PROCEEDING
5th International Conference of Health Polytechnic of Jambi 2025
icon@poltekkesjambi.ac.id
http://journal.poltekkesjambi.ac.id/index.php/ICoHPJ
doi.org/10.35910/icohpj.v5i0

FORMS OF SOCIAL SUPPORT FOR HEMODIALYSIS PATIENTS IN IMPROVING FLUID RESTRICTION ADHERENCE: A SCOPING REVIEW

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ABSTRACT

Background: *Hemodialysis is a renal replacement therapy that requires patient compliance with fluid restrictions to prevent complications and improve quality of life. Hemodialysis patients often experience difficulties complying with fluid restrictions, which can lead to fluid overload and affect the effectiveness of therapy. Social support from various parties, such as family, medical personnel, and fellow patients, is vital in increasing patient motivation and ability to comply with fluid restrictions. This article aims to explore the forms of social support for hemodialysis patients in improving fluid restriction compliance.*
Methods: *This scoping review design uses the Arksey and O'Malley model to analyze the scoping review. Literature sources used were through online databases, namely PubMed, Science Direct, Garuda, Proquest, Global Index Medicus, Wiley, and Cochrane from 2014 to 2024. Identification and analysis using Preferred Reporting Items for Systematic Reviews and Meta Analysis for Scoping Review (PRISMA-SR)*
Results: *With 13 articles analyzed, this article summarizes the effect of social support on fluid restriction compliance in the sense that it is effective for improving fluid restriction compliance with hemodialysis.*
Conclusion: *Social support is efficacious in improving compliance with fluid assurance in hemodialysis patients.*

Keywords: *Social Support, Haemodialysis, Chronic Kidney Disease*

INTRODUCTION

Chronic Kidney Disease (CKD) is characterized by structural or functional damage to the kidneys and/or a decrease in the glomerular filtration rate (GFR) to less than 60 mL/min/1.73m² for more than three months. It is a global health issue with a high prevalence rate and a significant financial burden (Bustam et al., 2022). According to the World Health Organization (WHO, 2018), CKD causes approximately 850,000 deaths annually and ranks 12th as a global cause of death. Based on data from CKD patients, the worldwide prevalence of CKD increased from approximately 2,786,000 people in 2018 to 3,018,860 people in 2019, reaching 3,200,000 people in 2020. CKD has various causes, including diabetes mellitus, hypertension, ischemia, infections, obstruction, toxins, autoimmune diseases, and infiltrative disorders. Progressive CKD can lead to serious complications, including cardiovascular disease, hypertension, anemia, bone mineral disorders, electrolyte imbalances, diabetes mellitus, and metabolic acidosis (Bello et al., 2017). Progressive CKD, without adequate management, can rapidly progress to the final stage, known as end-stage kidney disease (ESKD), requiring interventions such as dialysis (Hsu et al., 2016). As a result, hemodialysis is often the most commonly applied treatment for CKD patients

Hemodialysis is the final step in improving kidney function and is one treatment option for chronic kidney failure (Putri & Afandi, 2022). Hemodialysis is the most commonly used treatment method in Indonesia. According to the 2017 Indonesian Renal Registry (IRR) report, 77,892 patients actively underwent hemodialysis therapy that year, and 30,843 new patients started hemodialysis in the same year (IRR, 2018). Hemodialysis (HD) is

the most essential treatment for CKD patients (Guo et al., 2020). Therefore, it is necessary for patients with chronic kidney failure, regardless of its associated impacts.

One of the common issues faced by many hemodialysis patients is non-adherence, particularly in fluid intake restrictions. Non-adherence to fluid intake limitations can lead to an increase in body fluid volume, potentially causing complications in chronic kidney disease (Herlina & Rosaline, 2021). Patient non-adherence is influenced by beliefs, attitudes, personality, understanding of instructions, social isolation, and family support (Anugrah & Wahyudi, 2023). Patients undergoing hemodialysis need to adhere to fluid intake restrictions strictly (Hunter et al., 2023). A significant number of patients undergoing hemodialysis have a history of non-adherence to fluid intake restrictions (Nadri et al., 2020). The adherence rate of hemodialysis patients to the recommended fluid restrictions remains low (Beerendrakumar et al., 2018).

