Original Article

Work-hemodialysis treatment interface in patients with chronic kidney disease: a scoping review

Interface trabalho-tratamento hemodialítico em pacientes com insuficiência renal crônica: revisão de escopo

Interfaz trabajo-tratamiento hemodialítico en pacientes con insuficiencia renal crónica: revisión de alcance

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Abstract

Objective: To analyze the scientific evidence on the impact of hemodialysis treatment on the work of patients with chronic kidney disease.

Methods: This is a scoping review carried out through searches in five databases: PubMed, LILACS, CINAHL, PsyInfo and Scopus. We included studies published between 2010 and 2020, in Portuguese, Spanish and English, with a qualitative or quantitative approach, with patients undergoing hemodialysis for chronic kidney failure, who focused on work, employment or productivity.

Results: The 18 studies included in the review show the impact of hemodialysis treatment on the relationship with work and the reasons associated with unemployment. Such reasons involve sociodemographic characteristics, physical weakness, treatment and family and employer support.

Conclusion: After starting hemodialysis, we identified impairment in patients' functional capacity, both physical and psychological, requiring changes in life habits due to restrictions imposed by chronic kidney disease and decreased productivity.

Resumo

Objetivo: Analisar as evidências científicas sobre o impacto do tratamento hemodialítico no trabalho de pacientes com insuficiência renal crônica.

Métodos: Revisão de escopo realizada por meio de buscas em cinco bases de dados: PubMed, LILACS, CINAHL, PsyInfo e Scopus. Foram incluídos estudos publicados entre 2010 e 2020, nos idiomas português, espanhol e inglês, de abordagem qualitativa ou quantitativa, com pacientes em tratamento hemodialítico para insuficiência renal crônica, que tivessem foco no trabalho, emprego ou produtividade.

Resultados: Os 18 estudos incluídos na revisão mostram o impacto do tratamento hemodialítico na relação com o trabalho e as razões associadas à desempregabilidade. Tais razões envolvem características sociodemográficas, debilidade física, tratamento e apoio familiar e do empregador.

Conclusão: Após o início da hemodiálise, nota-se o comprometimento da capacidade funcional tanto física como psicológica dos pacientes, sendo necessárias alterações nos hábitos de vida em decorrência das restrições impostas pela insuficiência renal crônica e da diminuição da produtividade.

Resumen

Objetivo: Analizar las evidencias científicas sobre el impacto del tratamiento hemodialítico en el trabajo de pacientes con insuficiencia renal crónica.

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Conflict of interest: nothing to declare.

Métodos: Revisión de alcance realizada mediante búsquedas en cinco bases de datos: PubMed, LILACS, CINAHL, PsyInfo y Scopus. Se incluyeron estudios publicados entre 2010 y 2020, en idioma portugués, español e inglés, de enfoque cualitativo o cuantitativo, con pacientes bajo tratamiento hemodialítico por insuficiencia renal crónica, que estuvieran centrados en el trabajo, empleo o productividad.

Resultados: Los 18 estudios incluidos en la revisión muestran el impacto del tratamiento hemodialítico en la relación con el trabajo y las razones asociadas al desempleo. Estas razones incluyen características sociodemográficas, debilidad física, tratamiento y apoyo familiar y del empleador.

Conclusión: Después del inicio de la hemodiálisis, se observa la capacidad funcional de los pacientes comprometida, tanto la física como la psicológica, por lo que los cambios en los hábitos de vida se hacen necesarios como consecuencia de las restricciones impuestas por la insuficiencia renal crónica y de la reducción de la productividad.

Introduction

Chronic kidney disease (CKD) treatment is based on an early diagnosis, followed by nephrological treatment and measures that preserve the functioning of the kidney.[1] The aim is to delay, as much as possible, CKD evolution to its terminal stage. However, some patients progress to end-stage renal disease and can be treated with the following therapeutic options: dialysis, transplantation, or conservative treatment without dialysis support.[1] Dialysis support is the treatment of choice in the world and in Brazil, which adopts this practice in about 90% of patients in the terminal stage of the disease.[2]

