 4.3, post: 12.0 ± 3.5, $p < 0.001$) a considerable improvement in quality-of-life scores (pre: 55.2 ± 8.1, post: 68.5 ± 6.3, $p < 0.001$). In contrast, the control group showed no major alterations in either depression ($p = 0.345$) or quality of life ($p = 0.982$). Regression analysis demonstrated that spiritual social support significantly influenced both depression ($B = -0.45$, $p < 0.001$) and quality of life ($B = 0.60$, $p < 0.001$).

Conclusion: This study emphasises the positive impact of spiritual social support on psychological wellness and quality of life in patients with CKD. The above findings indicate integrating spiritual care into treatment programs for dialysis patients. Spiritual social support diminishes depression and raises quality of life in those with CKD obtaining haemodialysis, hence adding to holistic treatment approaches.

Key words: Renal insufficiency, chronic; Renal dialysis; Depression; Quality of life; Spiritual therapies.

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Introduction

Chronic kidney disease (CKD) is a pervasive health issue that profoundly affects patients' physical, emotional and psychological well-being. As the most prevalent treatment modality for end-stage renal disease, haemodialysis presents numerous challenges, often leading to heightened levels of depression and a significant decline in quality of life (QoL). According to the research, the frequency of depression with CKD individuals undergoing haemodialysis fluctuates between 20 % to 50 % globally, underscoring a critical mental health crisis within this population.[1, 2] This mental health burden not only exacerbates the physical complications associated with CKD but also impedes adherence to treatment regimens, ultimately compromising patient outcomes.[3, 4] Given the escalating incidence of CKD worldwide—particularly in lower- and low- to middle-countries—there is an urgent need to address both the psychological and physiological aspects of care.

Despite the established physical benefits of haemodialysis, the psychological aspects of patient care are frequently overlooked. Specifically, the significance of spiritual companionship in reducing depression and improving satisfaction of life among patients with CKD has not been adequately explored in existing research. Spiritual social support encompasses emotional and spiritual guidance from religious communities, family members and friends, which has been associated with improved mental health outcomes across various chronic conditions.[5, 6] However, its specific effect on depression and the QoL among persons receiving dialysis treatments remains ambiguous, revealing a significant gap in the literature that warrants further investigation.

This initiative intended to examine the influence of spiritual social support on levels of depression and QoL in CKD patients receiving haemodialysis. The research quantitatively assessed how varying degrees of spiritual social support correlate with changes in mental health outcomes, thereby providing insights into potential non-pharmacological interventions that could complement conventional medical treatments. By concentrating on this interaction, the study hoped to emphasise the significance of including spiritual attention through ordinary medical procedures for kidney failure management.

A review of current literature reveals a notable deficiency in research concerning the integration of spiritual social support within the treatment framework for CKD patients, particularly those undergoing haemodialysis. While numerous studies have examined pharmacological and lifestyle interventions for CKD management, few have delved into psychosocial factors—especially spiritual support—as viable coping mechanisms.[7, 8] Additionally, many existing studies primarily concentrate on the prevalence of depression without exploring effective interventions that could alleviate its impact. This lack of comprehensive research underscores the necessity for further exploration into spiritual social support as a therapeutic tool.

This study makes an innovative addition to the area by investigating the relationship amongst spirituality, social support and health outcomes in a kidney failure population. Unlike previous research predominantly focused on medical or behavioural interventions, this study emphasised the psychosocial dimensions of patient care with particular attention to spiritual well-being. The anticipated findings aimed to provide a fresh perspective on how incorporating spiritual social support into standard care practices could enhance both psychological resilience and physical health outcomes for patients facing CKD.

Methods

The current investigation utilised a quasi-experimental approach with a pre- and post-test control group structure. The method enables the measurement of changes in depressive symptoms and QoL in patients with CKD undergoing dialysis treatments before and after receiving spiritual social support interventions, while comparing the results to a control group that was not given the intervention.

