



**STRESS ADAPTATION AS AN IMPROVEMENT EFFORT SELF- MANAGEMENT AND QUALITY OF LIFE IN PATIENTS WITH CHRONIC KIDNEY DISEASE: A LITERATURE REVIEW**

**Kiki Maria\*, Rondhianto, Suhari**

Nursing Program, Faculty of Nursing, Universitas Jember, Jl. Kalimantan Tegalboto No.37, East Krajan, Sumpersari, Kec. Sumpersari, Jember Regency, East Java 68121 Indonesia

\*[kikimaria190@gmail.com](mailto:kikimaria190@gmail.com)

**ABSTRACT**

Chronic Kidney Disease (CKD) is a significant health issue closely associated with mortality. The prevalence of this disease has been increasing significantly worldwide each year. It is characterized by a permanent decline in kidney function that cannot be reversed within three months or even many years. Eventually, the kidneys may cease to function properly. Failure to adapt to stress impacts the mechanism of coping, self-awareness self-control, and self-efficacy decreasing that impact on self-management and quality of life. This research aims to illustrate the influence of adaptation to stress as effort enhancement self-management and quality of life in patients with chronic kidney disease. A systematic review using the PRISMA protocol and the JBI Critical Appraisal Tool was used to determine which articles met the three requirements of electronic databases (PubMed, Google Scholar, ScienceDirect). Inclusion criteria include the quality of life of chronic kidney disease patients published in English within the last 5 years (2019-2024). This summarizes twenty - two articles. Discuss the influence of adaptation to stress, self-management, and quality of life for patients with chronic kidney disease. Self-management and quality of life in patients with chronic kidney disease are influenced by adaptive stress, including 1) Focal stimuli (level of severity, duration of hemodialysis, symptoms), 2) Contextual stimuli (distance to health facility, family support, power of health support, satisfaction with health service, employment, economic status, health insurance, marital status), 3) Residual stimuli (age, religion, level of education, sex of type). Positive coping strategies, self-awareness, self-control, and self-efficacy can improve the adaptation process to stress, thus having a positive impact on self-management and quality of life in patients with chronic kidney disease.

Keywords: adaptation stress; chronic kidney disease; quality of life; self-management

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**INTRODUCTION**

Chronic Kidney Disease (CKD) is a health problem that is closely connected with a high number of deaths. The prevalence of this disease has significantly increased worldwide every year. It is characterized by a permanent decline in kidney function that cannot be reversed within three months or even many years until the kidneys no longer function properly (Kidney Disease Improving Global Outcome, 2023). By 2023, the global prevalence of chronic kidney disease among a population of 850 million people is expected to exceed 10% (International Society of Nephrology, 2023). Patients with chronic kidney disease generally experience a decline in self-management and quality of life as a consequence of their inability to adapt to stress (García-Martínez et al., 2021). High levels of stress can impact an individual's coping mechanisms (Cardol et al., 2023). If the coping mechanism is inadequate (Sheth et al., 2023), then, self-awareness will decrease (Kreibich et al., 2020), causing a decrease in self-control

(Nilsen et al., 2020). In addition, it is important to note that self-efficacy will also decrease (Al Sawad et al., 2022; Bowling et al., 2023; Ghasemi Bahraseman et al., 2021). Self-management has also decreased (Lai et al., 2021; Lin & Hwang, 2020; Ouyang et al., 2022). The deterioration of a patient's condition can be indicated by an increase in urea, creatinine, and albuminuria levels. In addition, the disease may be accompanied by complications that can further reduce the patient's quality of life (Chesnaye et al., 2022; Krishnan et al., 2020; Pauly et al., 2020; Ranabhat et al., 2020).

Based on a previous study, it was found that 39% of 48 patients with chronic kidney disease had poor self-management (Billany et al., 2023). 41% of the 270 patients with chronic kidney disease reported a decline in their quality of life. Additionally, 27.1% of the 144 patients reported suffering from psychological stress (García-Martínez et al., 2021). Adaptation stress is one of the determining factors in a patient's chronic kidney disease and their ability to self-manage effectively (Cardol et al., 2023). According to Sister Calista Roy, stress adaptation is the process wherein individuals utilize coping mechanisms to overcome difficult changes and stressful situations in their lives. Coping mechanisms are seen as regulatory and cognitive factors, while stress is viewed as an influential stimulus that balances individuals and triggers adaptive responses. Stress adaptation is influenced by focal stimuli, contextual stimuli, and residual stimuli (Allgood, 2018).