The choice of dialysis modality, both hemodialysis (HD) and peritoneal dialysis (PD), is based on patients' individual and clinical characteristics at the beginning of treatment, their preferences and social, economic, and geographical factors.[3] PD is the infusion, permanence and drainage of body fluid and toxic substances through a flexible catheter implanted in the peritoneal cavity. This is a procedure that can be performed at the patients' home.[4] HD consists of blood filtration through an extracorporeal process of clearance mediated by the membrane of a glider, which replaces kidney function.[5] Generally, this procedure is performed in specialized clinics or hospitals and is permeated by physical changes that impose limitations on patients' daily life and require adaptations.[6]

Although HD increases the survival of patients with CKD when compared to other therapeutic modalities,[7] individuals under HD experience several comorbidities daily,[8] in addition to a low quality of life[9] and a high burden of symptoms such as headache, vomiting, seizures, nausea, allergic reactions, among others.[10] The majority of patients under HD are men of working age, up to 59 years of age, who had to leave work after it started.[11] Therefore, it appears that HD treatment can have impacts not only on the physical dimension of patients' lives, but also on their professional lives.

Although studies show the impact of HD treatment of patients with CKD in relation to their work, no review related to this topic was found in the literature, which justifies conducting this scope review, whose objective is to gather and analyze scientific research on the work-HD treatment interface. A scoping review maps evidence and basic concepts, allowing for an examination of practice and can assist decision makers in policy making.[12] Moreover, this review will make it possible to identify information that has not yet been studied and that needs to be investigated in future research. Thus, the objective is to analyze the scientific evidence on the impact of HD treatment in the work of patients with CKD.

Methods

This is a scoping review, which followed five steps: research question identification; search for relevant studies; selection of studies; data extraction; and grouping, summarizing and presenting the results.[13] We used the Preferred Reporting Items for Systematic Reviews and Meta-Analyzes Extensions for Scoping Reviews (PRSMA-ScR) to guide and report on the essentials of this review.[14] According to the research question, "What are the repercussions of HD treatment for patients with CKD on their relationship with work?", we searched the PubMed, LILACS, CINAHL, PsyInfo and Scopus databases in September 2020. To develop the research question and the search strategy, the PCC tool was used, in which P is population, C Concept and C Context.[15] The search strategy combined descriptors (MeSH, CINAHL titles, APA Thesaurus and

DeCS) and keywords related to the terms chronic kidney disease, employment and hemodialysis, which were linked by the Boolean operators AND and OR. A search strategy adapted to each database was created, and an example of the PubMed strategy is presented in Chart 1. Searches were limited to the period between 2010 and 2020, in order to include more recent evidence on the impact of HD at work. Descriptors and keywords were used according to the specifics of each selected database.

Chart 1. Search strategy used in databases

PCC	Search terms
P- Population Patients with chronic kidney disease	"Kidney Failure, Chronic"[Mesh] OR "End-Stage Kidney Disease" OR "Disease, End-Stage Kidney" OR "End Stage Kidney Disease" OR "Kidney Disease, End-Stage" OR "Chronic Kidney Failure" OR "End-Stage Renal Disease" OR "Disease End-Stage Renal" OR "End Stage Renal Disease" OR "Renal Disease, End-Stage" OR "Renal Disease, End Stage" OR "Renal Failure, End-Stage" OR "End-Stage Renal Failure" OR "Renal Failure, End Stage" OR "Renal Failure, Chronic" OR "Chronic Renal Failure" OR "ESRD" OR "Renal Insufficiency, Chronic"[Mesh] OR "Chronic Renal Insufficiencies" OR "Renal Insufficiencies, Chronic" OR "Chronic Renal Insufficiency" OR "Kidney Insufficiency, Chronic" OR "Chronic Kidney Insufficiency" OR "Chronic Kidney Insufficiencies" OR "Kidney Insufficiencies, Chronic" OR "Chronic Kidney Diseases" OR "Chronic Kidney Disease" OR Disease, Chronic Kidney OR Diseases, Chronic Kidney OR "Kidney Disease, Chronic" OR "Kidney Diseases, Chronic" OR "Chronic Renal Diseases" OR "Chronic Renal Disease" OR "Disease, Chronic Renal" OR "Diseases, Chronic Renal" OR "Renal Disease, Chronic" OR "Renal Diseases, Chronic"
C - Concept Work/productivity	"Employment"[Mesh] OR Employment OR "Labor Force" OR Occupation OR income OR "Labor Forces" OR "Employment Status" OR "Status, Employment" OR "Status, Occupational" OR "Occupational Status" OR Underemployment OR "Unemployment"[Mesh] OR "Occupations"[Mesh] OR Occupation "Return to Work"[Mesh] OR "Work, Return to Back-to-Work" OR "Return-to-Work" OR "Back to Work OR "Work, back to"
C- Context: Hemodialysis treatment	"Renal Dialysis"[Mesh] OR "Dialyses, Renal" OR "Renal Dialyses" OR "Dialysis, Renal" OR Hemodialysis OR Hemodialyses

