

Caregivers in Hemodialysis Patient Care: Psychosocial Burden, Impact on Quality of Life, and Implications for Psychosocial Interventions (Narrative Literature Review)

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Abstract. *Chronic kidney disease (CKD) is a global health problem with a rising prevalence that often requires long-term renal replacement therapy, including hemodialysis. Although hemodialysis can sustain patient survival, this therapy is frequently accompanied by various psychological impacts, such as stress, anxiety, depression, and decreased quality of life. The psychological burden experienced by patients not only affects their individual well-being but also has significant consequences for family members as primary caregivers, manifesting as caregiver burden, emotional, social, and financial strain. This study aims to examine the role of family caregivers in the care of hemodialysis patients, particularly in relation to psychosocial burden, its impact on quality of life, and the implications of psychosocial interventions based on a narrative literature review. The research employed a narrative literature review method by searching scientific articles published between 2020 and 2025 across sources such as Google Scholar, PubMed, and relevant national and international journals. Inclusion criteria were articles that addressed the psychological aspects of hemodialysis patients and their impact on families. The collected data were analyzed descriptively to identify the forms, levels, and impacts of psychological burden. The review found that hemodialysis patients generally experience moderate to severe psychological burden, characterized by anxiety, depression, chronic stress, and reduced psychological well-being. These conditions contribute to an increased caregiving burden for families, including emotional exhaustion, impaired quality of life, social limitations, and financial stress. Adequate family support, psychosocial interventions, and caregiver assistance programs were found to play a crucial role in reducing the psychological burden on both patients and caregivers. In conclusion, the psychological burden of hemodialysis patients has multidimensional consequences for families. Therefore, a holistic care approach involving both patients and families is essential to improve the quality of life for both parties.*

Keywords: *Psychological Burden, Hemodialysis, Caregiver Burden, Family Support, Quality of Life*

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INTRODUCTION

Chronic kidney disease (CKD) is a growing global health problem that requires ongoing medical intervention, one of which is hemodialysis (Bello et al., 2005; Ameh et al., 2020; Nugent et al., 2011). Hemodialysis is a kidney replacement therapy that aims to eliminate toxins and excess fluid from the body, maintain electrolyte balance, and prevent serious complications. While this procedure can prolong patient survival, hemodialysis therapy is invasive, requires

regular appointments, and significantly impacts the patient's quality of life. This condition not only affects the patient physically and psychologically but also places significant stress on the family members who act as caregivers (Bevans & Sternberg, 2012; Weitzner et al., 2000; Northouse et al., 2012).

Caregivers are individuals who directly care for and support patients undergoing hemodialysis therapy (Sajadi et al., 2017; Hoang et al., 2018; Hovadick et al., 2021; Bartolo et al., 2022). They play a role in various aspects, from medical management and dietary and fluid monitoring to emotional support. This responsibility often lasts for a long time, resulting in physical, psychological, social, and economic burdens. According to Hekmatpou et al. (2019); Perpiñá-Galvañ et al. (2019); Martinez-Martin et al. (2012); Aubeeluck et al. (2012), If not managed properly, this burden can diminish the caregiver's health and quality of life, which in turn affects their ability to provide optimal care to the patient.

The psychosocial burden on caregivers arises from emotional distress, physical exhaustion, anxiety, depression, and changes in social dynamics resulting from the demanding caregiving role, which demands their full time and attention (Lizarazo et al., 2024; Gérain & Zech, 2019). Factors such as length of treatment, severity of the patient's illness, social support, economic status, and caregiver knowledge also influence the intensity of this burden. According to Garbarino et al. (2016) High psychosocial burden can lead to chronic stress, sleep disturbances, and decreased motivation to care for patients, requiring special attention from healthcare professionals.

Caregivers' quality of life is significantly affected by the psychosocial burden they experience. This burden can impact physical health through fatigue and decreased immunity, mental health through anxiety and depression, social and family relationships, and productivity in daily life. A reduced quality of life for caregivers not only impacts themselves but also impacts the quality of care provided to patients (Fleming et al., 2006; Nogueira et al., 2012; Ferrell et al., 2018). Therefore, attention to caregiver well-being is an integral part of hemodialysis patient management.