Self-management is the ability of the patient to take an active role in the care and management of their health condition. They should develop skills to manage their health in everyday life and make decisions based on the information they receive about their care (Riegel et al., 2019). The goal is to improve the quality of life for the patient, optimize health outcomes, and reduce the cost of healthcare services by empowering patients to take an active role in their maintenance. Patients with a high level of self-management are expected to be more successful in achieving their objectives, while those with a low level of self-management may question their ability to achieve their health objectives.

According to the World Health Organization, quality of life refers to an individual's perception of their place in the cultural and societal system, including their values, expectations, and standards of living (Gebrie et al., 2022; Krishnan et al., 2020; Pauly et al., 2020; Ranabhat et al., 2020; Rosén et al., 2020). Improved physiological and psychological status can increase self-management and quality of life in patients with chronic kidney disease. This can be achieved through independent patient management and treatment, leading to better health, increased activity, and longer life. Previous studies have shown that effective self-management can lead to a better quality of life for those managing their disease (Helou et al., 2020). Previous studies have shown a connection between self-management and quality of life. Adopting an approach behavior can reduce the level of complications and improve the quality of life for patients with chronic kidney disease. Therefore, self-management can strongly influence the treatment and quality of life experienced by patients with chronic kidney disease (Al Sawad et al., 2022; Ouyang et al., 2022).

Enhancing self-management and quality of life is crucial for patients with chronic kidney disease. Therefore, patients with chronic kidney disease require intervention, among other treatments. Provide comprehensive education and information about the disease, including its causes, symptoms, treatment, and appropriate management. The aim is to help patients understand their condition clearly. 2) Provide psychosocial support to patients through counseling, support groups, or assistance from medical professionals, expert nutritionists, and mental health experts. This support is crucial in helping patients overcome stress-related

psychological conditions increase self-awareness (Kreibich et al., 2020) and develop efficient coping mechanisms. 3) Management emphasizes the use of techniques such as relaxation, meditation, and exercise to help patients manage stress. Respiratory techniques may also be employed. This approach aims to help patients manage stress related to their disease, increase their self-control (Nilsen et al., 2020), and reduce the negative impact on self-efficacy (Lai et al., 2021). 4) Planning maintenance during the long-term maintenance period is crucial for patients. This includes creating a timetable for hemodialysis, managing a healthy diet, and using the correct medications. It is important to help patients arrange their daily lives in the best possible way (Shlipak et al., 2021). 5) The medical collaboration team consists of doctors, nurses, nutritionists, and other health experts who work together to plan and provide integrated care for patients with chronic kidney disease. Collaborative approaches can provide a comprehensive method to increase patient self-management and improve their quality of life (Helou et al., 2020; Keivan et al., 2023). This research aims to illustrate the influence of adaptation to stress as effort enhancement self-management and quality of life in patients with chronic kidney disease.

## METHOD

This is a systematic literature review using the PRISMA protocol and JBI Critical Appraisal Tool to determine if articles meet the specified conditions. The researchers obtained articles from three electronic databases: PubMed, Google Scholar, and ScienceDirect. Search for articles using keywords and boolean operators (AND, OR, NOT, or AND NOT). The inclusion criteria should cover self-management and quality of life for patients with chronic kidney disease caused by adaptation to stress. The articles must have been published in English within the last five years (2019-2024) and include the keywords 'self-management', 'quality of life', 'chronic kidney disease', and 'adaptation model stress.'" Furthermore, the selection stage involves choosing articles that meet the criteria published within the last five years until 2023, in full-text format and written in British English. These articles will be compiled for a systematic review based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The final total is 30 articles, with 15 from Google Scholar, 7 from Science Direct, and 8 from Pub Med. Of the 23 articles that met the required criteria for researchers (see Figure 1). data was extracted and coded for relevant topics in international articles from 2019-2024. The data was then analyzed using a meta-synthesis approach to compare, contrast, criticize, and synthesize the findings.

