

Safety culture in hemodialysis services: a scoping review protocol

Cultura de segurança em serviços de hemodiálise: protocolo de revisão de escopo Cultura de seguridad en los servicios de hemodiálisis: protocolo de revisión de alcance

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ABSTRACT

Objective: to map the available evidence on the assessment of the patient safety culture from the perspective of the multidisciplinary team in hemodialysis services. **Method:** a scoping literature review developed according to the methodology proposed by the Joanna Briggs Institute manual, in the following information sources: LILACS, BDNF, IBECs and ColecionaSUS (via the Virtual Health Library), MEDLINE via PubMed, COCHRANE, CINAHL, SCOPUS, Web of Science, EMBASE, CAPES theses and dissertations database and institutional repositories. Studies that answer the research question and are available in full will be considered eligible. There will be no language restrictions. Selection of the studies will take place independently by two reviewers and the differences will be discussed with a third reviewer. Data synthesis and extraction will be performed through a spreadsheet built in the Microsoft Office Excel Online program. The final synthesized results will be compiled and presented through tables or charts, flowchart and narrative discussion. Review registration number: <https://osf.io/7ug86>.

DESCRIPTORS: Renal Dialysis; Dialysis; Hospital Hemodialysis Units; Patient safety; Organizational Culture; Safety Management.

RESUMO

Objetivo: mapear as evidências disponíveis sobre avaliação da cultura de segurança do paciente na perspectiva da equipe multidisciplinar em serviços de hemodiálise. **Método:** revisão de escopo da literatura desenvolvida de acordo com a metodologia proposta pelo manual do Instituto Joanna Briggs, nas fontes de informação: LILACS, BDNF, IBECs e ColecionaSUS (via Biblioteca Virtual em Saúde), MEDLINE via PubMed, COCHRANE, CINAHL, SCOPUS, Web of Science, EMBASE, Banco de teses e dissertações da CAPES e repositórios institucionais. Serão considerados elegíveis estudos que atendam à pergunta de pesquisa, e disponíveis na íntegra. Não haverá restrição de idiomas. A seleção dos estudos ocorrerá de forma independente por dois revisores e as divergências serão discutidas com um terceiro revisor. A síntese e extração dos dados será executada por meio de uma planilha construída no programa Microsoft Office Excel Online. Os resultados finais sintetizados serão compilados e apresentados por meio de tabelas ou quadros, fluxograma e discussão narrativa. Número de registro da revisão: <https://osf.io/7ug86>.

DESCRITORES: Diálise Renal; Diálise; Unidades Hospitalares de Hemodiálise; Segurança do Paciente; Cultura Organizacional; Gestão da Segurança.

RESUMEN

Objetivo: mapear la evidencia disponible sobre la evaluación de la cultura de seguridad del paciente desde la perspectiva del equipo multidisciplinario de los servicios de hemodiálisis. **Método:** revisión de alcance de la literatura existente según la metodología propuesta por el manual del Instituto Joanna Briggs, en las fuentes de información: LILACS, BDNF, IBECs y ColecionaSUS (a través de la Biblioteca Virtual en Salud), MEDLINE a través de PubMed, COCHRANE, CINAHL, SCOPUS, Web of Science, EMBASE, base de datos de tesis y disertaciones de la CAPES y repositorios institucionales. Se considerarán elegibles los estudios que cumplan con la pregunta de investigación y estén disponibles en su totalidad. No habrá restricciones de idioma. La selección de estudios se llevará a cabo de forma independiente por dos revisores y las diferencias se discutirán con un tercer revisor. La síntesis y extracción de datos se realizará a través de una hoja de cálculo incorporada en el programa Microsoft Office Excel Online. Los resultados finales sintetizados se compilarán y presentarán a través de tablas o cuadros, diagrama de flujo y discusión narrativa. Número de registro de la revisión: <https://osf.io/7ug86>.

DESCRIPTORES: Diálisis Renal; Diálisis; Unidades Hospitalarias de Hemodiálisis; Seguridad del Paciente; Cultura Organizacional; Gestión de Seguridad.

INTRODUCTION

Chronic Kidney Disease (CKD) can be characterized as the gradual loss of the nephron function, which results in impaired renal filtration capacity and homeostasis⁽¹⁾. In cases where CKD evolves to the terminal stage, there is a need to initiate dialysis treatment or to perform a kidney transplant. It is estimated that more than 2.5 million people currently receive renal replacement therapy⁽²⁾. Despite the existence of therapeutic resources, mortality due to CKD is still a concern. Between 1990 and 2017, there was a 41.5% increase in the overall mortality rate caused by CKD in different age groups⁽³⁾.