The success of dialysis treatment in patients with end-stage renal disease largely depends on their ability to adhere to clinical requirements and make necessary lifestyle changes. Studies show that the social support received by patients positively correlates with better health outcomes in various chronic diseases (Sousa et al., 2019). Therefore, this scoping review aims to provide an overview of social support for hemodialysis patients. Family support is a crucial component of social support, assisting and aiding patients undergoing therapy (Daniswara, 2015).

METHOD

This review was conducted to summarize information from previous studies, aiming to provide an overview of the types of social support implemented to improve hemodialysis patients' adherence to fluid restrictions. Additionally, this review offers recommendations for enhancing fluid restriction strategies in the future. The methodological framework used in this review follows the approach proposed by Arksey and O'Malley (Westphaln et al., 2021). This approach consists of five stages:

Stage 1: Research Question

The research question in this review is: What social support has been implemented to improve adherence to fluid restrictions in hemodialysis patients?

Stage 2: Relevant Studies and Search Terms

This review will examine the social support provided to hemodialysis patients to enhance adherence to fluid restrictions. The articles included must be published within the last ten years. The article search will be conducted through online databases, including PubMed, ScienceDirect, Garuda, ProQuest, Global Index Medicus, Wiley, and Cochrane.

Tabel 1. Keywords for databased

No	Database	Keywords	Articles	Date Access
1	Pubmed	((hemodialysis OR dialysis treatment OR renal dialysis OR kidney dialysis OR dialysis therapy[MeSH Terms]) AND (social support OR social care OR community support OR interpersonal support OR peer support OR support system[MeSH Terms])) AND (fluid restriction OR fluid management OR fluid intake limitation OR fluid control OR restricted fluid regimen [MeSH Terms])	54	May 17, 2024
2	Cochrane Library	hemodialysis OR dialysis treatment OR renal dialysis AND social support OR community support OR peer support AND fluid restriction OR fluid management OR restricted fluid regimen	75	May 17, 2024

No	Database	Keywords	Articles	Date Access
3	Garuda	hemodialysis and fluid restrictions	14	May 17, 2024
4	Global Index Medicus	hemodialysis OR dialysis treatment AND social support OR community support AND fluid restriction OR fluid management	10	May 17, 2024
5	wiley Online Library	((hemodialysis OR dialysis treatment OR renal dialysis OR kidney dialysis OR dialysis therapy[MeSH Terms]) AND (social support OR social care OR community support OR interpersonal support OR peer support OR support system[MeSH Terms])) AND (fluid restriction OR fluid management OR fluid intake limitation OR fluid control OR restricted fluid regimen [MeSH Terms])	69	May 24, 2024
6	Science direct	Forms of social support for hemodialysis patients in increasing compliance with fluid restrictions	81	June 29, 2024
7	Proquest	Forms of social support for hemodialysis patients in increasing compliance with fluid restrictions	245	June 29, 2024

The inclusion and exclusion criteria in this review are determined based on the Population, Concept, and Context (PCC) model and are listed in Table 2. The search is limited to full-text articles published in English and Indonesian from 2014 to 2024.

Table 2. Article Eligibility Criteria

Criteria	
Population	Focusing on patients diagnosed with chronic kidney disease undergoing hemodialysis
Consept	Social Support
Context	Fluid restrictions

Stage 3: Study Selection

Study Extraction from Databases

Figure 1 illustrates the process, screening results, and manuscript extraction criteria after the initial search based on the study's inclusion and exclusion criteria. In this stage, studies were selected by screening titles relevant to the research question, resulting in 548 articles. The screening then continued to the abstract level. A total of 124 duplicate articles were identified and excluded. Further selection based on titles removed 177 articles, as they contained only theoretical discussions and were not original research articles. After this filtering process, 247 articles remained. Additional exclusions were made for articles that did not examine the forms of social support for hemodialysis patients in improving adherence to fluid restrictions or lacked completeness. Ultimately, 13 articles were selected for analysis, focusing on the types of social support provided to hemodialysis patients to enhance adherence to fluid restrictions.

Challenges in Study Extraction

All abstracts retrieved from the article search were downloaded into Mendeley software. After deduplication, the abstracts were exported to the Rayyan software program for further screening and selection (Ouzzani et al., 2016; Simarmata et al., 2022).

Stage 4: Data Extraction

We extracted data on the characteristics of journal articles relevant to the research topic, including publication year, country of study, research findings, study design, and sample size. This step aims to facilitate the data extraction process for compiling the research.

