

Challenges of Patient Safety in Primary Health Care in Brazil: Scope Review

Desafios da Segurança do Paciente na Atenção Primária à Saúde no Brasil: Revisão de Escopo

Desafíos de la Seguridad del Paciente en la Atención Primaria de Salud En Brasil: Revisión de Alcance

RESUMO

A segurança do paciente constitui um componente essencial da qualidade do cuidado em saúde e apresenta desafios específicos no contexto da Atenção Primária à Saúde (APS), porta de entrada do Sistema Único de Saúde (SUS). Este estudo teve como objetivo identificar e mapear os principais desafios relacionados à segurança do paciente na APS brasileira, a partir da perspectiva de profissionais de saúde e gestores. Trata-se de uma revisão de escopo, conduzida segundo as recomendações do PRISMA-ScR, com buscas realizadas nas bases LILACS, MEDLINE, IBECs, BDNF, CINAHL, SciELO, PubMed, Cochrane Library e Web of Science. Foram incluídos artigos originais publicados entre 2013 e 2022, desenvolvidos no Brasil, totalizando 19 estudos após o processo de seleção. A análise dos achados permitiu a organização dos resultados em quatro eixos temáticos: desafios dos profissionais de saúde, desafios da gestão dos serviços, desafios relacionados aos usuários e familiares e recursos potencializadores da segurança do paciente. Entre as principais barreiras identificadas destacam-se falhas de comunicação, sobrecarga de trabalho, insuficiência de infraestrutura e recursos humanos, fragilidades no apoio da liderança, medo de punições frente ao erro e baixa adesão dos usuários aos tratamentos. Como estratégias promotoras da segurança do paciente, evidenciaram-se a educação permanente, o fortalecimento do trabalho em equipe, a comunicação interprofissional, o planejamento dos processos de trabalho e a participação ativa dos usuários no cuidado. Conclui-se que a APS brasileira enfrenta desafios estruturais, organizacionais e relacionais que comprometem a segurança do paciente, sendo fundamental o fortalecimento de uma cultura de segurança não punitiva e de práticas de gestão participativa para qualificar o cuidado e reduzir eventos adversos.

DESCRIPTORES: profissionais de saúde, gestão em saúde, cultura organizacional e usuários dos serviços de saúde

ABSTRACT

Patient safety is an essential component of the quality of health care and presents specific challenges in the context of Primary Health Care (PHC), the main gateway to the Brazilian Unified Health System (SUS). This study aimed to identify and map the main challenges related to patient safety in Brazilian PHC from the perspective of health professionals and managers. This is a scoping review conducted according to the PRISMA-ScR recommendations, with searches carried out in the LILACS, MEDLINE, IBECs, BDNF, CINAHL, SciELO, PubMed, Cochrane Library, and Web of Science databases. Original articles published between 2013 and 2022 and conducted in Brazil were included, totaling 19 studies after the selection process. Analysis of the findings allowed the organization of results into four thematic axes: challenges faced by health professionals, challenges related to service management, challenges related to users and families, and resources that enhance patient safety. The main barriers identified included communication failures, work overload, insufficient infrastructure and human resources, weaknesses in leadership support, fear of punishment in the face of errors, and low user adherence to treatments. Strategies promoting patient safety included continuing education, strengthening teamwork, interprofessional communication, planning of work processes, and active user participation in care. It is concluded that Brazilian PHC faces structural, organizational, and relational challenges that compromise patient safety, highlighting the need to strengthen a non-punitive safety culture and participatory management practices to improve care quality and reduce adverse events.

DESCRIPTORS: health professionals; health management; organizational culture; health services users.

RESUMEN

La seguridad del paciente constituye un componente esencial de la calidad de la atención en salud y presenta desafíos específicos en el contexto de la Atención Primaria de Salud (APS), puerta de entrada del Sistema Único de Salud (SUS) de Brasil. Este estudio tuvo como objetivo identificar y mapear los principales desafíos relacionados con la seguridad del paciente en la APS brasileña, desde la perspectiva de profesionales de la salud y gestores. Se trata de una revisión de alcance realizada conforme a las recomendaciones PRISMA-ScR, con búsquedas efectuadas en las bases de datos LILACS, MEDLINE, IBECs, BDNF, CINAHL, SciELO, PubMed, Cochrane Library y Web of Science. Se incluyeron artículos originales

Integrative Review

Souza AS, Amador TA

Challenges of Patient Safety in Primary Health Care in Brazil: Scope Review

publicados entre 2013 y 2022, desarrollados en Brasil, totalizando 19 estudios tras el proceso de selección. El análisis de los hallazgos permitió organizar los resultados en cuatro ejes temáticos: desafíos de los profesionales de la salud, desafíos de la gestión de los servicios, desafíos relacionados con los usuarios y sus familias, y recursos potenciadores de la seguridad del paciente. Entre las principales barreras identificadas se destacan fallas en la comunicación, sobrecarga laboral, insuficiencia de infraestructura y recursos humanos, debilidades en el apoyo del liderazgo, miedo a sanciones frente al error y baja adherencia de los usuarios a los tratamientos. Como estrategias promotoras de la seguridad del paciente se evidenciaron la educación permanente, el fortalecimiento del trabajo en equipo, la comunicación interprofesional, la planificación de los procesos de trabajo y la participación activa de los usuarios en el cuidado. Se concluye que la APS brasileña enfrenta desafíos estructurales, organizativos y relacionales que comprometen la seguridad del paciente, siendo fundamental fortalecer una cultura de seguridad no punitiva y prácticas de gestión participativa para cualificar la atención y reducir eventos adversos.

DESCRIPTORES: profesionales de la salud; gestión en salud; cultura organizacional; usuarios de los servicios de salud.

RECEIVED: 11/11/2025 APPROVED: 11/28/2025

How to cite this article: Souza AS, Amador TA. Challenges of Patient Safety in Primary Health Care in Brazil: Scope Review. *Saúde Coletiva (Brazilian Edition)* [Internet]. 2025 [cited year month day];16(103):18720-18741. Available from: DOI: 10.36489/saudecoletiva.2025v16i103p18720-18741



Adrian Santos de Souza

Bachelor's degree in Pharmacy, specialization in Gerontology, Master's degree in Chemistry, and PhD candidate in the Graduate Program in Pharmaceutical Care at the Federal University of Rio Grande do Sul (UFRGS).