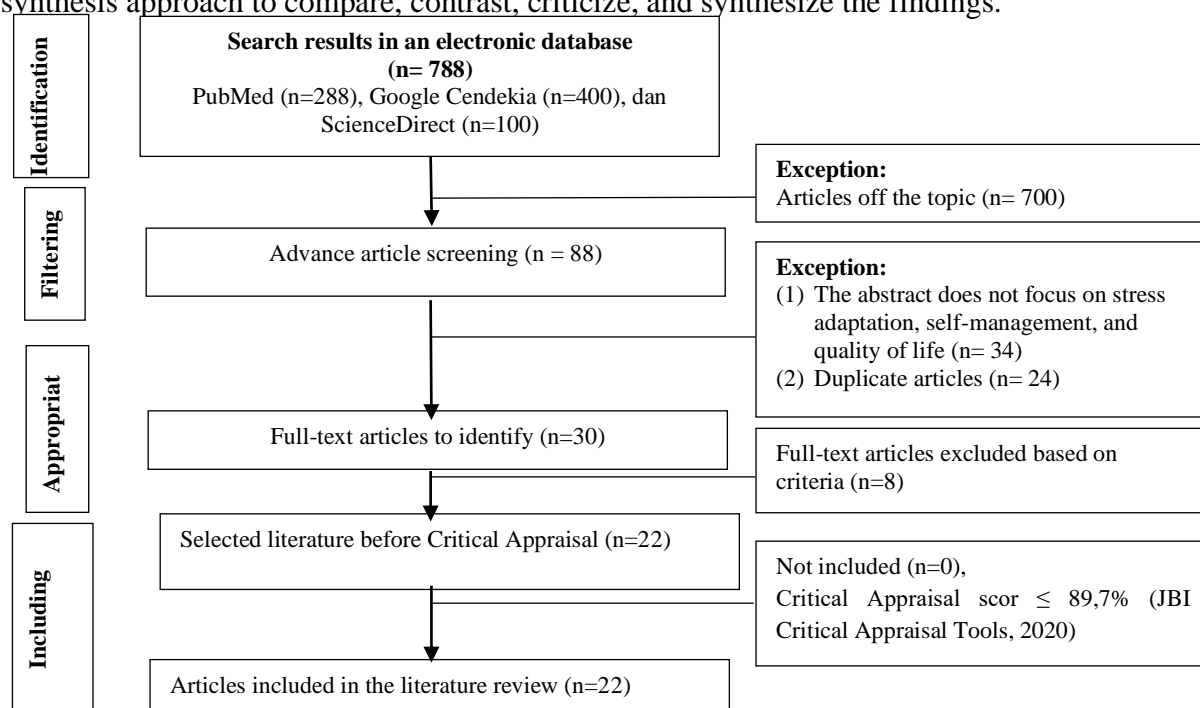


Figure 1. Study selection based on the PRISMA flow diagram\

**RESULTS**

Research results indicate that 22 articles meeting the study criteria were obtained. Following the review, relevant data were extracted and coded by researchers to identify the main themes. Based on the findings of the review of 22 articles, influencing factors in stress adaptation, including the severity of the disease, were discussed in 2 articles (9%) (Fletcher et al., 2022), 1 article (4,5%) reviewed about the duration of hemodialysis (Lestaris et al., 2023), 1 article (4,5%) reviewed about symptom disease (Fletcher et al., 2022), 2 articles (9%) reviewed about distance facility (Ashrafi et al., 2024; Zhang et al., 2019), 2 articles (9%) reviewed about support family (Dos Santos et al., 2021; Ghasemi Bahraseman et al., 2021), 1 article (4,5%) reviewed about satisfaction service health (Nirat et al., 2024), 2 articles (9%) support power health (Dos Santos et al., 2021; Ghasemi Bahraseman et al., 2021), 5 articles (22.7%) reviewed about the social status economy (García-Martínez et al., 2021; Ghazi et al., 2021; Naseef et al., 2023; Oh et al., 2019; Tannor et al., 2019), 2 articles (4,5%) reviewed about work (García-Martínez et al., 2021; Oh et al., 2019), 1 article (4,5%) reviewed about insurance health (Ghazi et al., 2021), 1 article (4,5%) reviewed about religion (Ghasemi Bahraseman et al., 2021)(Ghasemi Bahraseman et al., 2021), 3 articles (13,6%) reviewed about age (García-Martínez et al., 2021; Oh et al., 2019; Skoumalova et al., 2022), 6 articles (27,2%) reviewed about type of sex (Alshelleh et al., 2022; Chesnaye et al., 2022; García-Martínez et al., 2021; Krishnan et al., 2020; Oh et al., 2019; Skoumalova et al., 2022), 7 articles (31.8%) education (García-Martínez et al., 2021; Ghasemi Bahraseman et al., 2021; Krishnan et al., 2020; Lai et al., 2021; Naseef et al., 2023; Oh et al., 2019; Skoumalova et al., 2022). Meanwhile, 3 articles (13.6%) reviewed adaptation to stress (3, 4, 10), 4 articles (18,1%) discussed self-management in patients with chronic kidney disease (Cardol et al., 2023; Chen et al., 2021; Keivan et al., 2023; Ouyang et al., 2022) and 6 articles (31.8%) reviewed the quality of life in patients with chronic kidney disease (Chesnaye et al., 2022; Ghazi et al., 2021; Keivan et al., 2023; Naseef et al., 2023; Ouyang et al., 2022; Zhang et al., 2019). Where factors such as the severity of the disease, duration of hemodialysis, symptoms of illness, distance to health facilities, family support, support from healthcare providers, satisfaction with healthcare services, health insurance, economic status, employment status, marital status, age, gender, education, and religion influence adaptation to stress, resulting in increased self-management and a positive impact on the quality of life of patients with chronic kidney disease. Further details of the research results reviewed can be found in Table 1.