Stage 5: Thematic Summary and Key Findings

The literature findings are used to identify results based on emerging keywords. This review will analyze all articles through titles, abstracts, and full texts, followed by a screening

process to identify differences and duplicate articles. All analyzed articles contain information on social support in improving adherence to fluid restrictions in hemodialysis patients.

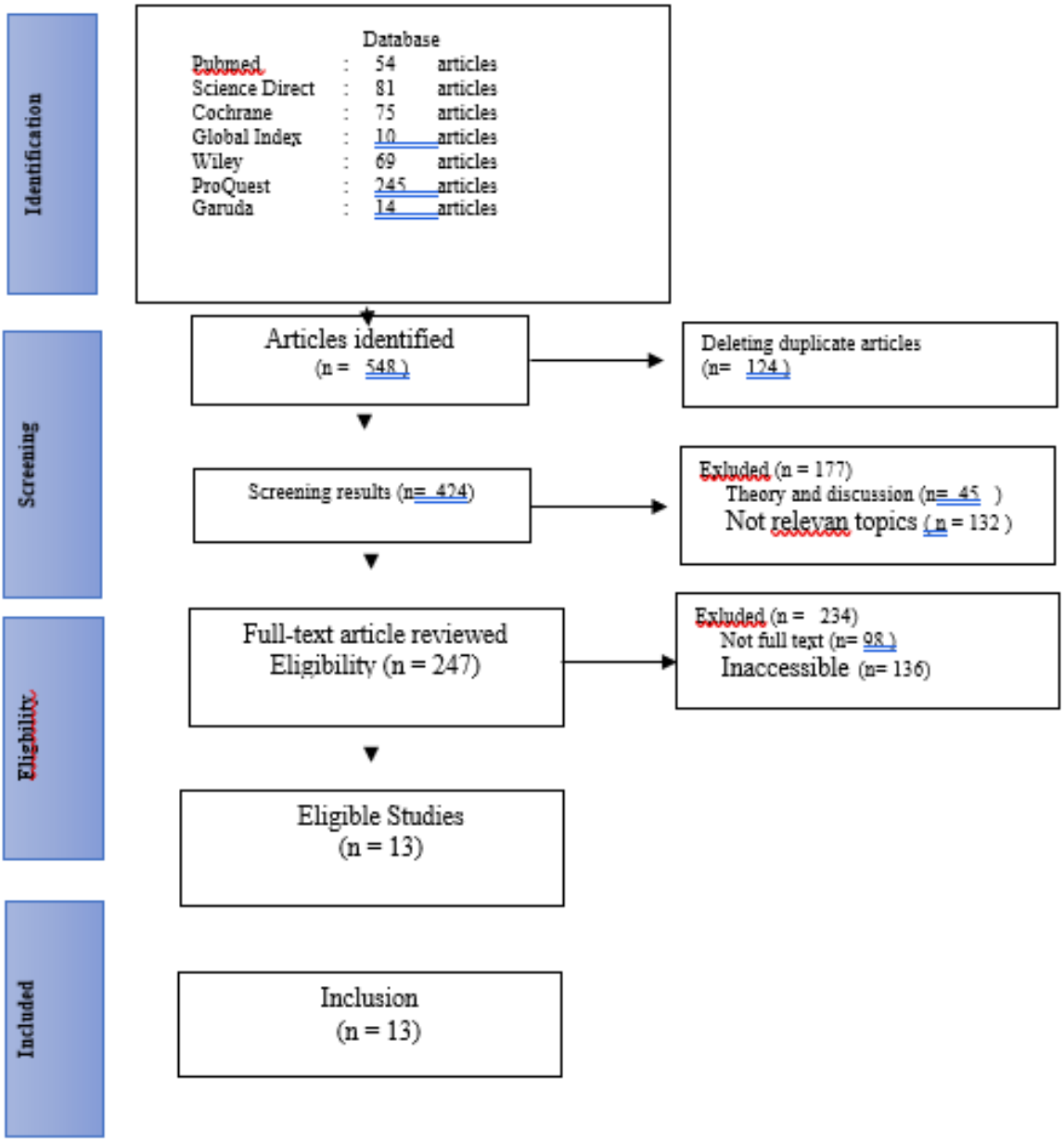

Figure 1. Prisma Diagram

Study Characteristics

Of the 13 research articles analyzed, 7studies were conducted in Indonesia. (Noviana & Zahra, 2022), (Wijaya & Padila, 2019), (Aini et al., 2017), (Susilawati et al., 2018), (Mailani et al., 2021), (Sulistyaningsih et al., 2020), (Eka et al., 2024). Iran 2 articles (Ahrari et al., 2014), (Asadizaker et al., 2022), Brazil 1 articles (da Silva et al., 2016) dan Yunani 1 articles (Theodoritsi et al., 2016), in korea 1 articles (Lee et al., 2021), and 1 articles in south africa (Chironda & Bhengu, 2019).