We included studies in Portuguese, Spanish and English, with a qualitative or quantitative approach, with adult patients (over 18 years old) with CKD undergoing HD and that focused on the relationship with work, employment or productivity of these patients. We included studies with mixed samples, involving patients who received HD and PD, provided that the outcomes related to patients under HD were clearly separated or that the majority of participants had received HD.

We excluded literature review articles, editorials, tests, dissertations, congress abstracts and studies that had adolescents or people who received kidney transplantation as participants, as well as those that included health professionals or family members in the sample. Furthermore, we excluded gray literature, as this type of material, although relevant, cannot be located through systematic and rigorous searches in databases, in addition to not being peer-reviewed, which could compromise the quality of included studies and, consequently, the quality of this scoping review.

The studies were exported to the Rayyan QCRI website.[16] Two reviewers (JVMA; LHFM) carried out screening independently. Initially, duplicate studies were removed and then, after reading the titles and abstracts, we excluded those that did not meet the inclusion criteria. Conflicts between the two reviewers were resolved by a third reviewer (WAA). The studies selected in the first stage of screening were read in full by both reviewers, independently. The study selection process is illustrated in the PRISMA flowchart (Figure 1).[17]

We extracted data from included studies, considering authorship, year of publication, country, objective, method, main results, participants' employment status, treatment impacts, barriers and facilitators for work. Data were descriptively analyzed by two reviewers and validated by all authors.

Results

We selected 857 studies, 856 from databases and 1 by manual search after reviewing the references of included studies. We excluded 447 articles because they were duplicates, leaving 409, which had their titles and abstracts analyzed based on the eligibility criteria, by two reviewers independently. Thirty articles were selected after screening and reading in full by two reviewers, independently, resulting in 12 excluded, as they did not focus on the relationship with work, were literature reviews or did not include patients under HD. Thus, the final sample of this review was 18 articles (Figure 1).

Characteristics of included studies

Chart 2 shows the characteristics of included studies. The studies that make up the sample (n=18) were mostly developed in the United States (n=6, 30%), Korea (n=2, 12%), Finland (n=2, 12%) and United

Kingdom (n=2, 12%). Japan, Argentina, Sweden, China, Brazil and India had only one study each. Of these articles, 01 was a mixed study, 03 were qualitative and 14 were quantitative cohort studies (n=7): cross-sectional (n=4), descriptive (n=2) and analytical (n=1) studies. The included studies present data from 645,205 participants. The minimum number of participants was n=17 and the maximum was 480,5970. Most participants were male and had a mean age of 49 years.

Impact of hemodialysis on patients' professional situation

The need to perform HD impacts the work trajectory of patients and the choice of a professional career, because in the dialysis process it is necessary for individuals to go to an institution to perform the treatment three times a week, with sessions that last, on average, from 3 to 4 hours. [22,28] Between 6 and 12 months before the start of HD, 702 patients reported that they were working, but, approximately 4 months after the start of dialysis, only 32-40% of them were still employed.[25,35] Another study with 135 patients on maintenance HD for more than three months showed that the majority (n=98) were unemployed, equivalent to 74.9% of the sample. [21]