The study was conducted between April and June 2024 at the Islamic Hospital Surabaya, including both the Jemursari and A Yani branches. The population targeted for the study comprised all CKD patients undergoing haemodialysis at these locations, totalling 184 patients. A convenience sample of 172 respondents were selected using

straightforward randomisation and purposive sampling, with 86 patients assigned to the intervention group and 86 to the controls group. The inclusion criteria for participants were: (1) willingness to participate, (2) practicing Islam and (3) no hearing impairment. Exclusion criteria included: (1) absence during the study period and (2) patients experiencing reduced consciousness.

Study design

The independent variable in this study was spiritual social support, which was delivered in a structured three-session intervention. The dependent variables were depression levels measured with the Beck Inventory of Depression (BDI) and the QoL measured with the renal Illness Quality of Life Short Form (KDQOL-SF).

Data were collected through structured sessions with the intervention group, who received spiritual social support. This consisted of three 45-minute sessions conducted weekly. In the first session, patients identified obstacles and support systems they experienced during haemodialysis and received spiritual guidance (zikr and prayer). The second session focused on communal prayers and psychological guidance about the Muslim perspective on illness. The third session offered religious guidance on Fiqh (Islamic jurisprudence) relating to illness. Depression levels were measured using the BDI, consisting of 21 statements and QoL was assessed using the KDQOL-SF questionnaire, modified to fit the local cultural context and containing four domains: physical wellness, psychological well-being, relationships and the environment.

To ensure data reliability and reduce potential bias, a standardised intervention module was used for all participants. The intervention was administered by trained facilitators, ensuring consistent delivery across all sessions. Random allocation of participants into intervention and control groups further helped control for confounding variables. Additionally, standardised and validated instruments (BDI and KDQOL-SF) were employed to measure the key variables, enhancing the reliability and validity of the collected data.

Statistical analysis

Data analyses were carried out through paired and independent t-tests to identify statistical differences in pre- and post-intervention measurements within and between groups. The paired t-test was carried out to evaluate changes in depression and QoL within each group, while an independent t-test compared the results comparing both groups. Multiple linear regression tests were performed to find the components that most significantly impacted the outcomes. A statistical threshold of $p < 0.05$ had been used for most analyses.

Results

Characteristics of respondents

Table 1 shows the demographic and clinical characteristics of the 92 respondents, divided equally between the intervention and control groups (n = 46 each). The characteristics include age, gender, duration of illness, socioeconomic status, marital status, education level, employment, comorbidities and the duration of haemodialysis.

The respondents had a mean age of 51.1 ± 9.9 years. There was an even distribution of gender between the groups, with 50 % male and 50 % female participants. The average duration of CKD was 5.0 ± 2.4 years, and the duration of haemodialysis averaged 12.1 ± 5.9 months. Socioeconomic status was predominantly low or middle and most participants (75.9 %) were employed.

Depression and quality of life (before and after intervention)

The effect of spiritual social encouragement on depressive symptoms and overall QoL was evaluated by comparing pre- and post-intervention data for both groups. The intervention group showed a significant decrease in depression and an improvement in QoL, as detailed in Table 2.

The intervention group exhibited a significant reduction in depression scores from 18.5 ± 4.3 to 12.0 ± 3.5 ($p < 0.001$), while no significant changes were observed in the control group ($p = 0.345$). Additionally, the intervention group saw a substantial improvement in QoL, with scores increasing from 55.2 ± 8.1 to 68.5 ± 6.3 ($p < 0.001$), whereas the control group remained unchanged ($p = 0.982$).