Table 3. Summary of literature

Author, Years	Title	Study Design (Sample Size)	Country	Result	Forms of Social Support
da Silva et al., (2016)	*Social support of adults and elderly with chronic kidney disease on dialysis*	A descriptive cross-sectional study with a sample size of 103 participants	Brazil	Patients with chronic kidney disease receive high levels of social support, both instrumental and emotional, primarily from their families. The average instrumental support score is 3.81, while the average emotional support score is 3.92.	"Instrumental support and emotional support." "The average instrumental social support is 3.81, indicating that individuals receive practical and material assistance at an adequate level. In contrast, emotional support has an average of 3.92, suggesting that the attention, empathy, and psychological support received are at a relatively high level."
Noviana & Zahra, (2022)	*Social support and self-management among end-stage renal disease patients undergoing hemodialysis in Indonesia*	Cross-sectional study (sample 107 participants)	Indonesia	High levels of social support contribute to improved self-management in patients with ESRD. This study emphasizes the importance of functional social support in self-management interventions, highlighting the need for collaboration among healthcare providers, chronic kidney disease communities, and patient companions. The reliability analysis showed a Cronbach's alpha of 0.815 for the MOS-SSS and 0.620 for the HDSMI, with a 95%	Functional support "More than half of the patients (51%) had high social support, and 53% had good self-management. There was a significant relationship between social support and self-management ($p=0.027$; $\alpha=0.05$; odds ratio 95% CI = 2.386)."

Author, Years	Title	Study Design (Sample Size)	Country	Result	Forms of Social Support
				confidence interval (CI) of 2.386 (1.097–5.193), indicating a significant relationship between social support and self-management effectiveness.	
Wijaya & Padila, (2019)	The relationship between family support, education level, and age with adherence to fluid intake restrictions in end-stage renal disease patients undergoing hemodialysis.	Cross-sectional Study (sample 108 participants)	Indonesia	Family support can enhance patients' adherence to fluid intake restrictions, which is crucial for reducing the risk of complications during hemodialysis therapy.	Family support "It is expected that family support can be maximized to create compliant behaviors, enabling clients to become aware of fluid intake restrictions by informing family members, especially through the hemodialysis clinical setting that continuously serves clients with End Stage Renal Disease undergoing hemodialysis treatment."
Ahrari et al., (2014)	*The Relationship Between Social Support and Adherence of Dietary and Fluids Restrictions among Hemodialysis Patients in Iran*	Korelational study (sample 237 partisipant)	Iran	Social support helps improve adherence to diet and fluid management. The reliability analysis showed a Cronbach's alpha of 0.71, with a confidence interval (CI) of 0.31 (0.18, 0.52) for other types of support and 0.51 (0.32, 0.80) for support from friends.	Other Support (Medical Professionals), friends and family support Patients receiving more social support tend to be more compliant with dietary and fluid restrictions and show lower levels of phosphorus and potassium in laboratory test results. Nurses play a crucial role in finding various ways to provide social support to patients and encouraging families to support their hemodialysis patients.