Patients diagnosed with CKD in adulthood had more difficulty at work than those diagnosed in childhood. [29,30] On the other hand, those who received the diagnosis in childhood were unable to reach an adequate level of education. [29,30] In a study of 64 young adult patients with advanced CKD or end-stage renal disease, only 20% of those under dialysis worked full-time. Of the total respondents, 38.6% believed that "employers are reluctant to hire young people with chronic illnesses." [30] Other factors related to unemployment in these patients included retirement or preference for receiving the disability benefit, rather than remaining in paid employment, even if the amount of the aid was lower than the compensation for the job. [27] Patients with life or health insurance were more likely to continue working in order to secure the benefits offered by the family services. [34,35]

Patients under HD reported significant losses and uncertainties related to their jobs. [28] Unemployed patients have a higher risk of mortality when compared to employees.[26] Depressed mood, social isolation and reduced occupational

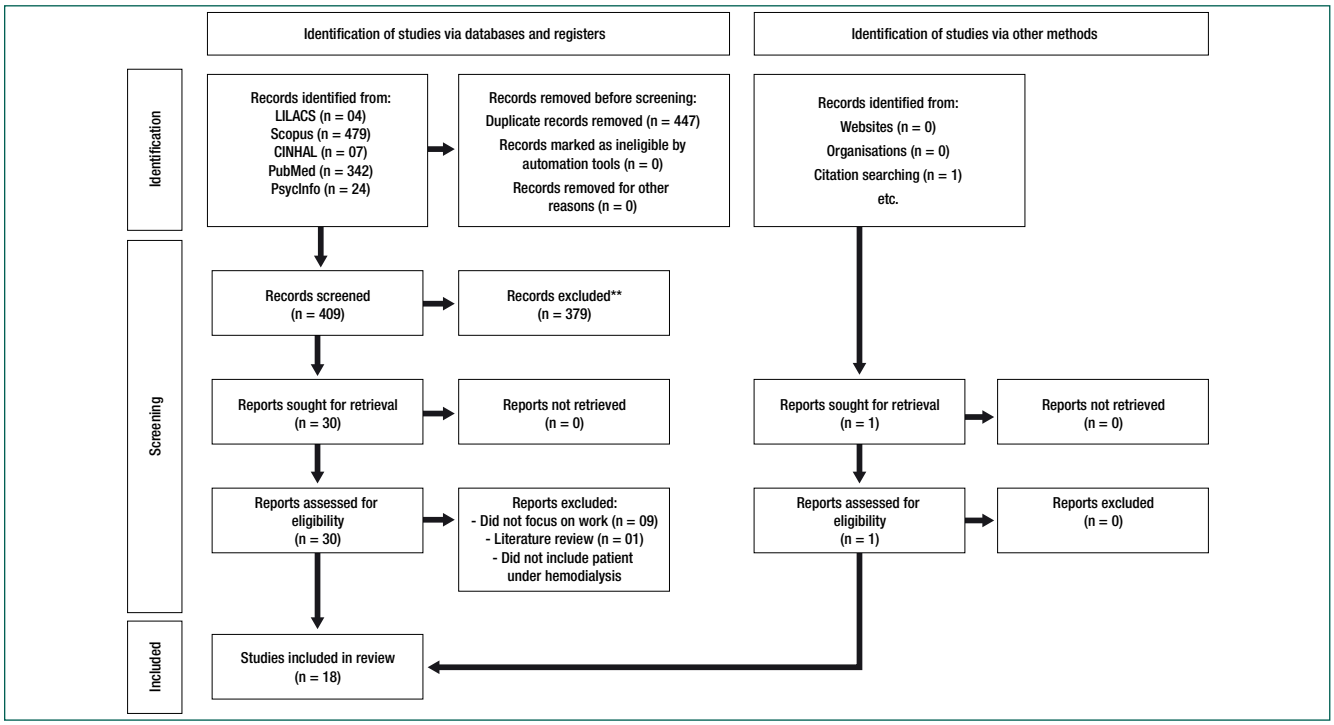

Figure 1. Flowchart of the literature search process

Chart 2. Characteristics of included studies, according to first author, year and country, objectives, method and participants