Table 1.  
Summary adaptation model research stress as effort enhancement self-management and quality of life in the patient disease kidney chronic

1.	Fletcher et al. (2022)	The Purpose of the Study is to synthesize the severity levels of diseases, symptoms, and quality of life of patients in the clinical group of chronic kidney disease (stages 1-5) worldwide, with the hope of improving	D: Cross-sectional study S: 1,529 respondents V: Symptom burden, Quality of Life health in disease kidney chronic I: KDQOL-SF Instrument A: p < 0.05 after adjustment for multiple testing	- Research results show that patients with chronic kidney disease experience a decline in their quality of life-related to their health (HRQOL). The level of severity of the disease depends on the stage of the disease and its symptoms, as well as the methods of treatment  - It is important to highlight the impact of the disease's symptoms on the negative quality of life of patients with chronic kidney
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		the quality of life.		disease, especially those undergoing maintenance dialysis.
2.	Lestaris et al. (2023)	The purpose of prove a connection between the duration of hemodialysis and quality of life.	D: Cross-sectional S: 100 respondents V: Duration hemodialysis, quality of life, patient disease kidney chronic I: KDQOL-SF™ Questionnaire A: Statistical test Spearman correlation	- The duration of HRQoL in hemodialysis has a significant relationship with the quality of life. This is because the repair of uremia symptoms and the patient's acceptance of being in the chronic kidney disease phase allows the patient to adapt to the changes, resulting in an improvement in their quality of life.
3.	Oh et al. (2019)	To identify the connection between chronic kidney disease development and HRQoL in pre-dialysis patients.	D: Cohort study perspective S: 1622 respondents V: Quality of life-related health and development disease kidney chronic I: KDQOL-SF36, measurement laboratory, and questionnaires sociodemographics A: Student's t-test, Mann-Whitney U test, R test	- The research results show that HRQoL is a multi-dimensional measurement. Both the summary component physical (PCS) and summary mental components (MCS) are affected not just by medical conditions but also by various sociodemographic factors. Low PCS is linked with several demographic factors, including age, gender, low income, unemployment, anemia, and declining kidney function. HRQoL is a significant factor in the development of chronic kidney disease  - This matter can help identify groups of patients at risk of developing chronic kidney disease by measuring HRQOL. Identifying at-risk patients with chronic kidney disease can provide preventive benefits for individuals related to their health and social aspects, as well as their economy.
4.	Tannor et al. (2019)	To evaluate the quality of life in patients with chronic kidney disease, from early stages to advanced stages (patients who are not undergoing dialysis), and to determine the factors that influence it	D: Observational study cross-sectional S: 202 respondents V: Quality of life, patient disease kidney chronic Gana I: Questionnaire sociodemographic, test clinical and laboratory, 36-Item RAND Health Survey A: Chi-square test, Mann Whitney U test, multiple linear regression	- Research results show that generally quality life patients ' kidney chronic disease kidney chronic currently carries on. The summary score mental component was significantly worse compared to the score summary component physique. defining factors of a quality bad life are economic status low, patient disease kidney chronic stage 5 and anemia

