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Article

Which dialysis modality offers better quality of life for chronic kidney disease patients: CAPD or hemodialysis (HD)? a scoping review

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ABSTRACT

In advanced stages of chronic kidney disease (CKD), where kidney function has severely declined, renal replacement therapy becomes essential. This scoping review aims to compare the impact of two common dialysis modalities hemodialysis (HD) and continuous ambulatory peritoneal dialysis (CAPD) on various aspects of patients' quality of life, including physical, emotional, and social dimensions. This review was conducted using the Population and Concept (PC) framework, which is commonly applied in scoping reviews, and followed the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) guidelines for reporting. A comprehensive literature search was performed across four databases: PubMed, ProQuest, ScienceDirect, and Google Scholar. The search focused on full-text, English-language articles published within the last ten years. Inclusion criteria included studies involving adult CKD patients undergoing HD or CAPD with quality of life as the primary outcome. Studies were excluded if they involved pediatric populations, case reports, or were not peer-reviewed. Nineteen studies met the eligibility criteria and were included in this review. The findings suggest that CAPD therapy is potentially associated with better physical quality of life compared to HD. However, results regarding emotional and social aspects were mixed, with some studies indicating comparable outcomes between modalities, while others showed conflicting results. Further research is warranted, particularly regarding emotional well-being and social support in CAPD patients. While CAPD may offer certain advantages in physical quality of life, comprehensive comparisons across emotional and social domains remain inconclusive. Limitations of this review include the small number of eligible studies, variation in study designs, and heterogeneity in patient populations. These limitations highlight the need for more robust and standardized research in this area.

Keywords:

Chronic Kidney disease
Continuous ambulatory
Peritoneal dialysis (CAPD)
Hemodialysis
Quality of life

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Introduction

The growing burden of chronic kidney disease (CKD) represents a major global public health concern, requiring significant healthcare resources and long-term management strategies. Global prevalence estimates suggest that CKD affected approximately 13.1% of the global population as of 2019 (Collaborators & Ärnlöv, 2020). This global trend is mirrored in Indonesia, where CKD also presents a growing health challenge. According to the 2018 Basic Health Research, the prevalence of CKD

diagnosed by doctors among individuals aged 15 years and older was 0.38%, marking an increase from 0.2% in 2013 (Balitbangkes, 2018). These figures, though lower than the global average, indicate an upward trend in Indonesia, likely due to factors such as increasing rates of hypertension and diabetes, two primary risk factors for CKD in the country. Given the rising burden of CKD in Indonesia, examining treatment options that can optimize patients quality of life is essential to inform clinical and policy decisions.

One of the main clinical challenges in managing CKD is determining the most appropriate renal replacement therapy (RRT) to sustain life and improve patient well-being. For patients with end-stage CKD, two principal dialysis modalities are widely used: hemodialysis (HD) and peritoneal dialysis (PD) (Ghodsian et al., 2021). In Indonesia, both HD and Continuous Ambulatory Peritoneal Dialysis (CAPD)–a specific form of PD–are available under the national health insurance scheme, yet CAPD remains underutilized compared to HD. This raises an important question regarding whether CAPD provides comparable or even superior outcomes in terms of quality of life (QoL) relative to HD, especially considering its potential benefits such as flexibility, home-based treatment, and lower dependency on hospital facilities. However, evidence comparing the two therapies, particularly in the Indonesian context, remains limited and inconsistent, highlighting the need for a systematic review to clarify the specific QoL domains affected by each modality.

While CAPD offers flexibility for individuals with CKD undergoing renal replacement therapy, the influence of this treatment on patient well-being is an area of active investigation, with studies yielding a range of outcomes. Some studies suggest potential benefits for QoL with CAPD compared to hemodialysis (HD). For instance, a prospective cohort study in Singapore reported higher quality of life scores for CAPD patients in both physical and mental aspects compared to HD patients. Similarly, research from Taiwan found that peritoneal dialysis (PD) patients receiving care in medical centers reported better overall quality of life compared to the HD group (Hsu et al., 2020). This study improves our understanding of the QOL of patients using different types of dialysis in Taiwan. CAPD allows patients to undergo dialysis anywhere and anytime without being tied to a dialysis machine schedule. This therapy gives patients more control over their lives and increases their independence. The CAPD dialysis process can also help maintain the body's fluid and electrolyte balance better than HD. This intervention can reduce fatigue and increase the patient's energy. Because it does not require permanent vascular access, CAPD has a lower risk of infection than HD. CAPD, of course, provides benefits for patients in maintaining their health.