First author, year and country	Objectives	Method	Participants
LEE (2020)[18] Korea	Assess several clinical parameters, according to rehabilitation and employment status, to elucidate the characteristics correlated with the best rehabilitation status among patients under HD.	Cross-sectional study	29,865 patients under HD with information on the state of rehabilitation. They had independent daily life 46.8% of participants, 9% worked part-time and 21.6% full-time.
Ghani (2019)[19] Sweden	Examine the impact of PD on labor market outcomes (employment, disability pension and labor income), compared to IH† in Sweden, controlling non-random selection for treatment.	Cross-sectional study	4,734 patients of productive age (20-60 years), who started the treatment of chronic dialysis between 1995 and 2012. They were under PD 44% of participants and 56% undergoing treatment for IH.
Walker (2019)[20] New Zealand	Describe the perspective and experience of patients under HD in community homes, to understand how and why it is used, as well as the advantages and disadvantages of this treatment modality.	Qualitative study, with an analytical approach	25 patients, men and women, aged between 31 and 56 years, 14 men and 11 women who had experience in HD in community homes. Only 20% had completed higher education. Regarding employment, 24% worked full-time and 32% worked part-time.
Anees (2018)[21] Pakistan	Determine the effect of socioeconomic factors on the quality of life of patients under HD.	Descriptive multicenter follow-up study	135 patients with end-stage renal disease on regular maintenance dialysis for ≥3 months and literate. 74.9% of participants were unemployed and 84.6% had > 10 years of education.
Erickson (2018)[22] United States	Examine employment trends over time among patients starting dialysis.	Cohort study	480. 597 patients, aged between 18 and 54 years.
Kim (2018)[23] Korea	Explore individual income trends and estimate the variation in the mean monthly income of patients under HD.	Cohort study	138 people with a mean age of 61 to 81 years, with 68% being male. Of the sample, 76% were employed.
Imanish (2017)[24] Japan	Investigate the influences of employment and level of education on mortality and hospitalization among maintenance patients under HD in Japan.	Prospective cohort study	7,974 patients, male and female, under HD under 60 years of age. 62% of participants were male and 51% were employed. Regarding education, 15% graduated and 52% were at college.
Huang (2017)[25] China	Assess the employment situation and determine the variables for unemployment in Chinese patients on maintenance HD.	Cohort study	231 participants under HD for more than 3 months, aged between 18 and 61 years, when they started HD. 50% were employed and 60% were male.
Lakshmi (2017)[26] India	Investigate employment rates in patients on maintenance dialysis.	Cross-sectional study	226 participants: 155 patients under HD with a mean age of 54.1 years, 70.3% were men and 18.6% illiterate; 69 dialysis patients with a mean age of 55.8 years and 81.1% were men.
Kutner (2017)[27] United States	Understand the factors associated with employment maintenance among patients of working age with advanced CKD.	Cohort study	528 adults between 20 and 64 years old, with an average age of 50.3 years, English or Spanish speakers. 62.3% were male and 77.7% had completed at least high school. They were under HD for at least 3 months and were able to give informed consent.
Wells (2015)[28] United States	Explore the changes and occupational perceptions experienced by Mexican-Americans with end-stage renal disease and their families living with dialysis.	Qualitative studies, with a phenomenological approach	17 Mexican-Americans with end-stage renal disease, 8 women and 9 men, aged 21 ≥61 years. 9 participants were unemployed, 8 had higher education and 17 were family members, residing in the Republic of Cameroon.
Lewis (2015)[29] United Kingdom	Explore how a serious chronic disease in childhood affects education and employment in early adulthood.	Qualitative study of approach to Grounded Theory	931 participants with end-stage renal disease, aged between 20 and 30 years, diagnosed for the first time between 0 and 19 years of age.
Murray (2014)[30] United Kingdom	Assess the impact of end-stage renal disease on education and employment outcomes in young adults.	Mixed study	57 young adults, with a mean age of 25 years, in which 14% were undergoing dialysis and 78.9% were awaiting kidney transplantation. Of the sample, 59,7% were employed.
Helantera (2012)[31] Finlândia	Investigate employment rate, in different modes of renal replacement therapy, in dialysis and treatment of transplant patients, in Finland, and to assess other factors associated with employment.	Cross-sectional cohort study	2,637 Finns, aged 16-64, receiving long-term dialysis. Men predominated (61.8%), with a mean age of 49 years.
Marinovish (2012)[32] Argentina	Check whether the low or absent income of the HD incident population is a poor prognostic factor.	Retrospective and longitudinal observational analytical study.	13,466 participants with a mean age of 60.4 years who started an HD program for the first time. 57.2% of participants are male.
Santos (2013)[33] Brazil	Identify the changes imposed by HD treatment on the quality of life of individuals with CKD in terms of entering the job market.	Cross-sectional, comparative and descriptive	24 patients with a mean age of 49.29 years, 50% men. 29.1% of participants continued to work after starting dialysis.
Muehrer (2011)[34] United States	Understand the factors associated with employment maintenance among patients of working age with advanced CKD.	Descriptive and retrospective study	102,104 patients between 18 and 64 years old who were working 6 months before starting their first chronic dialysis. 82.5% were under HD, and 17.5%, under PD.
Kutner (2010)[35] United States	To investigate the importance of depressed mood and usual activity level as predictors of job maintenance among patients after starting HD.	Prospective cohort study	1,643 patients, with a mean age of 56.6 years, 55% of whom were men. 32% continued to work after starting dialysis.