Author, Years	Title	Study Design (Sample Size)	Country	Result	Forms of Social Support
Theodoritsi et al., (2016)	*Factors Associated with the Social Support of Hemodialysis Patients*	Observasional study (interviews) (sample 258 partisipants)	Yunani	Higher levels of support are associated with better treatment outcomes and adherence to therapeutic regimens. The overall Cronbach's alpha is 0.804, with subscale scores of 0.78 for family support, 0.74 for friend support, and 0.78 for significant others.	Friends and Family support "Out of 258 participants, 53.9% were male, and 65% were over 60 years old. Patients felt very supported by their family and close relatives, but support from friends was lower. Family support and support from close relatives were significantly related to marital status, living arrangements, and the number of children. Meanwhile, support from friends was associated with age, marital status, and living arrangements."
Asadizaker et al., (2022)	*Predictors of Adherence to Treatment in Hemodialysis Patients : A Structural Equation Modeling*	Cross sectional study (sample 500 partisipants)	Iran	Social support and self-efficacy play crucial roles in adherence to treatment among hemodialysis patients. Higher levels of social support are correlated with better adherence rates. The scores are 0.89 for the Beck Depression Inventory (BDI), 0.86 for social support, and 0.51 (0.32, 0.80) for support from friends.	Support from friends Social support shows a medication adherence mean score of 720.7 (SD = 246.64). Higher levels of social support correlate with better adherence levels, with a correlation of 0.89 for the Beck Depression Inventory (BDI), 0.86 for social support, and 0.51 (95% CI: 0.32, 0.80) for support from friends.
Aini et al., (2017)	The relationship between family support and adherence to fluid intake	A quantitative correlational study with a cross-sectional approach was conducted, involving 86 respondents.	Indonesia	High family support improves patient adherence to fluid intake	Familiy support The family support with compliance to fluid intake restriction has a correlation of ρ

Author, Years	Title	Study Design (Sample Size)	Country	Result	Forms of Social Support
	restrictions among chronic kidney disease (CKD) patients undergoing hemodialysis in the hemodialysis unit of RSUD dr. H Soewondo Kendal.			restrictions. This study shows that family interventions in managing chronic kidney disease (CKD) can enhance therapy outcomes and the patient's quality of life. The results indicate a p-value = 0.000 and a correlation coefficient (r) = 0.789**,** demonstrating a strong positive relationship.	(Rho) 0.789 (P-value 0.000), indicating that there is a significant relationship between family support and adherence to fluid intake restrictions among patients undergoing hemodialysis.
Susilawati et al., (2018)	Self-Efficacy and Social Support in Hemodialysis Patients for Improving Adherence to Fluid Intake Restrictions	Mixed Methods, Sequential Explanatory (sample 76 quantitative, 6 qualitative respondents)	Indonesia	There is a significant relationship between self-efficacy and social support with adherence to fluid intake restrictions in hemodialysis patients. The findings indicate that self-efficacy has a moderate positive correlation (r = 0.476, p = 0.001)**,** while social support has a weak positive correlation (r = 0.308, p = 0.007) with adherence.	Familiy support "...yeah, it's life motivation, so don't complain because this is a trial... we have to be optimistic because we never know how long we'll live, but if we're healthy, we have to keep going..." "...oh, it's good, especially from my wife, kids, right... they are patient... they give support..." "...yeah, they take me and later pick me up... yeah, just support me, just go with it, enjoy it, as long as it goes smoothly..." "...yeah, they support everything... they all support me to do dialysis... sometimes they come here when I'm off from school... my kids are waiting for me while I'm on hemodialysis..." "...yeah, they just support me, just

Author, Years	Title	Study Design (Sample Size)	Country	Result	Forms of Social Support
					accept it... it's God's will... before, they used to take me... sometimes they pick me up... yeah, they support me, just be patient..." "...yeah, they're willing to take me, just accept it... actually, they like to remind me not to eat what I'm not allowed to... they motivate me... sometimes my husband or kids take me..." Support from friends: "...my friends also motivate me... they give advice..." "...Alhamdulillah, everyone supports me... yeah, just motivation, giving advice... just motivating..." "...they just cheer me on... they tell me to stay strong..."
Lee et al., (2021)	*Socioecological Factors Affecting Fluid Restriction Adherence Among Korean Patients Receiving Hemodialysis: A Qualitative Study*	Qualitative descriptive study (23 patients) and individual interviews (4 patients)	Korean	Socioecological Factors Influencing Adherence to Fluid Intake Restrictions in Hemodialysis Patients, Including Age, Gender, and Family Support	Family support "When I eat with my family, they say, 'Mom, please don't drink too much, or you'll suffer later.' They care about me very much. I will continue to control my fluid intake for the rest of my life."Lee et al., (2021) (p. 5) "Initially, my family cooked separately for me, but now the whole family eats renal-friendly meals. We no longer have soup. Because my family does so much to help me, I have to follow that plan closely."Lee et al., (2021) (p. 5)