ORCID: <https://orcid.org/0009-0002-4230-8006>



Tânia Alves Amador

Bachelor's degree in Biochemical Pharmacy, Master's and PhD degrees in Biological Sciences (Biochemistry), Associate Professor at the Federal University of Rio Grande do Sul and professor in the Graduate Program in Pharmaceutical Care at the Federal University of Rio Grande do Sul (UFRGS).

ORCID: <https://orcid.org/0000-0003-2109-3034>

INTRODUCTION

The healthcare environment exposes patients and healthcare professionals to a number of considerable risk factors and hazards. An unsafe healthcare environment is a public health problem because it presents adverse events to patients and staff. Adverse events are situations in which harm is caused to patients unintentionally during treatment and are associated with different factors at the level of individual or collective tasks¹.

Therefore, it is important to understand that patient safety is a critical factor in ensuring the quality of healthcare services. Every day, healthcare organizations are strengthening a culture of safety, which is associated not only with good care practices, but also with obtaining favorable conditions for their implementation².

The definition of a culture of safety

encompasses an understanding of values, beliefs, and standards, all of which are important in an organization, and which behaviors and activities related to safety are valued, prioritized, and expected in the workplace. Furthermore, it is a multifactorial issue defined, in the context of health services, as a product of values, attitudes, perceptions, skills, and patterns of individual and collective behavior, which determine the commitment, form, and proficiency toward the administration and management of patient safety².

Since the 2000s, tools and instruments have emerged in the Brazilian technical-scientific scenario to assess the understanding of patient safety within healthcare organizations, notably questionnaires that provide clear results and assist in identifying and measuring possible factors that predispose to adverse events²⁻³. These tools can be used at different levels

of health care, especially primary care⁴⁻⁵

The literature includes a scoping review on the topic of patient safety in primary care⁵, however, the study was conducted with research from several countries. In this sense, a scoping review with studies conducted in Brazil is important for the production of evidence that helps to clarify the topic in Brazilian territory. The findings of this study will provide scientific data to assist in the creation of public policies that can mitigate adverse events, as well as identify common strengths and weaknesses in different regions of the country.

OBJECTIVES

To identify the challenges of patient safety from the perspective of healthcare professionals in primary healthcare in Brazil.

METHODS

A systematic review of the literature was conducted, specifically updating Levac's⁶ review of the method proposed by Arksey and O'Malley⁷. We chose to use this review method because of its applications for summarizing findings, exploring the extent of research on a given topic, and identifying research gaps. This review structure includes six steps: (1) identification of the research question, (2) identification of relevant studies, (3) selection of studies, (4) mapping of data, (5) comparison, summary, and reporting of results, and (6) consultation. The sixth step is optional and was not employed.

The research question for this study was developed according to the PCC mnemonic combination, where P: *population* – health professionals, C: *concept* – patient safety; and C: *context* – primary health care. Thus, the guiding question was established: what are the patient safety challenges described by health professionals in primary health care (PHC) in Brazil?

The pre-established inclusion criteria were: original articles written in the context of PHC, published in Portuguese, Spanish, or English, on patient safety, whose research subjects included health professionals and/or managers. A time limit of 10 years was defined, i.e., 2013-2022, carried out in Brazilian health services. Duplicate studies, reviews, editorials, theses, dissertations, experience reports, theoretical essays, reflection studies, and books were excluded.

One of the data sources checked was the Virtual Health Library, which included the Latin American and Caribbean Health Sciences Literature (LILACS), International Health Sciences Literature (MEDLINE), Spanish Bibliographic Index of Health Sciences (IBECS), Nursing Database (BDENF), and *Cumulative Index to Nursing and Allied Health Literature* (CINAHL). Searches of publications indexed in virtual libraries included: *Cochrane Library*, *Scientific Electronic Library Online* (SciELO), *National Library of Medicine* (PubMed and *Web of Science*).

The Google Scholar tool and reference lists from relevant literature were also checked.

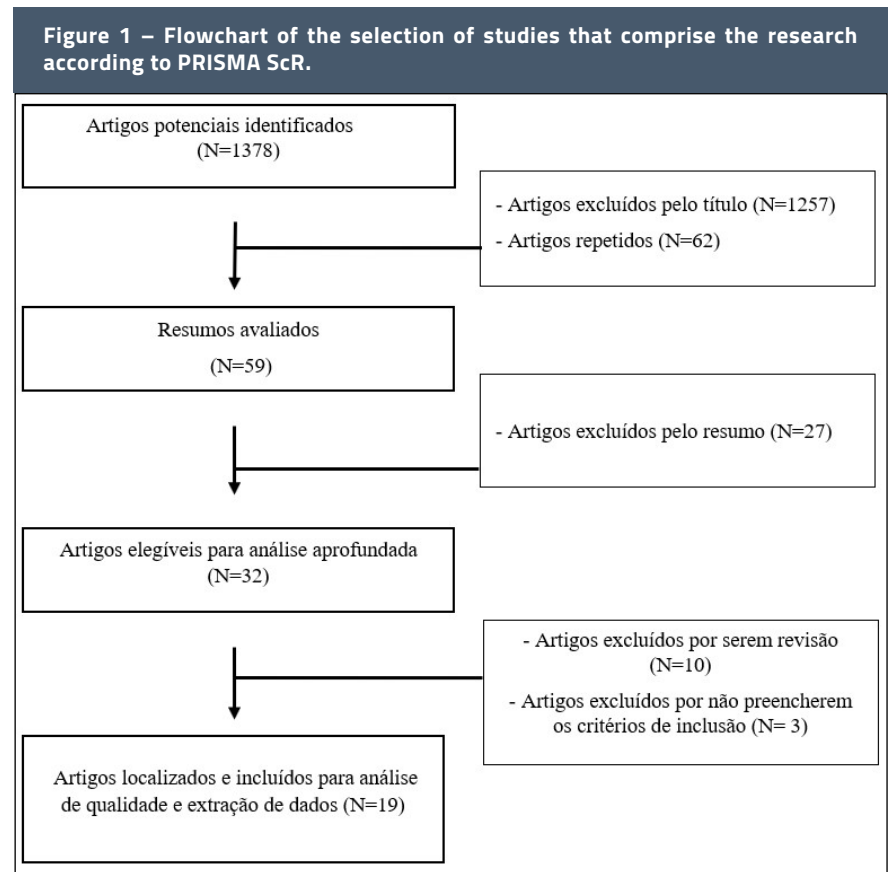
The following controlled descriptors of terminology recommended by *Medical Subject Headings* (MeSH) and/or Health Sciences Descriptors (DeCS) were selected: *Patient Safety*, *Safety culture*, *Safety Management*, *Primary Health Care*. All these terms were searched for their equivalents in Spanish and Portuguese. The search strategy used followed the definition of each corresponding database. The Boolean operator AND was used with the following combinations: *Patient Safety AND Primary Health Care*; *Safety culture AND Primary Health Care*; *Safety Management AND Primary Health Care*. These search strategies were adopted in their Spanish and Portuguese equivalents and performed in September 2023.