5.	Krishnan et al. (2020)	To determine the factors related to overall quality of life and specific domains	D: Cross-sectional S: 1696 patients with disease kidney chronic V: Quality life I: EQ-5D-3L Questionnaire A: Multiple linear regression	- Research results show that factors affecting the quality of life of patients who have chronic kidney disease include types of sex women, education, loss of partner, and illness accompanying
6.	Dos Santos et al. (2021)	To understand the connection between frailty, social support, family support, and quality of life in chronic kidney disease patients undergoing hemodialysis.	D: Correlational, cross-sectional study S: 80 Respondents V: Connection between weakness, support social and functional family patient hemodialysis I: Mann-Whitney test and level adopted significance _ for statistical tests was 5% (P<0.05).	- The research results show that there is a high prevalence of frailty (93.8%) in individuals with low social support and family support. Although there are differences in the scores of social support dimensions between the frail and non-frail groups, only the family support dimension reaches statistical significance. There is a significant relationship between physical frailty, social support, family support, and quality of life.
7.	Pauly et al. (2020)	- To assess and compare dimensions of QoL in the different stages of CKD patients and also to identify the factors affecting QoL	D: Cross-sectional S: 210 respondents V: Dimensions of quality of life, the different stages chronic kidney disease patients I: (EQ-QoL-5D) and visual analog scale (VAS) Questionnaire A: ANOVA tests	- The most commonly affected domains were usual activities (79%), pain (76.20%), and anxiety/depression (71.91%). Factors such as age (> 65 yrs), BMI (Underweight and Obese), educational background (Illiterate), Unemployment, domiciliary status (Rural), number of medications (> 11) had a significant association with EQ-5D index and VAS scores (p=0.000). It was found that QoL was impaired in stage 5D compared to other stages (p=0.000)
8.	Lai et al. (2021)	To evaluate the connection between depression and anxiety with self-management and self-efficacy in pre-ESRD patients.	D: Cross-sectional study S: 112 respondents V: Depression, anxiety, self-efficacy, and self-management I: HDSMI Questionnaire, QDQOL SF Spearman rho correlation and regression logistics	- The research results show that stress can decrease self-efficacy and self-management abilities. - Patients with higher levels of education have better self-efficacy and self-management abilities compared to patients with lower education levels.
9.	Skoumalova et al. (2022)	To evaluate the connection between health literacy and health-related quality of life in dialysis patients.	D: Cross-sectional study S: 542 respondents V: Literacy health, quality of life, sociodemographics, and disease accompanying I: Questionnaire (KDQoL-SF), Questionnaire (HLQ), Index	- The research results show that there is a significant relationship between health literacy and quality of life (both physical and mental summary components) in dialysis patients, after adjusting for age, gender, education, and CCI. - Patients with low health literacy have lower physical and mental summary components compared to patients with high health literacy. - Patients with low health literacy

			Charlson Comorbidity (CCI) A: General linear model	currently have lower mental summary components compared to patients with high health literacy. Health literacy is linked with both physical and mental HRQoL.
10.	Alshelleh et al. (2022)	To evaluate the connection between mental health (depression and anxiety) and the quality of life of patients with chronic kidney disease, as well as the correlation with sociodemographic factors, laboratory values, and metabolic profiles.	D: Cross-sectional study S: 103 respondents V: Depression, anxiety, quality of life I: Questionnaire (PHQ-9, (GAD-7), WHOQOL-BREF. A: Sample t-test independent and Mann Whitney-U test, correlation test order Spearman rankings	<ul style="list-style-type: none"> <li>- Research results show that patients with chronic kidney disease are prone to pressure psychological. of 103 patients with chronic kidney disease experience depression (58.3%) and anxiety (50.5%).</li> <li>- Depression and quality of life have connections negative, strong, and significant. The higher the depression the lower the quality of life for patients with chronic kidney disease.</li> <li>- Based on research results show that marital status connection is significant with depression. There is a connection negative between anxiety and quality of life.</li> <li>- Patient women have scored more anxiety high compared to men.</li> <li>- Patients who don't work score more physical function compared to patients other.</li> <li>- Patients with higher serum hemoglobin levels have higher physical and psychological scores</li> </ul>
11.	Garcia-Martínez et al. (2021)	To identify how durability and quality of life are connected with health, and how sociodemographic, clinical, and routine hemodialysis variables relate to perceived stress in patients with chronic kidney disease.	D: Cross-sectional study S: 144 respondents V: Perception of stress, quality of life, and resilience I: Sociodemographic Data Questionnaire, Related, PSS-10, KDQOL-36), and CD-RISC A: Sample t-test independent, One-Way ANOVA, Spearman rho, Analysis regression multiple	<ul style="list-style-type: none"> <li>- The research results show that resilience and HRQoL are the main predictors of the stress felt among patients undergoing hemodialysis for more than six months. Among the sociodemographic factors analyzed in this study, employment status is associated with a significantly higher perception of stress. This aligns with patient survey results, indicating that those who are unemployed experience greater stress compared to those who are employed.</li> <li>- Sociodemographic variables, as well as routine and clinical aspects of hemodialysis, were not found to be related to perceived stress</li> </ul>