Among these therapies, hemodialysis stands out as the most prevalent modality, being used by approximately 89% of the world population undergoing these treatments, a reality that affects more and more people⁽⁴⁾. This consists in filtering the blood by means of a machine, in cases where the patient's renal function is severely compromised⁽⁵⁾. As it is a treatment offered in high-complexity organizations and serves patients considered to be severe, it is indispensable to identify the possible risks to patient safety⁽⁴⁾.

In addition, the health of patients undergoing hemodialysis is generally fragile. The physiological changes caused by renal failure make patients undergoing dialysis therapy more susceptible to clinical complications resulting from adverse health events⁽⁶⁾. Therefore, the importance of safe hemodialysis services is noted, in which the occurrence of avoidable adverse events is reduced and quality of care may be assured to the patients.

For this, measures should be adopted to promote patient safety, such as those proposed in the 2021-2030 global action plan for patient safety⁽⁷⁾.

The safety culture can be defined as a set of group and individual values, attitudes and competences that determine a pattern of behavior and commitment to institutional safety. Thus, achieving a safety culture also involves the safety climate, which encompasses the professionals' perception of the environment and the relationships developed in the work process⁽⁸⁾. Although safety culture and safety climate have different definitions, these terms are most often found in the literature as synonyms, as they have similar and intersecting outcomes.

In this scenario, the safety culture and climate stand out by allowing the assessment of the quality of health services and the definition of targeted interventions by identifying the weaknesses of each sector. Thus, efforts to develop and consolidate a state of strong patient safety culture in the health services result in the possibility of offering effective care, with less risk of health-related infection and other preventable complications.

A preliminary survey of studies on the patient safety culture from the perspective of professionals working in hemodialysis services was carried out in the following databases: LILACS, BDNF, IBICS and ColecionaSUS (via the Virtual Health Library), COCHRANE, CINAHL, EMBASE, SCOPUS, Web of Science, and MEDLINE via PubMed. Completion of this research took place on February 9th, 2021 and the results evidenced that there was no scoping

or systematic review in progress or completed on the topic of interest.

Therefore, the need to conduct a scoping review is justified, with the objective of mapping the available evidence on the assessment of the patient safety culture from the perspective of the multidisciplinary team in hemodialysis services. It is hoped that the results obtained may favor the development of future research studies that assess the effect of interventions or programs to strengthen these structural components of the health services, if needed.

Review question

To formulate the guiding question of this study, the PCC strategy will be used, in which the letter "P" represents the population; "C" the concept; and "C" the context. Thus, the guiding question of this study will be: "What studies are available in the national and international literature that assess the patient safety culture from the perspective of the multidisciplinary team in hemodialysis services?".

Inclusion criteria

Participants

The scope of this review will include studies with professionals from the multidisciplinary team who work in the care of patients with renal failure undergoing dialysis treatment. Assistance workers of all technical levels and undergraduate courses will be considered, as well as service managers.

Concept

This review will consider studies that assess the

patient safety culture, as well as those that show the perceptions about the values, environment and relationships developed in the work process. The concept of safety culture adopted in this review is the following: a set of values, attitudes, group and individual skills that determine a pattern of behavior and commitment to institutional safety⁽⁸⁾. To measure the safety culture, validated and non-validated instruments aimed at assessing this construct will be considered.

Context

The context of this review will consist of hemodialysis services without distinction as to their administrative nature (public or private services), size (large, medium and small) and type of service (hospital or outpatient). The eligible studies will not be limited to any geographic location.

Types of evidence sources

Studies available in full will be considered, which answer the research question and without restriction as to the methodological design. There will be no language restrictions. Articles published in journals and non-conventional publications, such as course completion papers, theses and dissertations, will be considered, since the methodological evaluation of the studies included is not a requirement for the development of scoping reviews. In addition to that, one of the objectives of this type of review is to map the evidence available in a given area⁽⁹⁾.

METHOD

This is a literature scoping review, to be developed according to the methodology proposed by the Joanna Briggs Institute Manual⁽⁹⁾. The findings of this review will be reported through the PRISMA extension for scoping reviews⁽¹⁰⁾. The research protocol was

registered on the *Open Science Framework* platform (<https://osf.io/7ug86>).

Search strategy

The search strategy aims at finding literature available in the 10 databases. To expand the findings, the strategy was defined by the reviewers with the help of a librarian (Figure 1).