PD - peritoneal dialysis; IH - institutional demodialysis; HD - hemodialysis; CKD - chronic kidney disease.

activity are other factors associated with unemployment in these patients.[22,27,35] Family members, in addition to dealing with the fear of death of their loved ones and the need to adapt their routine to the HD schedule, had to manage the family's finances.[28] Remaining in the job during the beginning of HD presented benefits to patients, such as increased self-esteem, better quality of life, social support, stable financial situation or increased income.[25]

Factors related to (lack of) employment during treatment

Some factors were related to (lack of) employment during HD treatment, such as sociodemographic characteristics, physical weakness and treatment and family and professional support.

Sociodemographic characteristics

Black, Hispanic, female, and older adult patients were less likely to be employed than other patients under HD. [22,24,34,35] Factors such as advanced age, lower educational level, and higher annual income were identified as independent risks for job loss. [25] Illiteracy and manual or manual labor were associated with the loss of employment of patients after starting dialysis. [26] Studies also found better employment rates in patients with more education or qualification. [20,35] Patients with higher income had better work status and easier to perform as planned during work activity. [21] Similarly, white males, aged 18 to 55 years, were more likely to maintain employment. [34] After the start of HD, 65% of patients under the age of 65 years had a reduction of 75% in monthly income, with women and patients with less education having a relatively greater decrease in income. [23]

Physical weakness and treatment

Better employability rates were associated with post-17h HD schedules and home dialysis. [35] Studies show that the employment rate was higher in those receiving PD compared to those under HD, [19,31] due to greater flexibility in treatment schedules. [19,35] Rigid HD shift scheduling was a barrier in job planning as it allowed little flexibility in work planning. [30]

The greatest difficulties faced by patients undergoing HD are related to physical limitations and emotional and social aspects. [33] The physical weakness caused by HD and the time of daily treatment were related to job loss. [25] Body, physiological changes and symptoms of HD, such as fatigue and weakness, as well as the time of dialysis, emerged as factors that hinder employment maintenance. [28]

Considering patients with an increase in the number of comorbidities, there was a predominance of diabetes among the unemployed. [31] The presence of comorbidities such as hypertension, diabetes mellitus, neurological diseases, glomerulonephritis or other urological diseases, heart diseases, cancer and inability to walk has associated with a decrease in job retention. [23,24,34] Men aged 50 to 60 years, with two or more comorbidities, were predictors of losing their jobs after starting dialysis. [26]

The use of catheter for HD limited the performance of some activities, reducing the probability of maintaining the job. [27,28] Patients with early diagnosis of mood disorders and who underwent treatment at the beginning of diagnosis are more likely to remain employed one year after the start of HD. [27,28]

Family and employer support

Family resistance, related to lack of information to accept patients' return to work, and employers' refusal were two of the main barriers to employment.[25] Thus, family members, caregivers and social employers should be informed about treatment options and goals of renal replacement therapy.[25] Male patients reported the loss of patriarchal power as a difficulty for employability, as they were no longer the main source of income and this power was granted to wife and children.[28] Social support, including spiritual support, vocational counseling and rehabilitation, was pointed out as an alternative capable of reducing barriers to work.[25] Patients undergoing vocational rehabilitation are more likely to return to employment.[35]

Discussion

The results show that HD had an impact on the patients' work trajectory and on the choice of a profes-

sional career. Moreover, the main reasons related to employability during HD treatment involved sociodemographic characteristics, physical weakness and treatment, as well as family and employer support. The studies included in this review show that patients with chronic diseases have greater difficulty in finding a job, compared to people who do not have chronic diseases. According to the authors, some employers refuse to hire people who have some form of chronic illness. Therefore, the primary fact that individuals have CKD has already contributed to the difficulty of finding a job or staying there.