12.	Ghasemi Bahraseman et al. (2021)	Identify and describe the influencing factors in self-management behavior among adults with chronic kidney disease.	D: Qualitative S: 30 respondents stress management training, related coping strategies, self-efficacy hemodialysis patient I: Interview A: Analysis thematic	- The thematic analysis results indicate that various factors influence self-management behavior, including attitude, outlook, stress, competing priorities, communication with healthcare providers, multimorbidity, motivation, knowledge, self-beliefs, convenience, affordability, support, and specific behavioral factors.
13.	Chesnaye et al. (2022)	To understand the quality of life in chronic kidney disease patients across different sexes, both male and female	D: Cohort study prospective observational S: 421 Respondents V: Quality of life, sociodemographics, clinical and comorbidities. I: HRQOL SF-36 A: Linear mixed model	- The research results show that among patients diagnosed with advanced-stage chronic kidney disease, women initially have lower quality of life compared to men. However, men experience a faster decline in quality of life-related to health over time.
14.	Ouyang et al. (2022)	To explore methods of intervention for promoting independence and assess their effectiveness in managing chronic kidney disease in the Chinese population	D: Cohort study intervention ambitious S: 1,200 respondents V: Management program independent of the patient disease kidney chronic (SMP- disease kidney chronic) I: questionnaire HRQoL A: Chi-square test / Fisher's exact test, Mann-Whitney U-test/Student's t-test, log-rank test	- Research results show management program intervention independent of the patient disease kidney chronic (SMP- disease kidney chronic) based theory cognition social care in patients disease kidney chronic can increase the quality of life patient disease kidney chronic and slow development as well as increase well-being psychology and quality life in a way whole.
15.	Keivan et al., (2023)	This study aims to investigate the role of self-management programs based on the nursing model in improving the quality of life of patients undergoing hemodialysis.	D: Quantitative S: 60 respondents V: Self-management, self-maintenance efficacy, hemodialysis, intervention nursing, quality of life I: Questionnaire (KDQOL – SF and demographics A: SPSS 18 at level significance 0.05 using independent T-test, paired T-test, and ANOVA	- The research results indicate that an independent management intervention, based on an individualized model, can enhance the independent maintenance of hemodialysis patients. Nurses can apply this model to reduce maintenance costs, enhance interventions, and improve the quality of life of patients
16.	Zhang et al. (2019)	To test the urban-rural difference in access to healthcare services and evaluate self-health	D: Quantitative S: 14,813 respondents V: health and quality of life, Access to service health	- The research findings indicate that, overall, access to healthcare services is positively correlated with self-assessment of health and quality of life among elderly

		and quality of life (QOL) among patients with chronic disease (CD) across different age groups in China	I: Questionnaire WHO-SAGE survey A: T-test and chi-square test	individuals with chronic diseases (CD) in China, especially for patients with lower health status. However, the impact of access to healthcare services seems to differ between urban and rural groups. Given the scope of universal healthcare services in China, improving the affordability of medical services and reducing barriers to accessing healthcare should be prioritized to provide safer access to healthcare services for the elderly.
17.	Lama Ghazi. (2021)	To identify whether there is a relationship between economic status and health insurance.	D: Study cross-sectional using electronic health records (EHRs). S: 185,269 respondents V: Environmental Socioeconomic Status, Health Insurance, and Prevalence disease kidney chronic I: Observational using electronic health records (EHRs) A: Multilevel Poisson regression	- The research results show that health insurance is more commonly used by chronic kidney disease patients with low economic status compared to those with high economic status. This trend is attributed to socioeconomic factors and the frequent need for chronic kidney disease treatment. - Further studies are needed to identify environmental and individual factors, as well as clinically possible targets for public health interventions aimed at reducing the severity of chronic kidney disease and improving the quality of life of affected patients.
18.	Cardol et al. (2023)	To understand the relationship between psychological pressure and compliance with self-management recommendations.	D: Cross-sectional S: 18 respondents V: Pressure psychology and management yourself to the patient disease kidney chronic I: Online questionnaire A: Analyze regression multivariable and regression ordinal logistics	- Research results indicate that out of 460 patients with chronic kidney disease, 27.2% experienced psychological pressure, significantly hindering their ability to manage the disease independently. - Considering the link between psychological pressure and compliance with self-management recommendations for chronic kidney disease, behavioral interventions are needed to identify and address psychological pressure as a potential barrier to independent disease management.
19.	Ashrafi et al. (2024)	To enhance access to healthcare services for patients with chronic kidney disease and reduce the burden of the disease	D: Quantitative cross-sectional S: 1864 I: Questionnaire V: Disease kidney chronic, Hispanic, access service health, justice, Inequality race A: Chi-square and regression tests logistics Multivariate	- Research results show that Hispanic patients with chronic kidney disease have limited access to healthcare services compared to the white population, indicating an existing gap in their access to services. - This gap is attributed to lower levels of education and income among Hispanics compared to whites, as well as a lack of health insurance. Therefore, more