Author, Years	Title	Study Design (Sample Size)	Country	Result	Forms of Social Support
					Other Support (Medical Professionals) "I appreciate that the nurses in the dialysis unit are helpful and supportive, so I eat and drink what they recommend. When we make a plan together, like promising to only gain a few kilograms by the next visit, it becomes easier to stick to that plan."Lee et al., (2021) (p. 5)
Mailani et al., (2021)	*The Fluid Management Experience in Patients with Chronic Kidney Disease Undergoing Hemodialysis in Indonesia: A Qualitative Study*	A qualitative study with a phenomenological approach was conducted (sample 14 respondents)	Indonesia	The study highlights the suffering and distress experienced by CKD patients who adhere to fluid intake restrictions. It emphasizes the importance of clear information regarding fluid prescriptions and the crucial role of family and dialysis staff support in helping patients manage their condition effectively.	Family support "... My children always remind me not to drink too much water. This practice helps keep my weight gain around 1 kg between dialysis sessions. However, sometimes it can go up to 2 kg, so it ranges between 1-2 kg." Mailani et al., (2021) (p. 6) Other Support (Medical Professionals) "...when the doctor comes, he always advises me to limit my fluid intake and manage my food consumption because my weight gain between dialysis sessions is always over 3 kg, and I experience edema in my legs."Mailani et al., (2021) (p. 8) Support from friends "... when I gain about 4 kg, Yaya (her name) ... monitors my appetite and fluid intake, or you'll get

Author, Years	Title	Study Design (Sample Size)	Country	Result	Forms of Social Support
					bigger... just kidding."Mailani et al., (2021) (p. 7)
Chironda & Bhengu, (2019)	*Motivators of adherence to integrated management among patients with chronic kidney disease: A qualitative study*	A phenomenological design (sample 12 respondents)	South Africa	Family support, anxiety about kidney transplant eligibility, support from other patients, awareness of non-adherence complications, and fear of being removed from the CKD program are the primary motivators for adherence in integrated management. These factors are crucial in encouraging patients to effectively follow fluid restrictions and treatment protocols.	Family support "My husband and children always remind me about my hemodialysis sessions at the hospital and the restrictions on medication, fluid intake, and diet at home. They always make sure that I have followed the correct diet, taken the prescribed medication, and consumed only 500 ml of fluid per day"Chironda & Bhengu, (2019) (p. 4)
Sulistyaningsih et al., (2020)	*The experience of adherence among hemodialysis patients undergoing therapeutic regimen: a qualitative study*	a qualitative phenomenological design (sample 10 respondents)	Indonesia	The study emphasizes the importance of self-care**,** the crucial role of nurses**,** the decline in physical activity ability**,** and the supporting and inhibiting factors of adherence. Nurses play a key role in educating and motivating patients, while physical limitations and external support systems influence adherence to	Support from friends "My colleagues support me..."Sulistyaningsih et al., (2020) (p. 5)

Author, Years	Title	Study Design (Sample Size)	Country	Result	Forms of Social Support
				fluid restrictions and treatment compliance.	
Eka et al., (2024)	Qualitative Study on Family Support for Adult Patients with Kidney Failure Undergoing Dialysis at Bahteramas Hospital, Southeast Sulawesi, 2023	Documentation techniques, recording, interviews, and observations.	Indonesia	Family support for patients with kidney failure includes informational, instrumental, evaluative, and emotional assistance.	Emotional & Instrumental Support Patients experience fear in facing their illness, and family members provide strength and encouragement through motivational words Eka et al., (2024) (p. 4) Families also consistently accompany patients during dialysis sessions, offering emotional and instrumental support Eka et al., (2024) (p.7)

RESULT AND DISCUSSION

RESULTS

This study indicates that patients with chronic kidney disease who have high social support, both instrumental and emotional, particularly from family, significantly influence adherence to fluid restriction (da Silva et al., 2016). Another study states that good family support can improve patient adherence to fluid restriction, which is crucial in reducing the risk of complications during hemodialysis therapy (Wijaya & Padila, 2019). A study indicates tactical support helps improve adherence to dietary and fluid management (Ahrari et al., 2014), Another study by Asadizaker et al. (2022), states that social support and self-efficacy play an essential role in adherence to treatment among dialysis patients.