To systematize the process of including

studies, we opted for the PRISMA *Extension for Scoping Reviews* (PRISMA ScR) methodology⁸. In addition, following the methodology proposed by Nora⁵, the listed studies were discussed based on their characteristics and their content divided into four categories, namely: challenges for health professionals; challenges for health service management; and challenges with users and families. The fourth category included resources that enhance patient safety.

RESULTS

The studies were preselected based on the titles and abstracts, and the final sample was achieved based on reading the articles in full, as shown in the flowchart in Figure 1.



Source: own elaboration, based on the recommendations of the international PRISMA guide for Scope Reviews (PRISMA-ScR).

Integrative Review

Souza AS, Amador TA

Challenges of Patient Safety in Primary Health Care in Brazil: Scope Review

For better visualization and an overview of the articles found, a table was prepared, shown below, contain-

ing the main characteristics of each study, as well as the journal of publication, in addition to the subsequent

organization of the studies based on the nature addressed in the work.

Table 1: Characteristics of the articles included in the scope review on patient safety culture in primary care.

Author	Year / State	Journal	Participants	Approach
Aguiar et al.	2020 / AM	Interface: Communication, Health and Education	10 physicians	Observational, exploratory, descriptive, and quantitative study
Alencar et al.	2021 / CE	Brazilian Journal of Health Promotion	18 nurses	Qualitative study
Araújo et al.	2022 / DF	PLOS One	246 health professionals	Quantitative study
Galhardi et al.	2018 / SP	Acta Paulista de Nursing	240 health professionals	Descriptive, cross-sectional, and quantitative study
Lousada et al.	2020 / CE	BMC Primary Care	69 health professionals	Cross-sectional quantitative study
Macedo et al.	2019 / PR	Enfermería Global	43 nurses	Descriptive quantitative study
Macedo et al.	2020 / PR	Text & Context Nursing	1,131 health professionals	Cross-sectional, descriptive, and quantitative study
Oliveira et al.	2019 / GO	Journal of School of Nursing	37 health professionals	Descriptive, cross-sectional, and quantitative study
Pai et al.	2020 / RS	Revista Baiana de Enfermagem	188 health professionals	Cross-sectional study
Raimondi et al.	2019 / PR	Revista Gaúcha de Enfermagem	144 health professionals	Cross-sectional quantitative study
Raimondi et al.	2019 / PR	Journal of Public Health	144 health professionals	Cross-sectional quantitative study
Ribeiro et al.	2021 / MG	Nursing Reference Journal	23 health professionals	Exploratory qualitative study
Rocha et al.	2021 / BA	Physis: Journal of Collective Health	2 nurses and 3 dentists	Exploratory qualitative study
Schmidt et al.	2019 / RS	Journal of Infection Prevention and Health	172 health professionals	Cross-sectional quantitative study
Silva et al.	2019 / RS	Revista Gaúcha de Enfermagem	10 nurses	Descriptive, exploratory, and qualitative study
Silva et al.	2022 / MG	Anna Nery School Journal of Nursing	22 nursing professionals	Descriptive, exploratory, and qualitative study
Souza et al.	2018 / RS	Brazilian Journal of Nursing	260 health professionals	Cross-sectional study

After the selection and evaluation of the articles, a total of 19 studies were included in this scope review. These were published between 2013 and 2022. A profile of the studies will be presented with a description of their individual characteristics and then presented in four categories, which stood out due to the particularities of each one. These are: challenges for health professionals; challenges for health service management; and challenges with users and families. The fourth category included resources that enhance patient safety.

Characterization of the studies

In 2019, we obtained the highest number of publications (n=6), with 9-10-11-12-13-14 authors. In 2018 and 2020, we obtained the same number for both, with (n=4) publications in each year, by the following authors 15-16-17-18 and 19-20-21-22. In 2021 and 2022, we found (n=3) and (n=2) publications, respectively, by authors 23-24-25 and 26-27. Regarding the editorial origin, the studies were published in 16 scientific journals, both national and international.

Regarding the state of the federa-

tion in which the study was conducted, most of the studies (n=9) were conducted in the southern states. This was followed by the northeast and southeast regions with (n=3) studies each. The midwest and north regions had (n=3) and (n=1) studies each.

Regarding the methodological profile of the studies, one study 19 used an incident reporting form called *the Primary Care International Study of Medical Errors*, already translated and validated for Brazilian Portuguese, which deals with patient safety.

Other studies (n=7) used a qualitative approach to design their research ²⁴⁻²⁵⁻¹⁴⁻²⁶⁻¹⁷. One study used social representation theory to conduct the study, also a qualitative approach ²³.

In quantitative studies, questionnaires were used as a research tool, in particular the *Medical Office Survey on Patient Safety Culture* (MOSPSC) ¹⁵⁻⁹⁻²¹⁻²²⁻¹¹⁻¹²⁻¹⁸⁻²⁷ and the *Safety Attitudes Questionnaire* (SAQ) ²⁰⁻¹⁰⁻¹³⁻¹⁶.