				programs and policies are needed to improve kidney health and enhance equality and quality of life for patients with chronic kidney disease
20.	Chen et al. (2023)	- To evaluate self-management in patients undergoing hemodialysis, the process of identifying self-management behaviors needs to be simplified.	D: Cross-sectional study. S: 628 respondents V: Partnership, self-care, solution problems and management emotional I: Questionnaire structured HDSMI-18 A: tested with standard fit indices	- The findings from the Hemodialysis self-management instruments, which were verified by this CFA (Confirmatory Factor Analysis), consisting of 18 items, can serve as an evaluation tool to identify issues in self-management among patients undergoing hemodialysis. This enables healthcare providers to deliver more individualized care. - This instrument can provide guidelines for nurses to quickly assess problems in the self-management of patients undergoing hemodialysis. - This instrument can be beneficial for nursing managers to improve service quality through periodic evaluations and identify areas of difficulty for patients in self-management.
21.	Naseef et al., (2023)	- This study aims to explore the influencing factors affecting the quality of life of patients undergoing dialysis in Palestine.	D: A multicenter cross-sectional observational study S: 271 respondents V: Quality of Life patient hemodialysis I: KDQOL-SFT Questionnaire A: Statistical analysis was performed using SPSS	- The research results indicate that income and educational status significantly influence three domains of the KDQOL-SFTM questionnaire, with role physical, employment status, and role emotional scoring the lowest among the three main domains. - Assessing the sustainability of patients' quality of life during their hemodialysis journey using the KDQOL-SFTM in conjunction with clinical evaluations enables healthcare professionals to intervene and optimize their maintenance.
22.	Nirat et al. (2024)	- To evaluate the knowledge, perception, satisfaction levels, and quality of life among beneficiaries of the Pradhan National Dialysis Program (PMNDP), paramedics need to be assessed.	D: A cross-sectional study S: 240 respondents V: Evaluate knowledge, perception, level of satisfaction and quality of life recipient benefit national dialysis program services pradhan Orderly (PMNDP) I: KDQOL-SF Questionnaire A: -	- The findings suggest that beneficiaries of the PMNDP at the chosen dialysis centers generally expressed satisfaction with the program, primarily because of its zero expenses. However, some patients reported facing mental health challenges like depression, irritability, and difficulty concentrating, likely stemming from the complexities associated with nephropathy, which appears to impact their quality of life

## **DISCUSSION**

Chronic kidney disease (CKD) is a significant health issue associated with a high mortality rate. The prevalence of this disease has been steadily increasing worldwide every year, and it is characterized by a permanent decline in kidney function that cannot be reversed within a period of three months or even several years. Eventually, the kidneys cease to function properly (Kidney Disease Improving Global Outcome, 2023). The global prevalence of chronic kidney disease among the population of 850 million people is reported to have exceeded 10% by 2023 (International Society of Nephrology, 2023). Patients with chronic kidney disease generally experience a decline in self-management and quality of life as a consequence of their inability to adapt to stress (García-Martínez et al., 2021). High levels of stress can impact an individual's coping mechanisms (Cardol et al., 2023). If the coping mechanism is inadequate (Sheth et al., 2023), then, self-awareness will decrease (Kreibich et al., 2020), causing a decrease in self-control (Nilsen et al., 2020). In addition, it is important to note that self-efficacy will also decrease (Al Sawad et al., 2022; Bowling et al., 2023; Ghasemi Bahraseman et al., 2021). Self-management has also decreased (Lai et al., 2021; Lin & Hwang, 2020; Ouyang et al., 2022). The deterioration of a patient's condition can be indicated by an increase in urea, creatinine, and albuminuria levels. In addition, the disease may be accompanied by complications that can further reduce the patient's quality of life (Chesnaye et al., 2022; Krishnan et al., 2020; Pauly et al., 2020; Ranabhat et al., 2020).

Adaptation stress is one of the determining factors in a patient's chronic kidney disease and their ability to self-manage effectively (Cardol et al., 2023). According to Sister Calista Roy, stress adaptation is the process wherein individuals utilize coping mechanisms to overcome difficult changes and stressful situations in their lives. Coping mechanisms are seen as regulatory and cognitive factors, while stress is viewed as an influential stimulus that balances individuals and triggers adaptive responses. Stress adaptation is influenced by focal stimuli, contextual stimuli, and residual stimuli (Allgood, 2018). Failure to adapt to stress impacts the coping mechanism, self-awareness, self-control, and self-efficacy, leading to a decrease in self-management and quality of life. Roy viewed individuals or groups as systemic entities with continuous components interacting with environmental stimuli. The coping process is influenced by stimuli, including focal, contextual, and residual stimuli ((Browning) Callis, 2020).