Psychosocial interventions are an important strategy for supporting caregivers. These interventions include health education, psychological counseling, social support through peer groups, and stress management or coping strategy training. With appropriate interventions, caregivers can gain the skills and emotional support needed to overcome the challenges of care, improve their psychological well-being, and indirectly enhance patient adherence and quality of life.

Given the central role of caregivers in the care of hemodialysis patients and the significant impact of psychosocial burden on family well-being, research into the relationship between psychosocial burden, quality of life, and the effectiveness of psychosocial interventions is crucial. A deeper understanding of these conditions can help healthcare providers design more effective support programs, thereby creating a holistic care environment and improving health outcomes for patients and families.

METHODS

Literature Search Strategy Design

This study employed a literature review with a narrative review design. This design was chosen because the researchers aimed to comprehensively examine the psychosocial burden experienced by caregivers caring for hemodialysis patients, as well as its impact on the quality of life of patients and their families. The literature search strategy was conducted by collecting references from various relevant sources, including scientific journals, previous theses, textbooks, ebooks, and trusted online sources. This approach allowed the researchers to integrate findings from various studies to provide a comprehensive picture of caregivers' psychosocial experiences and the implications for possible psychosocial interventions.

Data Type

The data used in this study is secondary data, namely the results of studies or observations from various literature sources obtained from the internet in the form of theses, journals, textbooks, and ebooks.

Inclusion Criteria

Articles that discuss the psychosocial burden of caregivers in caring for hemodialysis patients, including its impact on the quality of life of patients and their families. Articles published between 2020 and 2025 to ensure the most current and relevant information. Articles using appropriate research designs, such as observational, quantitative, qualitative, or review studies, that address the psychosocial, emotional, and social aspects of caregivers.

Exclusion Criteria

Articles that are not fully accessible, resulting in incomplete data for analysis. Articles that are irrelevant to the topic of caregivers or hemodialysis patients, for example, focusing only on the clinical aspects of hemodialysis without addressing the psychosocial burden. Articles published outside the 2020–2025 period.

Literature Search Flow

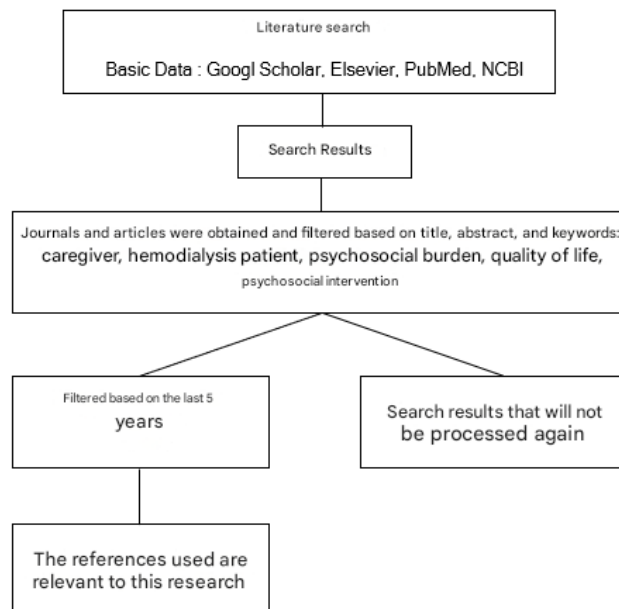


Figure 1. Flow Diagram of Literature Search and Article Selection Process

RESULT AND DISCUSSION

This study presents a systematic review of the psychosocial burden experienced by families as caregivers in the care of hemodialysis patients and its impact on their quality of life. The analysis was conducted by reviewing various publications discussing the psychological conditions of hemodialysis patients, including depression, anxiety, stress, and quality of life, and how these conditions affect the role and responsibilities of families in caring for patients. This review also highlights the emotional and social consequences experienced by caregivers, including burnout, psychological distress, and impaired social interactions. The study includes respondent characteristics, study design, psychological measurement instruments, and emerging clinical and social implications, which provide a basis for developing psychosocial interventions to support the well-being of family caregivers and improve the quality of care for hemodialysis patients.