Table 1: Characteristics of respondents

Characteristic	Intervention group (Mean ± SD) (n = 46)	Control group (Mean ± SD) (n = 46)	Total (n = 92)
Age (years)	50.2 ± 10.1	52.0 ± 9.8	51.1 ± 9.9
Gender			
Male	24 (52.2 %)	22 (47.8 %)	46 (50.0 %)
Female	22 (47.8 %)	24 (52.2 %)	46 (50.0 %)
Duration of illness (years)	5.4 ± 3.2	5.1 ± 3.5	5.3 ± 3.3
Socioeconomic status			
Low	18 (39.1 %)	20 (43.5 %)	38 (41.3 %)
Middle	20 (43.5 %)	18 (39.1 %)	38 (41.3 %)
High	8 (17.4 %)	8 (17.4 %)	16 (17.4 %)
Marital status			
Married	30 (65.2 %)	28 (60.9 %)	58 (63.0 %)
Unmarried	16 (34.8 %)	18 (39.1 %)	34 (37.0 %)
Education level			
No formal education	10 (21.7 %)	8 (17.4 %)	18 (19.6 %)
Primary school	14 (30.4 %)	16 (34.8 %)	30 (32.6 %)
Middle school	12 (26.1 %)	10 (21.7 %)	22 (23.9 %)
High school	10 (21.7 %)	12 (26.1 %)	22 (23.9 %)
Employment			
Working	36 (78.3 %)	34 (73.9 %)	70 (75.9 %)
Unemployed	10 (21.7 %)	12 (26.1 %)	22 (24.1 %)
Comorbidities			
Diabetes mellitus	20 (43.5 %)	22 (47.8 %)	42 (45.7 %)
Hypertension	18 (39.1 %)	16 (34.8 %)	34 (37.0 %)
Heart disease	6 (13.0 %)	5 (10.9 %)	11 (11.9 %)
Other diseases	2 (4.3 %)	3 (6.5 %)	5 (5.4 %)
Duration of CKD (years)	4.8 ± 2.3	5.2 ± 2.5	5.0 ± 2.4
Duration of haemodialysis (months)	12.5 ± 6.1	11.8 ± 5.8	12.1 ± 5.9

CKD: chronic kidney disease;

Table 2: Depressive symptoms and quality of life scores before and after intervention

Variable	Group	Pre-intervention (Mean ± SD)	Post-intervention (Mean ± SD)	Paired t-test p-value	Independent t-test p-value
Depression (BDI)	Intervention	18.5 ± 4.3	12.0 ± 3.5	< 0.001	< 0.001
	Control	19.2 ± 4.5	18.8 ± 4.2	0.345	
Quality of life (KDQOL-SF)	Intervention	55.2 ± 8.1	68.5 ± 6.3	< 0.001	< 0.001
	Control	54.8 ± 7.9	55.2 ± 8.0	0.982	

BDI: Beck Depression Inventory (BDI); KDQOL-SF: Kidney Disease Quality of Life Short Form;

The effect of spiritual social support on depressive symptoms and quality of life

A regression study was performed to investigate the influence of spiritual social support on depressive symptoms and QoL among patients with chronic renal failure obtaining dialysis treatment. Table 3 presents the regression coefficients and p-values for both depression and QoL as dependent variables.

Spiritual social support had a significant effect on both depression and QoL. The regression coefficient for depression was -0.45, indicating that an increase in spiritual social support was associated with a decrease in depression levels ($p < 0.001$). Similarly, the coefficient for QoL was 0.60, suggesting that higher spiritual social support resulted in improved QoL ($p < 0.001$).

Table 3: The impact of spiritual assistance on depressive disorder and quality of life

Variable	Regression coefficient (B)	p-value
Depression	-0.45	< 0.001
Quality of life	0.60	< 0.001

Correlation between spiritual social support, depression and quality of life

The relationships between spiritual social support, depression and QoL were further examined through correlation analysis, presented in Table 4.

Table 4: Correlation between spiritual social support, depression and quality of life

Variable	Spiritual social support	BDI	KDQOL-SF
Spiritual social support		-0.732**	0.645**
Depression score (BDI)	-0.732**		-0.540**
Quality of life score (KDQOL-SF)	0.645**	-0.540**	

*** p < 0.01; BDI: Beck Depression Inventory (BDI); KDQOL-SF: Kidney Disease Quality of Life Short Form;*

A strong negative correlation was found between spiritual social support and depression ($r = -0.732$, $p < 0.01$), indicating that increased spiritual social support was associated with lower depression levels. Similarly, a positive correlation was observed between spiritual social support and QoL ($r = 0.645$, $p < 0.01$), suggesting that higher levels of spiritual support were linked to improved QoL. Depression and QoL were also negatively correlated ($r = -0.540$, $p < 0.01$).