However, other research presents contrasting results. For instance, research conducted in Indonesia adds to the body of evidence suggesting similar life quality for patients with CAPD or HD (Rini et al., 2021). This study reinforces the notion that despite potential complications associated with two modalities, both treatment modalities aim to increase patients' life quality. Patients can adapt to their conditions and get support from their families. A study found that HD patients had higher QOL scores in physical domains than PD patients (Tch et al., 2019). This situation is associated with several factors, namely, the efficiency of HD in cleaning blood and removing waste substances, support from medical staff during the HD process in hospitals or clinics, and more structured and controlled time management in undergoing HD therapy.

While continuous ambulatory peritoneal dialysis (CAPD) offers flexibility, it's important to acknowledge potential drawbacks that might impact quality of life. These include complications associated with CAPD itself, the additional burden of self-care management, and potential feelings of embarrassment related to the treatment (Mbeje, 2022). CAPD requires high discipline and commitment from the patient to carry out the dialysis procedure independently. These demands can cause stress and fatigue, especially for patients with other activities or difficulty following treatment instructions (Walker et al., 2023). Complications such as peritonitis can cause pain, discomfort, and anxiety in patients. Peritonitis considerably affects a patient's life quality, as this can cause symptoms such as fever, nausea, and vomiting (Baillie et al., 2021). Some CAPD patients may feel embarrassed about their condition and feel isolated from others (Thong-on et al., 2022). This embarrassment may be caused by discomfort with the dialysis procedure or concerns about the social stigma associated

with kidney disease. CAPD patients may experience depression, anxiety, and stress as a result of their condition. Factors such as complications arising from CAPD, the demands of self-care management, and potential feelings of stigma related to the treatment can significantly impact a patient's overall well-being. In some cases, these challenges may even exacerbate physical symptoms. Furthermore, inadequate social support networks, encompassing family, friends, and the broader community, can further diminish the quality of life for CAPD patients (Sitjar-Suñer et al., 2020). Studies have shown that robust social connections can equip patients with coping mechanisms to manage stress, leading to an overall enhancement in their life quality.

This research, which explores how CAPD contributes to the well-being of individuals with chronic kidney disease, reveals inconsistencies in findings. This result highlights the need for a more nuanced understanding of this critical topic. Scoping reviews serve as a valuable tool for systematically mapping existing literature, identifying research gaps, and pinpointing areas ripe for further investigation. Therefore, this scoping review aspires to provide a deeper understanding of life quality for patients diagnosed with CKD who have opted for CAPD as their renal replacement therapy. Through a comprehensive literature mapping process, this study aims to achieve the following objectives: The review will delineate specific aspects of QoL that are demonstrably influenced by CAPD therapy, a comparison of QoL outcomes between CAPD patients and those receiving alternative renal replacement therapies (hemodialysis).

Metode

This study employed a scoping review methodology guided by the Joanna Briggs Institute (JBI) framework, specifically utilizing the Population and Concept (PC) approach. The population of interest consisted of patients with chronic kidney disease (CKD) who were undergoing Continuous Ambulatory Peritoneal Dialysis (CAPD) therapy. The core concept examined was health-related quality of life (HRQoL).

The literature search followed the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) guidelines to ensure transparent reporting. Four databases–PubMed, ScienceDirect, ProQuest, and Google Scholar–were selected based on their accessibility and broad coverage of clinical and health-related research. Databases such as Scopus or Cochrane were not included due to limited access and the focus of this review on identifying a wide range of empirical studies, including gray literature. Keywords used in the search included "chronic kidney disease," "Continuous Ambulatory Peritoneal Dialysis," "quality of life," and "peritoneal dialysis." The search was restricted to full-text articles published in English within the last ten years. Studies were eligible if they were original research (quantitative or qualitative), involved adult CKD patients undergoing CAPD therapy for at least three months, and assessed quality of life. Articles were excluded if they were review papers, conference abstracts, or lacked sufficient methodological details.

The article selection process involved several stages: (1) identification of studies through database searching, (2) removal of duplicates, (3) screening of titles and abstracts, and (4) full-text eligibility assessment. Two independent reviewers conducted the screening and resolved discrepancies through discussion. For quality assessment, we applied the JBI Critical Appraisal Checklists, which are tailored to various study designs, including qualitative studies, cross-sectional studies, and cohort studies. This process allowed us to evaluate the methodological rigor of each study and its relevance to the review objectives.