Challenges faced by healthcare professionals

The data in the literature confirm the plurality of behaviors involving the challenges experienced by healthcare professionals in the PHC setting, some of the main points being: errors related to the administrative process of the healthcare organization, communication failures, technical knowledge problems, lack of professional skills and abilities, and also problems related to diagnosis and treatment, in addition to dissatisfaction with the infrastructure. Other points related to challenges were the lack of planning for error prevention, work overload, and damage to the mental health of professionals. In addition, professionals reported fear of reprisals for reporting errors to their superiors.

The professionals highlight the incorrect use of medical records as a trigger for patient safety failures ¹⁹⁻²¹. It is noteworthy that worker overload was highlighted as a possible causal factor in the situation reported by respondents (unavailability of medical records/patient records when needed), which may be the result of failure on the part of the professional responsible for organizing and making medical records available, or insufficient staff to perform the task ²¹⁻²²⁻²⁵⁻¹⁸.

Other authors highlight the dimensions of open communication, communication about errors, standardization of processes, staff train-

ing, and work pressure and pace as negative dimensions in patient safety culture ¹⁵⁻⁹⁻²¹⁻²⁵⁻¹³⁻¹⁶⁻¹⁸. In addition, another author reports that the topic of patient safety is not part of the list of discussable issues within the municipal health department. The study participants report that, as health professionals, they assume that they should enter the job market with prior knowledge of the subject and thus provide the best for the patient ²⁵.

With regard to technical skills, the studies ²³⁻²¹⁻¹³⁻¹⁴⁻²⁶⁻¹⁸ highlight the importance of the correct execution of procedures, the use of personal protective equipment (PPE), and good hygiene practices. They emphasize that failure to perform a certain activity can cause harm not only to the patient but also to themselves ²⁷.

Still in the context of the technical skills that each professional develops in their work, professionals who work directly with patients reported that, even though they are aware of the importance of hand washing, this practice is not common within the UBS. Professionals are concerned with their own safety and forget about patient safety. It was mentioned that hand washing, when it occurs, is only after contact with the user ¹⁴.

In one study ²⁶, professionals described having difficulty avoiding errors when it comes to administering medications. According to the participants, errors occur at all stages of the process, especially with regard to the administration of immunobiologicals, particularly in the vaccination room, where the immunization service is located. Professionals are aware of the errors and report that the mistakes made are difficult to overcome. In the same vein, another study showed that continuing education had negative percentages for safety culture, especially among female professionals ¹⁶.

In another study ¹⁶, the patient safety culture showed a negative per-

centage in the municipality studied, which highlights the precariousness of the service and how dissatisfied and stressed the professionals are. This dissatisfaction is concerning, since professionals who are not satisfied with their work are more likely to make mistakes, leading to a failure to provide safe, quality care.

Another problem highlighted in the studies is the lack of materials for use with patients, lack of personal protective equipment, and inadequate physical structure ²³⁻²¹⁻²⁴⁻²⁵⁻¹⁴⁻²⁶⁻¹⁷. Similarly, the study ²⁰ reported that health professionals were dissatisfied with their working conditions and with management's perception of them. In addition, the perception of stress and safety culture received low scores among PHC professionals.

Another weakness is the unit's lack of accessibility; wheelchair-bound patients have no means of being treated due to the lack of ramps or accesses that facilitate care. Both points are vulnerabilities that the authors found in health units in the state of Rio Grande do Sul ¹⁴.

The lack of infrastructure is considered a predisposing factor for errors in the care process, given that, although health units are designed to provide health care to people, some are located in old buildings that lack accessibility, exposing users to risk and contributing to the ineffectiveness of patient safety ²⁶.

Studies ¹⁵⁻²¹⁻²⁴⁻²⁶ highlight problems related to communication. Meanwhile, ²⁰ emphasized that the perception of management and the teamwork climate are domains of patient safety culture that influence other domains concomitantly, except for the perception of stress, as this is a subjective domain of the professional.

Furthermore, with regard to reporting errors, teams believe that this aspect could be used against them, thus highlighting a culture of fear of reprisals ¹⁵⁻²⁰⁻⁹⁻²⁶. However, it is neces-

sary for professionals to understand that the occurrence of errors and proper communication can be alternatives for a better understanding of the event and a new chance to improve service delivery and prevent the same error from becoming a problem in the future ¹⁵.

When professionals do not have the space to report or comment on mistakes made, problems will remain and may even be exacerbated. For this reason, the culture of safety must be in line with the team's discussions and priorities and exclude a punitive culture ⁹.

Hierarchical issues within health services are important for the smooth functioning of the workflow. However, health professionals fear retaliation for mistakes made, and this power dynamic, in which professionals are punished for mistakes, carries with it punitive characteristics and difficulties for professionals in expressing themselves to their colleagues and superiors. Therefore, with regard to safety culture, the organizational climate is a motivating factor for professionals to express themselves and have their concerns heard and responded to appropriately ¹⁰.

In a survey conducted at UBSs in Curitiba, Paraná, participants mentioned that every day, at least one patient was not treated, even if they were an emergency patient or had a chronic clinical condition. In addition, inconsistencies were reported in the exchange of information with other institutions, especially between UBSs and pharmacies or hospitals. This has been a recurring problem in the last 12 months ⁹. Similar problems were found in a study conducted in the PHC of the city of Londrina, also in the state of Paraná, and in other states of Brazil ²¹⁻¹⁷⁻¹⁸.

In a study conducted in the state of Goiás, the authors showed that the main problem related to patient safety is the lack of institutional co-

ordination between health services. According to professionals, this lack of coordination is the result of the influence of administration on patient care. Management in this sense has failed to provide human resources for the high demand for work, the system becomes overloaded, and patients are not treated with the proper quality. They also reported a lack of resources for therapeutic conduct ¹⁷. The same type of difficulty was described in the study ¹⁸, where the exchange of information with other health services was a problem reported as having occurred frequently in the last 12 months.

Other professionals refer to the workplace in a negative light, stating that the number of activities performed is more important than the quality of care provided to users, which predisposes them to errors that affect patients ⁹⁻²⁵⁻¹³⁻²⁶⁻¹⁷⁻²⁷. Excessive workload and, consequently, physical fatigue among professionals was identified as a risk factor for errors ²⁶.