Information sources	Search Strategy
LILACS, BDNF, IBECS and ColecionaSUS	("Renal Dialysis" OR "Diálisis Renal" OR "Diálise Renal" OR "Diálise Extracorpórea" OR "Hemodiálise" OR "Dialysis" OR "Diálisis" OR "Diálise" OR "Hemodialysis Units Hospital" OR "Unidades de Hemodiálisis en Hospital" OR "Unidades Hospitalares de Hemodiálise" OR "Unidades Hospitalares de Diálise Renal") AND ("Patient Safety" OR "Seguridad del Paciente" OR "Segurança do Paciente" OR "Organizational Culture" OR "Cultura Organizacional" OR "Cultura Organizacional" OR "Cultura Corporativa" OR "Safety Management" OR "Administración de la Seguridad" OR "Gestão da Segurança") AND (db:("LILACS" OR "IBECS" OR "BDNF" OR "coleccionaSUS") AND la:("en" OR "es" OR "pt"))
COCHRANE, CINAHL, SCOPUS, Web of Science	("Renal Dialysis" OR "Dialysis" OR "Hemodialysis Units Hospital") AND ("Patient Safety" OR "Organizational Culture" OR "Safety Management")
EMBASE	hemodialysis or dialysis and 'patient safety'
MEDLINE via PubMed	("Renal Dialysis" OR "Dialysis" OR "Hemodialysis Units Hospital") AND ("Patient Safety" OR "Organizational Culture" OR "Safety Management")

Figure 1 - Search strategy. Belo Horizonte, MG, Brazil, 2021

Source: Prepared by the authors, 2021.

In the first place, the databases of the Virtual Health Library and MEDLINE were searched and the following descriptors were defined: renal dialysis, dialysis, hospital hemodialysis units, patient safety, organizational culture and safety management. This preliminary search allowed surveying the main terms and keywords used to map the complete search strategy.

From this definition, the second stage was initiated, in which the search strategies were structured for the information sources used in the review: LILACS, BDNF, IBICS and ColecionaSUS (via the Virtual Health Library), MEDLINE via PubMed, COCHRANE, CINAHL, SCOPUS, Web of Science and EMBASE.

The reference list of all the studies selected for critical review will be analyzed as a strategy for including additional studies.

The gray literature will be considered based on the search in the CAPES theses and dissertations database, in addition to institutional repositories (Institutional Repository of the Federal University of Ceará, Common Repository of the Lisbon Nursing School, Institutional Repository of the Federal University of Alagoas, Institutional Repository of the Federal University of Minas Gerais, Repository of Intellectual Production of the University of São Paulo and Institutional Repository of the University of Brasília). Additional searches from the reference lists of

the review sample articles will be conducted. Regarding the search in gray literature, there will also be no time frame.

Selection of studies

All the literature identified will be transferred to the EndNote Web manager (Clarivate Analytics, PA, USA) and duplicates will be removed. The references will then be uploaded to the Rayyan software⁽¹¹⁾. Any other resulting duplicates will be excluded. Then, the reference screening phase is initiated, in which two independent reviewers will read the titles and abstracts, comparing them as to the inclusion and exclusion criteria. Any and all disagreements in the screening will be resolved by a third reviewer.

The next stage is reading in full all the studies selected and assess the inclusion criteria already established. Studies that do not meet the inclusion criteria will be disregarded with due justification. The results of this process will be presented through the PRISMA-ScR flowchart⁽¹⁰⁾.

Data extraction

The data will be extracted from the studies included in the review through a chart developed in a Microsoft Office Excel Online spreadsheet by the reviewers, as shown in Figure 2.

Study identification							
Author	Title	Year	Country	Language	Type of study	Objective	Assessment instrument
Participants							

Sample size/Adherence rate		Study locus/Professionals	
Main results			
Safety culture level	Strengths of the safety culture	Weaknesses of the safety culture	
Conclusions			

Figure 2 – Data extraction instrument. Belo Horizonte, MG, Brazil, 2021

Source: Prepared by the authors, 2021.

Two reviewers will independently map and tabulate the data. Disagreements will be resolved through discussion with a third reviewer in order to eliminate misunderstandings.

Presentation of the results

The data extracted will be presented in tables or charts, flowchart and narrative discussion, considering the objective of this scoping

review. Through a comparative chart, a synthesis of the studies will be presented from the description of information such as the measuring instrument used, safety culture level, and main strengths and weaknesses of the patient safety culture. A narrative summary will accompany the tabulated and mapped results in order to describe how the results relate to the objective and research question of the review.

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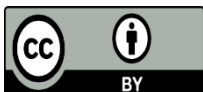
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