Data were extracted systematically using a standardized form, covering study characteristics (author, year, country, design, sample size, patient demographics) and key findings related to quality of life domains. The analysis involved a descriptive qualitative synthesis to map the evidence across physical, emotional, social, and other relevant quality of life aspects. Potential selection bias was minimized by applying clear inclusion and exclusion criteria, using independent reviewers, and transparently reporting the review process.

Result and Discussion

Study Selection

The selection process produced 1,254 articles from large scientific databases, with details of 752 from Pubmed, 94 from ProQuest, 63 from Science Direct, and 345 from Google Scholar. Articles irrelevant to the study population were removed from the inclusion criteria in the title screening process. As a result, there were 969 eligible articles. Next, duplicate articles were sorted out, resulting in 824 articles. We continued the stage of deleting 784 articles from the list for several reasons; namely, the title did not match the topic (755 articles), the population did not match the topic (6 articles), the journal that was published was not a research journal (16 articles), and not a full-text article (7 articles). Our initial search identified 40 articles. Subsequently, we refined the selection process to ensure articles directly aligned with the literature review's theme. We resulted in a shortlist of 19 articles that then underwent a rigorous quality assessment. The process of identifying and selecting relevant literature for this review is outlined in detail within Figure 1.

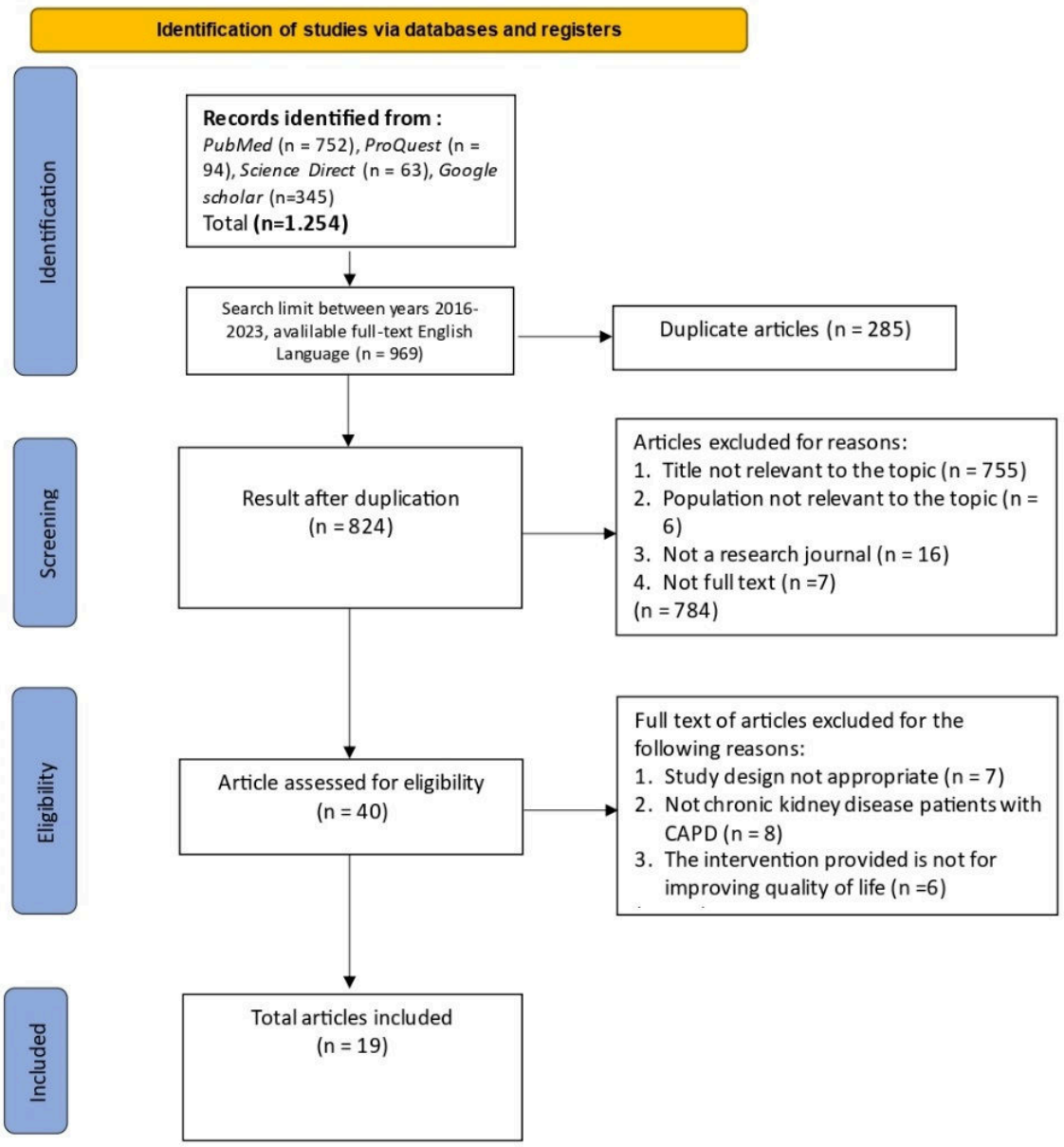

Figure 1 Flowchart of the Literature Search Strategy

Key Features of Analyzed Studies

This study involved 19 articles with varying study designs. The research was conducted in diverse geographical regions including Southeast Asia, South Asia, the Middle East, Africa, and Latin America. Southeast Asia is represented by the Philippines, Indonesia, Malaysia, Vietnam, Thailand, and Taiwan. South Asia includes India, with both general and South India represented. The Middle East region includes Saudi Arabia and Turkey. Africa is represented by South Africa and Morocco. Latin America is represented by Mexico. This wide distribution underscores the global relevance of the topic. Table 1 presents a comprehensive overview of the selected studies.