Discussion

CKD patients obtaining dialysis treatments face significant psychological and physical challenges, notably elevated levels of depression and a significant decline in QoL. The current study sought to investigate the influence of structured spiritual social assistance on these critical outcomes, addressing an important gap in the literature regarding the integration of psychosocial and spiritual interventions in chronic disease management. Existing research has consistently highlighted the benefits of psychosocial and spiritual interventions in improving mental health outcomes among chronically ill patients, particularly those suffering from debilitating conditions like CKD.[9] However, the specific effects of culturally relevant spiritual support interventions have not been extensively studied, making our investigation particularly timely and necessary.

Presented findings indicate that patients receiving structured spiritual social support experienced a statistically significant reduction in depression scores, from 18.5 ± 4.3 to 12.0 ± 3.5 ($p < 0.001$), alongside a marked improvement in QoL scores, which increased from 55.2 ± 8.1 to 68.5 ± 6.3 ($p < 0.001$). In contrast, the control group exhibited no significant changes in either measure, underscoring the efficacy of the intervention. These results align with previous studies that have documented similar positive outcomes associated with spiritual interventions in chronic illness populations.[5, 10-12] The strong negative correlation observed between spiritual social support and depression ($r = -0.732$, $p < 0.01$), coupled with a positive correlation with QoL ($r = 0.645$, $p < 0.01$), further reinforces the notion that spiritual social support plays a crucial role in enhancing mental health and overall well-being among haemodialysis patients.

Interestingly, both groups exhibited relatively low initial QoL scores compared to findings reported in other studies involving CKD patients.[13] This discrepancy may reflect unique sociocultural factors or variations in healthcare delivery within presented study population that warrant further investigation. Additionally, while the intervention significantly reduced depressive symptoms, some residual depressive feelings persisted post-intervention, suggesting that spiritual support alone may not suffice for comprehensive mental health management; it may need to be integrated with other therapeutic modalities for optimal effect.

The positive impact of spiritual social support on depression and QoL can be attributed to several interrelated factors inherent in presented intervention design. The incorporation of communal prayers, religious guidance and psychological support likely provided emotional relief and fostered a sense of community among participants, thereby enhancing their coping mechanisms.[14] Furthermore, the culturally tailored nature of intervention may have rendered it more personally meaningful to participants, thus amplifying its effectiveness.

While presented findings are promising, they must be interpreted with caution due to certain limitations inherent in quasi-experimental

design. Potential biases related to participant allocation cannot be entirely ruled out and the study's focus on a specific religious demographic may limit the generalisability of results across diverse cultural contexts. Future research should aim to validate these findings within broader populations and explore the integration of spiritual support with other therapeutic interventions to enhance patient outcomes further.

In summary, this study posits that culturally tailored spiritual social support interventions can significantly reduce depressive symptoms and improve QoL among CKD patients undergoing haemodialysis. These findings have profound implications for healthcare practices, suggesting that integrating structured spiritual care into chronic disease management protocols could address not only the physical but also the emotional and psychological needs of patients. As healthcare continues to evolve towards a more holistic model of care, recognising and addressing the spiritual dimensions of patient health will be crucial for optimising treatment outcomes

Conclusion

The focus of this study was to investigate the influence of spiritual social encouragement on depression and QoL in CKD patients undergoing haemodialysis. The research successfully demonstrated that a structured, culturally relevant spiritual intervention can significantly reduce depressive symptoms and improve QoL in this population. The intervention group showed substantial improvement in both depression scores and QoL contrary to the placebo group, highlighting the potential benefits of holistic treatment techniques in managing the psychological burden associated with chronic illnesses like CKD. The findings from this finding have significant ramifications for the sector, suggesting that incorporating spiritual care into chronic disease management could enhance patient outcomes. Future research should focus on broader populations, different cultural contexts and explore long-term outcomes. Practically, healthcare providers are encouraged to integrate spiritual social support into treatment plans, particularly for patients facing the emotional toll of long-term chronic conditions like CKD.

Ethics

Study was approved by the Research Ethics Committee of Rumah Sakit Islam Surabaya Jemursari, decision No: JS.A.SKR.4155.08.24, dated 24 August 2024. Participants provided informed consent before the study, ensuring their rights and confidentiality were maintained throughout.

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Conflicts of interest

The authors declare that there is no conflict of interest.

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Data access

The data that support the findings of this study are available from the corresponding author upon reasonable individual request.

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