Another study indicates that high family support enhances patients' adherence to fluid intake restrictions (Aini et al., 2017). Another study states that social support and self-efficacy are significantly related to adherence to fluid restriction (Susilawati et al., 2018). According to the study by Noviana & Zahra, (2022) high social support improves self-management in patients with ESR. Meanwhile, another study shows that higher support is associated with better treatment outcomes and adherence to therapeutic regimens (Theodoritsi et al., 2016). The study by Eka et al. (2024), found that family support impacts hemodialysis patients. Other studies indicate that family support and support from medical professionals can enhance adherence to fluid restriction (Lee et al., 2021). Mailani et al. (2021) It is stated that family support, support from medical professionals, and support from friends play a significant role in adherence to fluid restriction. According to Sulistyaningsih et al. (2020), support from friends is highly beneficial in adhering to fluid restrictions. Additionally, another study states that family support is highly beneficial for adherence to hemodialysis and fluid restriction (Chironda & Bhengu, 2019).

DISCUSIONS

This review aims to describe the forms of social support that influence adherence to fluid restriction in hemodialysis patients. The success of fluid restriction adherence is influenced by several factors, including beliefs, education, knowledge, information/educational media, psychological stress, attitudes, motivation, and family support. The media plays a crucial role in helping patients understand and retain information. Providing education on fluid restriction is highly beneficial for patients, as it serves as a comprehensive tool for health promotion and education, ultimately improving knowledge, attitudes, health behaviors, and quality of life (Gultom et al., 2020; Jamiatun et al., 2015; Zahroh & Giyartini, 2018). Another study shows that social support can enhance adaptability, depending on the source and type of support provided (Jiang et al., 2015). Family, emotional, instrumental, physical, and informational support can improve adherence to fluid restriction (Adinda Tifany & Nani Safuni, 2024). This indicates that social support has a significant positive impact on self-management. Mediation model analysis reveals that expectations fully mediate the effect of social support on self-management (Parviniannasab et al., 2024).

Hemodialysis patients generally experience moderate levels of hope, social support, anxiety, and depression while adhering to dietary and fluid restrictions. Considering the relationships between hope, social support, spiritual well-being, anxiety, depression, and stress, interventions incorporating these variables may enhance hope among hemodialysis patients (Disease et al., 2020). Another study recommends forming a multidisciplinary team to address the physical, emotional, and social needs of patients undergoing hemodialysis, which should also involve family members in the care process (Gebrie et al., 2023). Social support, sense of coherence (SOC), and self-management are closely interconnected, with research indicating that social support directly influences self-management and SOC. Social support and SOC account for 69% of the variation in self-management. These findings suggest that healthcare professionals can enhance self-management among hemodialysis patients by strengthening social support and SOC strategies (Song et al., 2022). Adherence to fluid restriction is influenced by various factors that can be categorized into three groups. Personal factors, such as physical symptoms, lack of self-control, and social relationship factors, including social stigma and social support, all play a crucial role. Organizational factors, such as a lack of practical education, cultural dietary habits (e.g., Korean food culture), and insufficient support from policies and public health systems, also affect adherence. The main barriers include physical issues and difficulties in self-control, while supporting factors include risk awareness, positive self-assessment, adequate knowledge, and sufficient social support (Lee et al., 2021). Social support provides not only physiological benefits, such as improving adherence to fluid restriction, dietary compliance, medication adherence, and hemodialysis but also psychological benefits, including enhancing confidence in the treatment and reducing stressors that are crucial for hemodialysis patients. Therefore, strengthening well-structured and sustainable social support for individuals can significantly improve fluid restriction adherence and overall quality of life. A multidisciplinary approach involving healthcare professionals, family, friends, and the community is essential to ensure successful fluid restriction in hemodialysis patients. Further research is also needed to optimize the most effective forms of social support and identify long-term strategies to enhance adherence through social support for hemodialysis patients. The limitation of this review is that it only includes studies in two languages, English and Indonesian, in the analysis.

CONCLUSION

Non-adherence to fluid restriction in hemodialysis patients is influenced by several factors, including beliefs, education, knowledge, the type of information or educational media used, psychological stress, and social support. Social support plays a crucial role in improving adherence to fluid restriction by enhancing family, peer, emotional, instrumental, and other forms of support (including medical professionals, religious organizations, and community groups). These social support systems are the most significant contributors to improving fluid restriction adherence in hemodialysis patients.

CONFLICT OF INTEREST

There are no conflicts of interest in this study

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