Table 1. Summary of Reviewed Research

Author, year, location	Title	Study design	Sample	Result
TCH et al., 2019, Philippines	Quality of Life among End Stage Renal Disease Patients on Hemodialysis and Peritoneal Dialysis in the National Kidney and Transplant Institute	Cross sectional study	185 HD 225 CAPD	HD patients demonstrated a substantial increase in perceived life quality in the physical domain. In contrast, PD patients experienced an increase in their perceived life quality in well-being across psychological, social, and environmental aspects.
Rini et al., 2021, Indonesia	Differences in the quality of life of chronic kidney disease patients undergoing hemodialysis and continuous ambulatory peritoneal dialysis Ika	cross-sectional	125 hemodialysis and 125CAPD patients	The study assessed five key quality of life (QoL) domains for CKD patients: ability to do everyday tasks and manage pain during dialysis (both hemodialysis and CAPD) and emotional well-being (anxiety and sadness). Interestingly, in terms of patient well-being, this research found no remarkable distinction between HD and CAPD for individuals with CKD.
Mathew et al., 2023, South Africa	Comparison of quality of life in patients with advanced chronic kidney disease undergoing hemodialysis, peritoneal dialysis and conservative management in Johannesburg, South Africa: a cross-sectional, descriptive study	cross-sectional	50 patients on hemodialysis (HD) and 50 CAPD	An analysis of patient-reported outcomes revealed that CAPD patients scored lower in physical function, pain, vitality, and social functioning compared to HD patients. However, they also reported lower anxiety (HADS) and better emotional well-being. Additionally, PD patients appeared to have a greater likelihood of maintaining employment compared to HD patients.
Surendra et al., 2019, Malaysia	Health-related quality of life of dialysis patients in Malaysia: Haemodialysis versus continuous ambulatory peritoneal dialysis	cross-sectional study	141 patients (77 HD and 64 CAPD)	The study identified a significant disparity in reported difficulties with the usual activities of patients with (HD) and (CAPD). A higher percentage of HD patients (compared to CAPD) reported challenges in this domain. Interestingly, a notable proportion of patients in both groups experienced pain or discomfort.