Table 1. Synthesis of Literature on Psychosocial Burden and Quality of Life among Family Caregivers of Hemodialysis Patients

Reference	Research Title	Research Title	Main Parameters	Place / time	Key Results	Study Conclusion
Prima et al., 2023	Beban dan Psychological Well-Being pada Keluarga Pasien yang Menjalani Hemodialisis	Cross-sectional; 197 caregiver	Burden, PWB	Juli-Aug 2022, Bekasi	Caregiver families experience high burden and inverse PWB.	Caregiver psychosocial support is needed.
Pio, T. M. et al. 2022	Assessing Burden, Anxiety, Depression, and Quality of Life among Caregivers of Hemodialysis Patients in Indonesia: A Cross-Sectional Study	Cross-sectional	Burden, Anxiety, Depression, Quality of Life	Indonesia, 2022	Caregiver burden and low quality of life	Interventions are needed to reduce the burden and improve the quality of life of caregivers.
Khouban-Shargh, R. et al. 2024.	Stress management training program to address caregiver burden and perceived stress among family caregivers of patients undergoing hemodialysis: a randomized controlled trial study	Randomized controlled trial; Caregiver	Caregiver Burden, Stress	Iran, 2023	Stress management training is effective in reducing burden and stress.	Stress training programs are effective in reducing caregiver burden.
Ghenaati, N. et al. 2024.	Peer support groups and care burden in hemodialysis caregivers: a RCT in an Iranian healthcare setting	Randomized controlled trial; Caregiver	Caregiver burden, Peer support	Iran, 2023	Peer support reduces caregiver burden	Peer support groups can reduce caregiver burden.

Nimah, L. 2024	Quality of Life of Family Caregivers of Patients Undergoing Dialysis: A Literature Review	Review literatur	Caregiver quality of life	-	Caregiver quality of life is often affected by burden.	Programs are needed to improve caregiver quality of life.
Azeez, A. et al. 2024	Caregiver burden and quality of life among family caregivers of hemodialysis patients from South India	Cross-sectional; Caregiver	Caregiver burden, quality of life	India, 2024	High caregiver burden, low quality of life.	Interventions are needed to reduce caregiver burden and improve quality of life.
Muchtari, T. A. et al. 2023	Association between caregiver burden in family and hemodialysis compliance of chronic kidney disease patients in Aceh, Indonesia	Cross-sectional; Caregiver dan Pasien CKD	Caregiver burden, HD compliance	Aceh, Indonesia, 2023	Caregiver burden is associated with HD patient compliance.	Caregiver burden affects patient adherence to HD therapy.
Mcllvannan et al. (2021)	Stress and Coping among Family Caregivers of Patients Receiving Long-Term Hemodialysis	Cross-sectional; Caregiver	Stres, mekanisme coping	Pakistan, 2024	Maladaptive coping increases caregiver stress	Adaptive coping education is needed.
Ramasamy, S. et al. 2025	Burden level and quality of life of caregivers of hemodialysis patient's in central India: a mixed-method cross-sectional study	Mixed-method; Caregiver	Beban caregiver, Kualitas hidup	India, 2025	High caregiver burden and low quality of life	Support programs are needed to reduce caregiver burden and improve quality of life.