The focal stimulus is the immediate stimulus faced by individuals that demands attention and significant adaptive energy. In the context of stress, focal stimuli can include incidents or factors that directly cause stress responses, such as the severity of the disease (Fletcher et al., 2022; Ghazi et al., 2021), symptoms disease (Fletcher et al., 2022), and duration of hemodialysis (Lestaris et al., 2023). Contextual stimuli can either enhance or diminish the effects of stimuli, including factors such as the distance to health facilities (Ashrafi et al., 2024; Zhang et al., 2019), satisfaction service health (Nirat et al., 2024), support family (Dos Santos et al., 2021; Ghasemi Bahraseman et al., 2021), support power health (Dos Santos et al., 2021; Ghasemi Bahraseman et al., 2021), insurance health (Ghazi et al., 2021), economic status (García-Martínez et al., 2021; Ghazi et al., 2021; Oh et al., 2019; Tannor et al., 2019), work (García-Martínez et al., 2021; Oh et al., 2019). Residual stimulus is frequently related to experiences or characteristics individuals do not fully realize, like age (García-Martínez et al., 2021; Oh et al., 2019; Skoumalova et al., 2022), types of sex (Alshelleh et al., 2022; Chesnaye et al., 2022; García-Martínez et al., 2021; Krishnan et al., 2020; Oh et al., 2019; Skoumalova et al., 2022), education (García-Martínez et al., 2021; Ghasemi Bahraseman et al., 2021; Krishnan et al., 2020; Lai et al., 2021; Oh et al., 2019; Skoumalova et al., 2022), and religion (Ghasemi Bahraseman et al., 2021).

The research findings from 22 reviewed articles indicate that patients with chronic kidney disease often experience significant psychological pressure, leading to difficulties in managing their condition independently. Recognizing the link between psychological pressure and adherence to recommendations for chronic kidney disease self-management, it is essential to implement interventions to identify and address psychological pressure as a potential obstacle in patients' self-management (Cardol et al., 2023). The research results also show that increasing self-management is associated with an improvement in quality of life (Ouyang et al., 2022). To enhance self-management and quality of life, patients with chronic kidney disease need to receive solutions and interventions, including) Education and information should be provided to patients, offering comprehensive knowledge about the disease, including its causes, symptoms, treatment, and appropriate management. This approach aims to help patients better understand their condition. 2) Provide psychosocial support to patients through counseling, support groups, or assistance from healthcare professionals, nutritionists, and mental health experts. This support is crucial for helping patients cope with psychological stress related to their condition, thereby enhancing self-awareness (Kreibich et al., 2020) and developing effective coping strategies. 3) Management stress is teaching techniques to manage stress to patients, like relaxation, meditation, and breathing exercises. This approach aims to help patients manage stress related to the disease, thereby increasing self-control (Nilsen et al., 2020) and reducing the impact negative on self-efficacy (Lai et al., 2021). 4) Planning maintenance that helps patients plan maintenance periods long, including timetable hemodialysis, healthy diet management, and the use of the right medicines. Plan maintenance with a well is very important for helping patients arrange life daily with more good (Shlipak et al., 2021). 5)

## **CONCLUSION**

Chronic kidney disease (CKD) is a significant health issue closely associated with mortality. The prevalence of this disease increases significantly worldwide every year. Chronic kidney disease is characterized by a permanent decline in kidney function, which cannot be changed within a period of three months or even many years until the kidneys no longer function properly. Failure to adapt to stress leads to a decrease in coping mechanisms, self-awareness, self-control, and self-efficacy, thereby affecting self-management and quality of life. This impact is influenced by three stimuli: 1) Focal stimuli include factors such as the severity level, duration of hemodialysis, and symptoms. Contextual stimuli consist of variables such as the distance to health facilities, family support, healthcare provider support, satisfaction with healthcare services, employment status, economic status, health insurance coverage, and marital status. Residual stimuli encompass age, religion, level of education, and gender. Patients with chronic kidney disease need to receive information and education about the disease, including its causes, symptoms, treatment options, and proper management. Additionally, they should have access to psychosocial support, effective care planning, and collaboration with a multidisciplinary medical team comprising doctors, nurses, nutritionists, and other healthcare professionals. This collaborative approach can provide a comprehensive strategy to improve self-management and enhance the quality of life for patients with chronic kidney disease.

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