In studies ¹¹⁻¹², both in the state of Paraná, professionals attributed negative perceptions to patient safety and quality, information exchange, workplace, communication and follow-up, support from managers, health services, and overall assessment. These negative data reflect a lack of safety culture; however, the authors maintain the theory that, when responding to the questionnaire, professionals somehow represented the users' view of the health service, since the negative perception came mainly from CHWs, professionals who spend most of their time in the community.

Another study reports that professionals do not fully understand the concept of patient safety, and this weakness in care is mainly due to a failure in the continuing education process. The authors report that certain professional categories mention important aspects of patient safety principles, but in a fragmented way or with conceptual distortion on the

subject ²⁴.

Challenges in health service management

The lack of materials and inadequate physical infrastructure directly impact the provision of health services. The authors report that these factors interfere with the professional practice of each individual, as well as contributing to an increased risk of patient safety ineffectiveness ²³⁻²⁴⁻¹⁷. In the same studies, the authors describe that initiatives focused on patient safety in PHC are still incipient and limited, and that according to professionals, this is a negative domain regarding the culture of patient safety.

In addition, management needs to address the fact that it is necessary to create a positive culture that promotes patient safety, which is one of the main challenges faced by health services. However, for this to occur, ¹⁵ the authors highlight the importance of the participation of the entire health team in promoting a positive safety culture. In another study, ⁹ it was highlighted that managers' commitment to patient safety is an essential element for strengthening a culture of safety. The authors ¹⁵ also reported that the study revealed the fragility of leadership support for patient safety culture, which may lead to the reflection that this can influence attitudes and behaviors related to the subject, demonstrating the importance that leaders have in identifying the aspects pointed out and implementing actions aimed at patient safety. Similar problems were found in studies conducted by other authors, where professionals are dissatisfied with management ²²⁻¹¹⁻¹³.

Low management perception scores indicate that professionals do not approve (or partially approve) of their leaders' actions regarding patient safety issues. These situations can undermine patient safety in PHC

²⁰⁻⁹⁻²¹⁻¹⁰⁻¹³.

The position of health services manager serves to support professionals, as well as senior managers, and therefore requires leadership skills, since they must listen to and understand their employees. If managers inhibit or ignore the skills of health workers, the work process and perception of leadership become negative, and this result is reflected in the entire work methodology of the organization, which generates fatigue and dissatisfaction in the workplace²².

In one study⁹, healthcare professionals from an ESF reported high levels of professional dissatisfaction. According to the professionals interviewed by the authors, decisions were often made based on what was best for the service rather than patient safety. Participants reported negative connotations. In addition to high demand for services and overload, this results in compromised user care.

The lack of action on issues such as safety culture reflects the reality of PHC in some regions of the country. Managers maintain that practices to improve care are mainly focused on hospital services. In addition, according to professionals, workflow procedures are not planned in advance, which increases the tendency for errors and harm to patients²⁴.

Managers, in a study conducted in the state of Goiás, report that the small physical space, combined with the large number of patients and few professionals, are triggers that make it impossible to adequately monitor and approach patients. In this sense, inadequate care presents an almost non-existent percentage for patient safety culture. Users, in turn, when they need care in such a precarious environment, end up triggering depressive or anxiety crises, in addition to not having their health problems resolved¹⁷.

Challenges with users and families

In this category, we highlight the findings regarding the challenges

faced by professionals with users and family members. It was possible to identify as the main factor the failure in communication between the user and the professional and non-adherence to the proposed treatment.

Some authors¹⁹ report that one of the main reasons for problems related to patient safety, especially treatment errors, originate with the patient themselves, since they decide on their own to interrupt or change the prescribed treatment without prior communication with the health professional.

The study²⁰ emphasized that the relationship between the user and health professionals did not have a positive perception of the patient safety culture, especially among community health workers. The author points out that in Brazil, these professionals play an important role in establishing the link between families and other health professionals.

Resources that enhance patient safety

This category shows the main behaviors that studies highlight and are considered important for the best service provided in healthcare organizations. In view of the problems reported, the importance of planning and information exchange with management is emphasized. The literature suggests that not only should professionals undergo continuing education processes¹⁹⁻¹⁵⁻²¹, but also that users and their families should actively participate in health care¹⁹.

Discussions among the team and joint planning, in addition to the complete, accurate, and timely exchange of information between institutions, were considered strengths in some studies²³⁻¹⁵. Other authors emphasize that team discussions should be strengths for positive dimensions of safety culture and focus on the fact that strategies should be based on scientific knowledge. However, the pre-

vious experiences of each professional cannot be ignored, as they can be tools for good care and give meaning to health actions²¹.

Factors such as increased physical space (for care, clinical care, storage of materials, and organization) and greater availability of human resources were reported and indicated for improving health care and better conditions for patients¹⁹. In addition, the potential of continuing education for professionals has been reported. This measure aims to increase individual technical capacity and minimize adverse events, thus improving the care offered and reducing the possibility of failures in service provision²⁶.

Other strategies described include proper techniques for disinfecting and sterilizing materials. In addition to establishing biosafety measures, as it is known that this can prevent the spread of infectious diseases²³⁻²⁵.

Teamwork and collaboration between different professional categories is a favorable factor in patient safety¹⁵⁻²⁷. The professionals interviewed in the study⁹ report that the work process, when aligned with management and the environment, is effective in preventing errors. Another author corroborates this and adds that the empathy and willingness of the worker, as well as their ethical stance, are ways of establishing bonds with the user and promoting continuity of care¹⁴.

The dimension of care follow-up can be understood as another strength of PHC, since the longitudinal nature of care is one of the guidelines to be operationalized in PHC¹³.

DISCUSSION

Currently, in Brazil, this study is a pioneer in the assessment of patient safety culture in health organizations within the scope of PHC. This study reviewed works that had health professionals (doctors, dentists, nurses,

pharmacists, psychologists, physical educators, social workers, physical therapists, nutritionists, community health agents, and managers) as their research population, that is, representatives of the PHC workforce in Brazil.

By focusing on the Brazilian context, it reveals regional specificities, structural challenges, and management weaknesses that have been little explored in the international literature. The results provide concrete support for the formulation of public policies that prioritize the inclusion of patient safety in the PHC agenda, guide investments in infrastructure, expand continuing education strategies, and strengthen a non-punitive culture. Thus, the research contributes to aligning daily practice with the guidelines of the National Patient Safety Policy and the National Primary Care Policy, offering evidence that can guide managers, professionals, and policymakers in building safer and more effective services.