Myrna, 2024	The Development of a Family Support Program for Caregivers of Hemodialysis Patients	Pengembangan program dukungan keluarga	Dukungan keluarga, Beban caregiver	Tidak disebutkan	Family support programs have been shown to be effective in reducing caregiver burden	Family support programs help reduce caregiver burden.
Farzi, S. et al. 2019	Caring Burden and Quality of Life of Family Caregivers in Patients Undergoing Hemodialysis : A Descriptive-Analytic Study	Deskriptif analitik; Caregiver	Beban caregiver, Kualitas hidup	Tidak disebutkan	High caregiver burden and low quality of life	Support to reduce caregiver burden is needed.
Chen et al., 2025	Effectiveness of dyadic psychoeducational intervention on cancer patients and their caregivers: a systematic review and meta-analysis	Cross-sectional; Caregiver	Beban caregiver, kesehatan mental	China, 2025	High burden associated with mental disorders	Caregiver mental health support is essential
Faridah. F. N. et al. 2024	A Review of Family Caregiver's Responses of Care to Patients Undergoing Hemodialysis	Literatur review	Respons caregiver	-	Caregiver responses to patient care vary	A better approach to caregiver support is needed
Martinez et al., 2012	Quality of life and burden in caregivers for patients with Parkinson's disease: concepts, assessment and related factors	Quasi-eksperimental; Caregiver	Psikoedukasi, beban caregiver	Meksiko, 2025	Psychoeducation reduces caregiver burden	Effective psychoeducational programs

Chen et al. 2025	Effects of dyadic psychoeducational interventions for haemodialysis patients and their family caregivers: a randomised controlled trial	Randomized controlled trial; Pasien HD dan caregiver keluarga	Edukasi psikoedukatif, kualitas hidup, stres	Tidak disebutkan	Dyadic interventions improve quality of life and reduce stress	An effective dyadic approach for HD patients and caregivers
Solaimani moghaddam, R. et al. 2024	Family Caregivers' Experiences of Living with Hemodialysis Patients: A Descriptive Phenomenology	Deskriptif fenomenologi; Caregiver	Pengalaman caregiver, Beban caregiving	Tidak disebutkan	Caregivers' experiences living with HD patients are challenging	Caregiver experiences are challenging, and support is essential.

Caring for patients with chronic kidney disease (CKD) undergoing hemodialysis not only focuses on the patient as the recipient of therapy, but also involves the crucial role of family caregivers as key supporters in long-term care. A review of 30 journals indicates that family caregivers face a complex and ongoing psychosocial burden, which significantly impacts the caregiver's own quality of life and directly impacts the success of hemodialysis patient care.

Caregiver Psychosocial Burden in Hemodialysis Patient Care

Most studies indicate that family caregivers of hemodialysis patients experience moderate to high levels of psychosocial burden. This burden includes physical exhaustion due to the demands of daily care, emotional distress due to incurable chronic illnesses, limited social interactions, and economic challenges arising from treatment costs and reduced caregiver productivity. Studies by Azeez & Ambatipudi (2024), and Ramasamy et al. (2025), consistently reported that high caregiver burden is closely related to increased stress, anxiety, and psychological distress. This finding is reinforced by research in Indonesia by Prima et al. (2023) and Pio et al. (2022), which showed that caregiver burden in families of hemodialysis patients has a significant negative relationship with psychological well-being. The higher the patient's dependency level and the longer the duration of hemodialysis, the greater the psychosocial burden experienced by caregivers (Mashayekhi et al., 2015). This reflects the chronic and cumulative nature of caregiving for hemodialysis patients, potentially leading to long-term emotional exhaustion.

Impact of Psychosocial Burden on Caregiver Quality of Life

The psychosocial burden experienced by caregivers directly impacts their quality of life. Various cross-national studies, such as those by Wong et al. (2012); Jeyagurunathan et al. (2017), show that caregivers with high levels of burden tend to have a lower quality of life, particularly in the dimensions of mental health, social relationships, and emotional well-being. Limited time for themselves, decreased social activities, and a greater sense of responsibility for the patient's condition are dominant factors in reducing caregivers' quality of life. A literature review by Nimah et al. (2024) confirmed that a decline in caregiver quality of life is a consistent phenomenon in families of hemodialysis patients. If this condition is not adequately addressed, caregivers are at

risk of mental health disorders, chronic fatigue, and a decreased ability to provide optimal care to patients.

The Relationship between Caregiver Burden and Hemodialysis Patient Care and Compliance

Caregiver psychosocial burden not only impacts the caregiver themselves but also has implications for the patient care process. A study by Muchtari et al. (2023) showed that caregiver burden is related to the patient's level of adherence to hemodialysis therapy. Caregivers experiencing physical and emotional exhaustion tend to have limited capacity to support patient adherence to schedules, diets, and fluid restrictions. This confirms that caregiver well-being is a critical component for the success of long-term hemodialysis therapy.