Author, year, location	Title	Study design	Sample	Result
Reynaga-Ornelas et al., 2019, Mexico	Impact of Sleep and Dialysis Mode on Quality of Life in a Mexican Population	cross-sectional study	39 patients on CAPD 42 patients on APD 40 patients on HD	Hemodialysis (HD) patients tend to report feeling more energetic when performing daily activities compared to those undergoing CAPD. The situation suggests a potential difference in vitality levels between the two treatment groups.
Tran et al., 2022, Vietnam	Quality of life assessment in patients on chronic dialysis: Comparison between haemodialysis and peritoneal dialysis at a national hospital in Vietnam	Descriptive cross-sectional	178 outpatients (131 on HD, 47 on PD), aged 18, at Thong Nhat Hospital (May 2020 July 2021)	PD patients reported better quality of life than HD patients. Older age and having peptic ulcer disease were linked to lower QoL. Choosing PD may improve QoL in ESRD patients.
Thavorncharoensap et al., 2025 Thailand	A comparison of health-related quality of life between continuous ambulatory peritoneal dialysis and automated peritoneal dialysis in children with stage 5 chronic kidney disease in Thailand	Randomized controlled trial	60 children with stage 5 CKD (30 on CAPD, 30 on APD), followed up at weeks 16 and 48	No significant difference in HRQoL or utility scores was found between CAPD and APD groups. Although APD showed slightly better trends in school and social domains, the changes were not statistically significant.
Alshehri et al., 2023, Saudi Arabia	Who has a better-kidney-related quality of life: peritoneal dialysis or hemodialysis patients? A cross-sectional study from Saudi Arabia	cross-sectional study	54 patients on CAPD 98 patients on HD	This study investigated functional health status in HD and CAPD patients. While no significant differences emerged in overall HRQoL, CAPD patients did score higher in physical health assessments, suggesting potentially better physical function. Interestingly, the study also identified a trend towards higher levels of depression in CAPD than HD group.
Shdaifat, 2022, Saudi Arabia	The Course of Quality of Life in Patients on Peritoneal Dialysis: A 12-month Prospective Observational Cohort Study	Prospective Observational Cohort Study	20 patients on CAPD 92 patients in TX 105 patients on HD	CAPD had lower physical function scores (- PCS) compared with patients undergoing kidney transplantation (Tx) and hemodialysis (HD). An analysis of mental function scores using the Mental Component Summary (MCS) revealed higher scores for hemodialysis (HD) and TX patients contrasted with CAPD. The result suggests that HD and Tx patients might experience better cognitive function or face fewer mental health challenges compared to CAPD patients.

Author, year, location	Title	Study design	Sample	Result
Sumathi et al., 2025, India (Madras Medical College)	Quality of life, caregiver burden and cost - comparison between CAPD and hemodialysis	Cross-sectional observational study	161 ESKD patients: 70 on CAPD (43.5%) and 91 on MHD (56.5%), all with 10 months on dialysis	Patients on CAPD had significantly better quality of life scores (EQ5D/VAS median 75 vs 70; p<0.001). CAPD group had fewer issues in anxiety/depression, pain, and daily activity performance. Caregiver burden was similar.
Manavalan et al., 2017, South India	Assessment of health-related quality of life and its determinants in patients with chronic kidney disease	cross-sectional study	204 patients (100 on HD, 104 on CAPD)	This study did not identify a substantial difference in QoL outcomes when comparing HD and CAPD treatment. However, the analysis revealed that factors such as unemployment, literacy level, and age can influence quality of life.
Chrifi Alaoui et al., 2022, Morocco	Comparison of quality of life in end-stage renal disease patients undergoing hemodialysis and peritoneal dialysis in a Moroccan city	cross-sectional study	91 patients (71 HD, 20 PD)	PCS, cognitive function, and staff encouragement were significantly better in PD patients. Regression analysis confirmed lower PCS, staff encouragement, and patient satisfaction scores in HD group ($p < 0.05$).
Sittisongkram et al., 2019, Thailand	Comparison of personal characteristic factors relating to quality of life in patients with end-stage renal disease	a descriptive research design	76 cases of terminal kidney disease	The study identified several key aspects of quality of life (QOL) that received high scores among participants. These included positive interactions and support from dialysis/renal unit staff, patient satisfaction with the treatment itself, strong social support networks, and preserved cognitive function. Conversely, the dimensions with the lowest scores pertained to physical limitations and pain, difficulties maintaining employment, the emotional burden associated with kidney disease (specifically for HD patients), and overall health perception (particularly for PD patients)
Tannor et al., 2017, South Africa	Quality of life in patients on chronic dialysis in South Africa: a comparative mixed methods study	a comparative mixed-methods study	65 HD 55 CAPD	While patients with HD and CAPD may experience similar overall quality of life (QOL), there are variations in specific aspects of QOL between the two treatment groups. PD patients tend to experience more symptoms, feel more tired, and have difficulty sleeping compared to HD patients. However, CAPD patients were also