The topic studied, patient safety and the challenges faced by professionals, although still in its infancy, has shown growth in Brazil. Primary health care (PHC), as the gateway to the system, has great scope for studies on the subject, since, although it has low-tech services, it provides health care and contributes to the reorientation of the care and management model based on the principles and guidelines contained in Ordinance No. 2436/17, since one of its objectives is to solve the health problems of the majority of the population²⁸.

This review used search terms and methodology similar to those used in Nora's study⁵; however, the author's review listed studies on patient safety in primary care worldwide. In our study, we refined the search to studies conducted only in Brazil and, based on this, we found that most studies were conducted in the southern region of the country.

Understanding how much health-care professionals understand the concept of patient safety in their work environment is an important step toward understanding the overall picture of healthcare organizations on this topic³. In addition, the data presented reveal that healthcare professionals have prior knowledge about patient safety and are aware that following established standards and protocols can prevent collateral damage²³.

Furthermore, most of the studies described used a quantitative methodology. Another author, when reviewing the topic of patient safety in the Brazilian Nursing Association's thesis and dissertation database, found similar data and reinforces the importance of studies that address mixed methodologies (qualitative and quantitative), since when involving the perspective of human beings, the subject becomes complex and unique to each individual²⁹.

The most common types of incidents in PHC were associated with medication errors, diagnostic errors, and work overload. In this sense, increased work overload leads to the development of mental disorders related to PHC workers, because, in addition to overwork, professionals are often subjected to problems in the physical structure of the units and also problems in the health care network itself. These risk factors lead professionals to perform poor-quality work, which compromises patient safety³⁰.

Medication-related errors stem mainly from a lack of communication between professionals and also between professionals and patients. Another set of errors are related to inappropriate prescribing (which may include prescribing drugs for other health problems, inappropriate doses and schedules, prescribing to patients who are allergic or have contraindications and drug interactions), prescribing drugs that are unavailable in

PHC, so the patient does not acquire the medication and the problem is not resolved, and errors related to lack of attention or illegibility of the prescription³¹.

Diagnostic errors are mainly attributed to medical professionals, as they are responsible for the diagnosis, which in some cases is made in an inadequate clinical environment. Doctors often work with a very high patient demand, a factor that contributes to errors. In addition, negligence is also associated with errors and lack of care for the patient³².

One study suggests that the following measures should be taken to minimize diagnostic errors: (a) include space for reflective education on diagnostic errors in medical school; (b) promote clinical research on diagnostic errors in the country; (c) establish a national database of diagnostic errors; (d) collaborate with the patient safety area and the activities of the Ministry of Health; and (e) promote cooperation between physicians, other professionals, and patients³².

In this sense, studies on the subject are concentrated on physiological human factors, cognitive human factors, and organizational perspectives. In addition, they are focused on identifying factors that influence patient safety, including staff illness, professional education levels, health team burnout, and the inability to perform technical activities³³.

This study showed that most of the studies were quantitative in approach and used questionnaires as a research tool, in particular the *Medical Office Survey on Patient Safety Culture*. This is a questionnaire consisting of 12 domains, namely: open communication, communication about errors, exchange of information with other sectors, work processes and standardization, organizational learning, overall perception of patient safety and quality, management support for patient safety, follow-up of patient

care, issues related to patient safety and quality, staff training, teamwork, and work pressure and pace. These domains involve and measure patient safety culture, six of which are specific to primary care ³⁴.

Some studies evaluated not only the types of adverse events, but also the factors that contribute to their occurrence. Among these, the factors that contributed most to patient failures were professional failures, lack of communication between professionals and users and professionals, and lack of communication between health institutions. Similar data are found in the study conducted by Nora ⁵, in which the author also reports that there is a lack of communication with management and that these factors contribute to problems related to patient safety.

Most of the studies found suggest some measures to reduce adverse events and make healthcare a little safer for patients. Among the measures mentioned are: better communication between professionals and improvements in the infrastructure of the health unit. Another author reinforces that the solutions, however, need to be planned in conjunction with management and other health professionals ³⁵.

In our study, the data reveal that errors are associated with human procedures, and these data corroborate other data in the literature ⁵⁻³⁶, especially with regard to the culture of patient safety in PHC, where errors can be seen as relevant attitudes in this context. To a certain extent, errors are still strongly associated with blame, a punitive work environment, and a culture that perceives errors made by health professionals as carelessness.

Therefore, dealing with errors and blame as a team can serve as an alternative to modify and transform errors into opportunities to discuss and develop critical thinking, including behaviors and attitudes of the

entire team towards their own errors and those of their colleagues, that is, seeing them as providing learning, an opportunity to prevent new incidents related to the same cause ³⁶.

The most common types of incidents in PHC were associated with medication errors, diagnostic errors, and work overload. In this sense, increased work overload leads to the development of mental disorders related to PHC workers, because, in addition to overwork, professionals are often subjected to problems in the physical structure of the units and also problems in the health care network itself. These risk factors lead professionals to perform poor-quality work, which has implications for patient safety ³⁰.

The report on biosafety in PHC was important, since this issue has a major impact on the lives of professionals, especially with regard to worker safety. And although professionals are familiar with the standards and equipment, their use is not always practiced, either due to a lack of PPE or due to negligence ²³. According to another author, in addition to implementing individual protection measures, which should provide PPE to professionals, health organizations should also comply with environmental care standards and provide training to professionals, especially those who have direct contact with patients and/or contaminants ³⁷.

Although findings regarding the challenges faced by users and family members with professionals were the category with the lowest number of findings, the World Health Organization (WHO) recommends that health professionals and health organizations support and encourage user and family participation in building the healthcare environment, thus making it safer and more welcoming, as it is known that family dynamics impact patients' healthcare treatment and behavior ³⁸⁻³⁹.

Although this study sought to eval-

uate most of the existing literature, there are some limitations to this type of research, given that there may be studies published in other languages or on other platforms and databases that are sometimes not indexed.