Implications of Psychosocial Interventions for Hemodialysis Caregivers

Several intervention studies emphasize the importance of psychosocial interventions in reducing caregiver burden and improving their quality of life (Waldron et al., 2013; Gabriel et al., 2020; Secinti et al., 2023). A randomized controlled trial by Khouban-Shargh et al. (2024) showed that stress management training significantly reduced caregiver burden and stress. These findings align with research by Ghenaati et al. (2024), which demonstrated that peer support groups are effective in reducing caregiver psychosocial burden by increasing a sense of community and emotional support. Furthermore, psychoeducational interventions have also shown positive results. Phiri et al. (2023); Frias et al. (2020); Chow et al. (2024) reported that psychoeducation programs can increase caregiver knowledge, improve coping strategies, and reduce stress levels. A dyadic approach involving both patients and caregivers simultaneously, as demonstrated by Chen et al. (2025), has been shown to be effective in improving quality of life and reducing stress for both parties, thus strengthening the concept of family-based care. The development of a structured family support program, as reported by Myrna (2024), also has important implications for nursing practice and healthcare. Such programs focus not only on the patient but also on empowering caregivers as an integral part of the hemodialysis care system.

Implications for Nursing Practice and Healthcare

Overall, the findings from these 30 journals indicate that family caregivers are a key component in the care of hemodialysis patients. The high psychosocial burden and reduced quality of life of caregivers underscore the need for a holistic, family-centered care approach (Rashidi et al., 2025; Elbilgahy et al., 2025). Healthcare professionals need to routinely screen caregivers for psychological burden and well-being, and integrate psychosocial interventions such as education, counseling, and group support into hemodialysis services. This approach is expected to not only improve the quality of life of caregivers but also strengthen patient support, enhance therapy adherence, and ultimately improve the outcomes of hemodialysis patients on a sustainable basis.

CONCLUSION

Based on the literature review, it can be concluded that family caregivers of hemodialysis patients experience significant and long-term psychosocial burden. This psychosocial burden encompasses physical, psychological, social, and economic aspects, arising as a consequence of the demands of intensive, continuous care and the caregiver's involvement in various aspects of patient care. The psychosocial burden experienced by caregivers has been shown to impact the caregiver's quality of life, particularly in aspects of mental health, physical fatigue, limitations in social activities, and disruptions to daily roles and productivity. This condition indicates that caregivers are a group vulnerable to well-being issues due to their caregiving role. In addition to impacting caregivers, psychosocial burden also has implications for the care process for hemodialysis patients. Caregivers with high levels of burden are potentially at risk of a decreased ability to provide optimal support to patients, including supporting therapy adherence and long-term care continuity. This demonstrates a close relationship between caregiver well-being and the quality of patient care. The reviewed literature also indicates that psychosocial interventions

play a crucial role in reducing caregiver burden and improving the quality of life for both caregivers and patients. Therefore, care for hemodialysis patients needs to be carried out comprehensively and holistically, by involving family caregivers as an integral part of the health care system through a family-centered care approach.

SUGGESTION

Healthcare services are expected to consider the well-being of family caregivers as part of hemodialysis patient care management. Screening for caregiver psychosocial burden and providing psychosocial education and support need to be integrated into routine services to support continuity of care and improve the quality of life of patients and their families. Family caregivers are expected to improve their understanding of hemodialysis patient care and utilize available social support. Stress management efforts and the implementation of adaptive coping strategies are important for maintaining physical and psychological health during long-term caregiving roles. Further research is recommended to develop and evaluate more specific psychosocial interventions, taking into account the cultural context and healthcare system in Indonesia. Furthermore, the use of longitudinal or interventional research designs is expected to provide a more comprehensive picture of the long-term impact on caregivers and hemodialysis patients. Policymakers are expected to integrate support for family caregivers into chronic disease care policies, including hemodialysis. Developing programs that include education, mentoring, and psychosocial support for caregivers is expected to improve the overall quality of healthcare

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