Author, year, location	Title	Study design	Sample	Result
				more likely to be working and felt more supported by care staff.
Hsu et al., 2020, Taiwan	A comparison of quality of life between patients treated with different dialysis modalities in Taiwan	Cross-sectional study	600 HD patients, 387 PD patients	PD patients had significantly better total QoL scores compared to HD patients, particularly in medical centers. However, in clinics, the difference was not significant.
Sutrisno et al., 2019, Indonesia	The Different in Quality of Life Between Patients with Kidney Failure Undergoing Hemodialysis and Continous Ambulatory Peritoneal Dialysis (CAPD)	a cross-sectional comparative analytical research design	104 HD, 22 CAPD	Research suggests that CAPD may offer a better quality of life for some patients compared to hemodialysis (HD). This result is potentially linked to factors like improved physical health. Additionally, CAPD patients tend to have higher hemoglobin levels than those on HD. The disparity observed may be attributed to the production of erythropoietin by healthy kidneys.
Türk et al., 2020, Turkey	Quality of life and associated factors in hemodialysis and peritoneal dialysis patients	cross-sectional study	60 HD patients, 45 PD patients	PD patients had significantly better HRQOL scores in five domains: emotional role, work status, cognitive function, dialysis staff encouragement, and patient satisfaction. Age, sex, education, comorbidity, hemoglobin, albumin, and ferritin levels were associated with HRQOL.
K l ç et al., 2024, Turkey	Quality of life and sleep, depression, family functioning, and marital adjustment in patients on HD and PD	Cross-sectional	21 HD and 27 PD patients	HD patients had significantly higher depression scores. PD patients had better family problem-solving, communication, and general functioning. Poor sleep quality was more frequent in HD. General health and mental health were better in PD group.
Alhabib et al., 2025, Saudi Arabia	Differences in Quality of Life Between Patients on Peritoneal Dialysis and Hemodialysis in Saudi Arabia	Cross sectional	307 dialysis patients (170 HD & 137 PD)	PD group showed higher nausea and lower family acceptance, while HD patients reported greater coping satisfaction. Linear regression showed income affected HD QoL, and age slightly influenced PD QoL. Overall, both groups reported positive life changes and minimal work absence.

Our review of the literature yielded mixed findings regarding the CAPD and HD life quality. While two studies showed no significant difference, six others suggested a higher QoL for CAPD patients. Our data analysis further revealed potential variations in QoL across various aspects like emotional and social well-being, potential for depression or anxiety, pain levels, social support networks, socioeconomic factors, and energy levels (vitality). Interestingly, a connection emerged between

hemoglobin levels and QoL, with CAPD patients typically having higher hemoglobin levels compared to HD patients.

Discussion

Most of the articles we reviewed showed that the physical health of patients with CAPD was better than that of HD patients. These findings indicate that the dialysis procedure affects the body's response. CAPD patients' body fluid and electrolyte balance is better maintained because dialysis is done daily, whereas HD is only for a few hours, three times a wee (Mathew et al., 2023). The dialysis process in the perineal cavity allows several kidney functions to continue so that toxins and metabolic waste products are removed consistently. Studies suggest that CAPD patients may experience improved nutritional status compared to those on hemodialysis (HD). This condition can include better protein metabolism, potentially leading to better preservation of muscle mass and physical strength (Ronny et al., 2022:Fidan & Ağırbaş, 2023).

CAPD patients' hemoglobin levels tend to be higher than HD patients. CAPD uses the peritoneum (abdominal cavity lining) as a dialysis membrane, more permeable to red blood cells than the synthetic dialysis membrane used in HD. This membrane allows for minimal blood loss in CAPD. There is evidence suggesting that CAPD may allow this continued production of endogenous erythropoietin (EPO) with in the body. Healthy kidneys make a hormone called erythropoietin, which is important for producing red blood cells in the body (Terada et al., 2021). CAPD might cause the lining of the abdomen (peritoneal mesothelial cells) to release more EPO, thereby increasing red blood cell production and Hb levels. Analysis of multiple research studies suggests a potential advantage for CAPD patients in terms of nutritional status compared to those undergoing hemodialysis (Mekhola et al., 2023). Adequate nutrition, especially iron and certain vitamins plays an important role in red blood cell production. With better nutritional status, CAPD patients can potentially have higher Hb levels (Dizdar et al., 2020:Sutrisno et al., 2019). However, the difference in Hb levels between CAPD and HD patients can vary. Other factors such as age, gender, severity of chronic kidney disease, and use of certain medications can affect Hb levels (Gunaseelan et al., 2020).