FINAL CONSIDERATIONS

This study concludes that PHC in Brazil has potential for investigation and research into new studies focusing on patient safety. It can also be concluded that the main challenges are related to professionals and management. It should be noted that, in this sense, users also play a leading role in healthcare and the management of their illness. Most of the studies presented measures for the promotion and prevention of adverse events, which were categorized as resources that enhance patient safety, among which continuing education and better communication between professionals and teams stand out.

Therefore, although care has already improved in several aspects, professionals need to overcome some barriers and face the problem, thus minimizing damage and enhancing the services offered in PHC, and ensuring quality and safety for professionals and users.

REFERENCES

1. ALOLAYAN, R. ALAHMAD, A. BUALI, D. ALONAIZAN, F. ALHAREKY, M. ALHUMAID, J. NAZIR, M. A. Patient safety culture amongst dental students and interns in Dammam, Saudi Arabia. *European Journal of Dental Education*. v. 25, n. 1, p. 175-182, 2020.
2. REIS, C. T. PAIVA, S. G. SOUSA, P. The patient safety culture: a systematic review by characteristics of Hospital Survey on Patient Safety Culture dimensions. *International Journal for Quality in Health Care*. v. 30, n. 9, p. 660-677, 2018.
3. PRIETO, M. M. N. FONSECA, R. E. P. ZEM-MASCARENHAS, S. H. Assessment of patient safety culture in Brazilian hospitals through HSOPSC: a scoping review. *Revista Brasileira de Enfermagem*. v. 74, n. 6, p. 1-10, 2021.
4. CAMACHO-RODRIGUEZ, D. E. CARRASQUILLA-BAZA, D. A. DOMINGUEZ-CANCINO, K. A. PALMIERI, P. A. Patient safety Culture in latin American Hospitals: A Systematic Review with Meta-Analysis. *International Journal of Environmental Research and Public Health*. v. 19, n. 21, p. 1-23, 2022.
5. NORA, C. R. D. BEGHETTO, M. G. Patient safety challenges in primary care: a scoping review. *Revista Brasileira de Enfermagem*. v. 73, n. 5, p. 1-11, 2019.
6. LEVAC, D. COLQUHOUN, H. O'BRIEN, K. K. Scoping studies: advancing the methodology. *Implementation Science*. v. 5, n. 69, p. 1-9, 2010.
7. ARKSEY, A. O'MALLEY, L. Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology*. v. 8, n. 1, p. 19-32, 2005.
8. TRICCO, A. C. ET ALL. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Annals of Internal Medicine*. v. 169, n. 7, p. 467-476, 2018
9. MACEDO, S. M. K. BARBOZA, A. R. C. A. BORGES, F. FIGUEIREDO, K. C. PERES, A. M. ASSIS, F. Patient safety culture: evaluation of nurses in primary health care. *Revista eletrônica trimestral de Enfermeria*. v. 1, n. 56, p. 387-397, 2019.
10. OLIVEIRA, P. C. SANTOS, VILLELA, E. F. M. BARROS, P. S. B. Patient safety culture in home care service. *Journal of School Nursing – University of São Paulo*. v. 54, n. 1. p. 1-8., 2020.
11. RAIMOND, D. C. BERNAL, S. C. Z. OLIVEIRA, J. L. C. MATSUDA, L. M. Patient safety culture in primary health care: analysis by professional categories. *Revista Gaúcha de Enfermagem*. v. 40, n. 1, p. 1-9. 2019.
12. RAIMOND, D. C. BERNAL, S. C. Z. MATSUDA, L. M. Cultura de segurança do paciente na ótica de trabalhadores e equipes da atenção primária. *Revista de Saúde Pública*. v. 53, n. 42. p. 1-9, 2019.
13. SCHMIDT, C. R. SANTOS, F. P. LORO, M. M. SOUZA, M. M. KOLANKIEWICZ, A. C. B. Primary Health Care as a scenario for assessing the patient's safety culture. *Revista Prevenção de Infecção e Saúde*. v. 5, n. 1, p. 1-12, 2019.
14. SILVA, A. P. F. BACKES, D. S. MAGNAGO, T. S. B. S. COLOMBE. Patient safety in primary care: conceptions of Family health strategy nurses. *Revista Gaúcha de Enfermagem*. v. 40, n. 1. p. 1-9, 2019.
15. GALHARDI, N. M. ROSEIRA, C. E. ORLANDI, F. FIGUEIREDO, R. M. Assessment of the patient safety culture in primary health care. *Acta Paulista de Enfermagem*. v. 31, n. 4, p. 409-416, 2018.
16. SOUZA, M. M. ONGARO, J. D. LANES, T. C. ANDOLHE. KOLANKIEWICZ, MAGNARO, T. S. B. S. Patient safety culture in the Primary Health Care. *Revista Brasileira de Enfermagem*. v. 72, n. 1, p. 27-34, p. 2018.
17. SOUZA, A. C. S. BEZERRA, A. L. Q. CAIXETA, C. C. PINHO, E. S. PARANAGUA, T. T. B. TEIXEIRA, C. C. Perception of professionals about patient safety in psychosocial care. *Enfermagem Psiquiátrica e Saúde Menta*. v. 73, n. 1, p. 1-8, 2019.
18. TEIXEIRA, M, S. T. LEILAA, B. D. G. ESTHER, C. P. N. L. ELISABETE, M. P. C. Patient safety in primary care: analysis of situations that favor adverse events. *Coloquio Panamericano de Investigación em Enfermeria*. v. 16, n. 1, p. 1-7, 2018.
19. AGUIAR, L. T. LIMA, D. S. MOREIRA, M. A. B. SANTOS, L. F. F. FERREIR, J. M. B. B. Patient safety incients in Primary Healthcare in Manaus, AM, Brazil. *Interface: comunicação, saúde, educação*. v. 24, n. 1, p. 1-15, 2020.
20. LOUSADA, L. M. DUTRA, F. C. S. SILVA, B. V. OLIVEIRA, N. L. L. BASTOS, I. B. VASCONCELOS, P. F. CARVALHO, R. E. F. L. Patient safety culture in primary and home care services. *BMC Family Practice*. v. 21, n. 1, p. 188-195, 2020.
21. MACEDO, L. L. HADDAD, M. C. F. L. SILVA, A, M. R; GIROTTO. Cultura de segurança do paciente na atenção primária à saúde em município de grande porte na percepção de trabalhadores. *Text & Context Nursing*. v. 29, n. 1, p. 1-15, 2020.
22. PAI, S. D. ALVES, D. F. B. PLUTA, P. WINTER, V. D. B.