Studies show that, among workers, including those with less time of insertion at work, there is a predominance of white people; this evidence points to the need to expand the access of black people to jobs that demand high education level.[36] This statement is consistent with the studies in this review, according to which the black population is less likely to acquire a job than white patients. In addition to this, black patients have a lower education level, which is mainly related to the lack of opportunities, contributing directly to unemployment. According to the results found, a higher educational level is seen as a facilitating factor for employability, while a lower educational level was associated with a lower employability. Therefore, access to education and a higher level of education favor patient compliance with work activities during HD.

Dependence under HD generates sources of stress and can cause problems, such as social isolation, loss of employment, dependence on Social Security, partial impossibility of locomotion and leisure, and decreased physical activity.[37] According to the results of this review, physical limitations are one of the main problems reported by patients under HD. These limitations prevent them from performing some daily activities, make it difficult to find a job, and cooperate in giving up work. In the results found in this review, the main symptoms of these limitations are fatigue and weakness, which contributes to demotivation related to work activities.

Studies show greater satisfaction on the part of patients who changed their HD treatments to PD, as they considered HD more aggressive and causing unwanted changes in their routine.[38] Patients under PD are more productive, more likely to be employed, compared to those under HD.[39] The results of this study show that patients under PD are more likely to remain employed than those under HD.

Patients with CKD suffer from "uremic syndrome", characterized by various dysfunctions in the organ systems, which impairs their quality of life and limits their daily activities.[40] In this review, it was observed that physical weakness is related as a possible reason for the unemployment of patients under HD, since the treatment causes symptoms such as fatigue, tiredness and weakness and, therefore, prevents them from making great efforts, limits their routine activities and results in in a low income of individuals. Keeping a job and preserving mental health was also described by patients under HD as something difficult, due to the emergence of depressive symptoms and negative thoughts.[41] Half of patients under HD have depressive symptoms and 25% have severe symptoms, with evidence diagnosis.[42]

The results presented in this review show evident consequences of CKD and dialysis treatment in patients' lives, with extreme changes in their daily lives. With this, the family assumes a leading role in the care and monitoring of the routine of these people.[41] Each family has a specific way of dealing with the difficulties caused by the disease. The studies included in this review reported that patients under HD face family resistance when returning to work, due to the lack of information about the disease and treatment.

Finally, it is important to highlight that, although CKD does not directly prevent the performance of work activities, it ends up imposing considerable limitations, which can cause removal and retirement.[43] However, performing some type of paid work has great relevance for adults, since, in addition to professional self-fulfillment, the individual is able to take responsibility for the family's financial situation.

The results obtained represent an advance for knowledge in the field of worker health with CKD under HD, as they bring together evidence that gives visibility to this important issue. However, it is recognized that the decision to exclude the gray literature may be a limitation of this review, as relevant infor-

mation related to the impact of HD treatment on the work of patients with CKD may not have been included. Finally, this review found some gaps in the literature that should be filled with future studies. The studies included in this review were predominantly developed in developed country contexts so that future research should explore this theme in other economic, cultural and social contexts. Additionally, it is recommended that they be developed in countries where the health system is not free and universal.

Conclusion

We concluded that HD treatment has an impact on the professional situation of patients and sociodemographic characteristics, physical weakness and treatment, as well as family and professional support, were aspects related to unemployment. After starting HD, we observed impairment in patients' functional, physical and psychological capacity, resulting in changes in lifestyle, restrictions resulting from CKD and decreased productivity. With this, signs of depression, fear and anguish appear. However, with early treatment, the probability that patients will remain in the job increases significantly. Family and social support is one of the ways to keep a job. Despite this, the study showed that it is necessary to guide family members and employers about treatment.

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