Our data analysis indicates that CAPD patients may experience a better life quality in contrast to hemodialysis patients. CAPD patients have greater flexibility in managing daily activities because they are not tied to a rigid dialysis schedule. This condition allows CAPD patients to participate in social activities, work, and travel more easily (Shimray, 2023). They tend to feel more free, in control, and have higher self-confidence than HD patients (Mendes Marins et al., 2023). As a result, they have optimism, hope and motivation to live life.

However, although CAPD offers greater flexibility and autonomy, CAPD patients are also at risk for emotional distress and have a lower assessment of their physical health. CAPD requires a high degree of discipline and commitment from the patient to perform manual fluid exchange several times daily. This demand can be a psychological burden for patients, especially those who are busy or have difficulty following instructions with discipline. A study found difficulty sleeping in CAPD patients (Al-Ali et al., 2021). They worry about therapy failure, complications, and uncertainty about the future (Bazazzadeh et al., 2023). CAPD requires significant lifestyle changes, including restrictions on diet, physical activity, and social interactions. This situation can disrupt the patient's routine and habits and cause feelings of loneliness and isolation. They may also feel embarrassed or uncomfortable about having fluid exchanges in public. Concerns about the financial burden and impact on the family, as well as a sense of uncertainty about the prognosis and potential complications, can be significant sources of stress for CAPD patients (Thong-on et al., 2021). This condition does not include using a peritoneal catheter because it causes pain and discomfort and is a source of infection (Grączewska, 2022). All of these negative situations can exacerbate stress and anxiety and contribute to depression. Other factors, such as mental health history, social support, and financial conditions, can also influence the emotional health of CAPD patients. Lack of social support and financial difficulties can exacerbate stress and anxiety.

New information obtained from the results of this review includes several vital findings regarding differences in quality of life between patients undergoing CAPD and HD. First, regarding physical

quality, CAPD patients generally show better conditions, including more stable blood pressure, better electrolyte balance, and more optimal nutritional status. This advantage is likely related to the continuous dialysis nature of CAPD, which allows the body's detoxification process to occur more evenly. In addition, hemoglobin levels in CAPD patients tend to be higher than in HD patients, most likely because the peritoneum is more effective in producing erythropoietin. However, although CAPD patients experience physical benefits, they often experience higher levels of stress, anxiety, and sleep disturbances. This is due to the complexity of CAPD therapy management, which requires patient involvement in daily care. Other factors that influence quality of life include social support, economic status, age, and level of education. Strong social support is associated with better quality of life, regardless of the type of dialysis undertaken. Good economic conditions can also reduce the financial burden associated with treatment, while younger age and higher education are often associated with a better quality of life.

These findings suggest that when choosing between CAPD and HD, the patient's physical condition, psychological factors, social support, and personal preferences must be considered. Although CAPD offers some physical benefits, the psychological impact of more complex therapeutic management must also be considered.

Conclusion

This scoping review found that Continuous Ambulatory Peritoneal Dialysis (CAPD) shows potential advantages over Hemodialysis (HD) in specific domains of quality of life among chronic kidney disease (CKD) patients, particularly in physical aspects such as improved energy levels, greater flexibility in daily activities, and enhanced social interactions due to the home-based nature of CAPD. However, emotional challenges such as anxiety, stress, and discomfort from the catheter and risks of peritonitis remain prominent among CAPD patients, potentially reducing their emotional well-being compared to HD patients, who benefit from regular professional support during dialysis sessions. Overall, CAPD may be preferable for patients who prioritize physical independence and flexibility, have strong self-management abilities, and possess adequate support systems to handle the demands of self-care. On the other hand, HD may be more suitable for patients with limited capacity for self-care or those who require structured medical supervision due to comorbidities or psychological vulnerabilities.

Clinically, these findings highlight the need for individualized treatment decisions based on patient preferences, psychological readiness, social support availability, and clinical conditions. Healthcare providers should carefully assess these factors when recommending dialysis modalities. Future research is recommended to explore tailored interventions that can address emotional and psychological challenges in CAPD patients, as well as cost-effectiveness analyses to support broader clinical decision-making..

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