- KOLANKIEWICZ, A. C. B. Evaluation of the patient safety culture in primary health care. *Revista Baiana de Enfermagem*. v. 34, n. 1, p. 1-12, 2020.
23. ALENCAR, S. V. G. L. NASCIMENTO, E. A. BRITO, C. D. BARBOSA, D. D. S. MARQUES, L. A. LUNA, G. L. M. PROBO, D. R. G. PROBO, R. A. S. Patient safety: social representations from the perspective of primary health care professionals. *Revista Brasileira em Promoção de Saúde*. v. 34, n. 1, p. 1-9, 2021.
24. RIBEIRO, H. C. T. C. PARTINI, R. D. SILVA, J. MENEZES, A. C. FRANCO, E. C. D. MATA, L. R. F. CAMPOS, C. G. Patient safety in primary health care: the perceptions of professionals working in Family health teams. *Revista de Enfermagem Referência*. v. 5, n. 6, p. 1-7, 2021.
25. ROCHA, M. P. VIANA, INGRID. S. VIEIRA, Segurança do Paciente na Atenção Primária em Saúde de um município brasileiro. *Physis: Revista de Saúde Coletiva*. v. 31, n. 4, p. 1-15, 2021.
26. SILVA, L. L. T. DIAS, F. C. S. MAFORTE, N. T. P. MENEZES, A. C. Patient safety in Primary Health Care: perception of the nursing team. *Escola Anna Nery*. v. 29, n. 1, p. 1-8, 2022.
27. ARAÚJO, G. L. AMORIM, F. F. MIRANDA, R. C. P. S. AMORIM, F. F. P. SANTANA, L. A. GOTTEMS, L. B. D. Patient safety culture in primary health care: Medical office survey on patient safety culture in a Brazilian Family health strategy setting. *PloS One*. V. 17, n. 7, p. 17-28. 2022.
28. BRASIL. Ministério da Saúde. Portaria nº 2436, de 21 de setembro de 2017. Aprova a Política Nacional de Atenção Básica, estabelecendo a revisão de diretrizes para a organização da Atenção Básica, no âmbito do Sistema Único de Saúde (SUS). Brasília, DF: Ministério da Saúde, 2017. [internet]. Acesso em 29/01/2023. Disponível em: https://bvsmms.saude.gov.br/bvs/saudelegis/gm/2017/prt2436_22_09_2017.html
29. GOMES, A. T. L. SALVADOR, P. T. C. O. RODRIGUES. C. C. F. M. SILVA, M. F. FERREIRA, L. L. SANTOS, V. E. P. Patient safety in nursing paths in Brazil. *Revista Brasileira de Enfermagem*. v. 70, n. 1, p. 139-146, 2017.
30. GARCIA, G. P. A. MARZIALE, M. H. P. Indicators of Burnout in Primary Health Care workers. *Revista Brasileira de Enfermagem*. v. 71, n. 5, p. 2469-2478, 2018.
31. GONZÁLEZ, G. G. MORALES, L. M. GARCÍA, S. M. DOMÍNGUEZ, C. J. PÉREZ, N. D. HERRERA, I. M. Descriptive analysis of medication errors notified by Primary Health Care: Learning from errors. *Atencion Primaria*. v. 52, n. 4, p. 233-239, 2020.
32. WATARI, T. Key concepts, for improving primary care diagnosis in Japan: Diagnostic error in primary health care. *Journal of General and Family Medicine*. v. 20, n. 2, p. 77, 2019.
33. LIU, C. CHEN, H. CAO, X. SUN, Y. LIU, C. Y. WU, K. LI-ANG, Y. C. HSU, S. E. HUANG, D. H. CHIOU, W. K. Effects of Mindfulness Meditation on Doctors' Mindfulness, Patient safety Culture, Patient Safety Competency and Adverse Event. *International Journal of Environmental Research and Public Health*. v. 19, n. 6, p. 1-15, 2022.
34. SHIH, C. BUCHET-POYAU, K. KERIEL-GASCOU, M. QUENON, J. L. MICHEL, P. TOUZET, S. CHANELIERE, M. Patient safety culture for health professionals in primary care: French adaptation of the MOSPSC questionnaire (Medical Office Survey on Patient safety Culture). *Revue d'Epidémiologie et de Santé Publique*. v. 70, n. 2, p. 51-58, 2022.
35. AL-MANDHARI, A. AL-ZAKWANI, I. AL-ADAWI, S. AL-BARWANI, S. JEYASEELAN, L. Awareness and implementation of nine World Health Organization's patient safety solution among three groups of healthcare workers in Oman. *BMC Health Services Research*. v. 16, n. 533, p. 2523-2534, 2016.
36. NORA, C. R. D. JUNGES, J. R. Segurança do paciente e aspectos éticos: revisão de escopo. *Revista Bioética*. v. 29, n. 2, p. 1-13, 2021.
37. LACERDA, T. C. SOUZA, F. M. PRADO, T. N. LOCATELLI, R. L. FREGONA, G. LIMA, R. C. D. MACIEL, E. L. Tuberculosis infection among primary health care workers. *Jornal Brasileiro de Pneumologia*. v. 43, n. 5, p. 416-423, 2017.
38. WORLD HEALTH ORGANIZATION. Patient safety workshop: learning from error. WHO, editor. Geneva, 2010.
39. YANG, T. J. COOPER, L. A. BOUWARE, L. E. THORNTON, R. L. J. Leveraging Delivery of Blood Pressure Control Interventions among Low-income African American Adults: Opportunities to Increase Social Support and Produce Family-level Behavior Change. *Ethnicity & Disease*. v. 29, n. 4, p. 549-559, 2019.
40. MARINA, S. T. LEILAA, B. D. G. ESTHER, C. P. N. L. ELISABETE, M. P. C. Patient safety in primary care: analysis of situations that favor adverse events. *Coloquio Panamericano de Investigación em Enfermeria*. v. 16, n. 1, p. 1-7, 2018.