Revista Brasileira de Enfermagem
REBEn

Assessment of patient safety culture in Brazilian hospitals through HSOPSC: a scoping review

Avaliação da cultura de segurança do paciente em hospitais brasileiros através do HSOPSC: scoping review

Evaluación de la cultura de seguridad del paciente en los hospitales brasileños a través del HSOPSC: revisión de alcance

Marcela Moreira Nascimento Prieto[I]
ORCID: 0000-0001-8497-5080

Renata Elizabete Pagotti da Fonseca[II]
ORCID: 0000-0001-9186-7352

Silvia Helena Zem-Mascarenhas[I]
ORCID: 0000-0001-7753-6725

[I] *Universidade Federal de São Carlos. São Carlos, São Paulo, Brazil.*
[II] *Universidade Federal de São Carlos, Hospital Universitário. São Carlos, São Paulo, Brazil.*

How to cite this article:
Prieto MMN, Fonseca REP, Zem-Mascarenhas SH. Assessment of patient safety culture in Brazilian hospitals through HSOPSC: a scoping review. Rev Bras Enferm. 2021;74(6):e20201315. https://doi.org/10.1590/0034-7167-2020-1315

Corresponding author:
Marcela Moreira Nascimento Prieto
E-mail: celamn@gmail.com

Submission: 01-06-2021 **Approval:** 03-16-2021

ABSTRACT

Objectives: to describe, from literature, the characteristics of patient safety culture in Brazilian hospitals that applied the Hospital Survey on Patient Safety Culture. **Methods:** this is a scoping review. A search was performed in the databases LILACS, PubMed, SciELO, CINAHL, Web of Science, Scopus and in the CAPES Dissertations and Theses Database in September and October 2020. **Results:** thirty-six studies were identified. Nine studies identified strengthened areas such as: "teamwork within the units", "expectations of supervisor/boss and actions promoting safety", "organizational learning", "support of hospital management for patient safety" and "frequency of report of events". As a critical area, the dimension "non-punitive response to error" was evidenced in 30 of 36 studies. **Conclusions:** the identification of areas of strength and critical areas of safety culture is relevant to encourage improvement of patient safety problems in an institution.

Descriptors: Patient Safety; Organizational Culture; Quality of Health Care; Hospitals; Quality Indicators Health Care.

RESUMO

Objetivos: descrever, a partir da literatura, as características da cultura de segurança do paciente nos hospitais brasileiros que aplicaram o *Hospital Survey on Patient Safety Culture*. **Métodos:** trata-se de uma *scoping review*. Foi realizada busca nas bases de dados LILACS, PuBMed, SciELO, CINAHL, *Web of Science,* Scopus e no Banco de Dissertações e Teses da CAPES, em setembro e outubro de 2020. **Resultados:** foram identificados 36 estudos. Nove estudos identificaram áreas fortalecidas como: "trabalho em equipe dentro das unidades", "expectativas do supervisor/chefe e ações promotoras da segurança", "aprendizado organizacional", "apoio da gestão hospitalar para a segurança do paciente" e "frequência da notificação de eventos". Como área crítica, a dimensão "resposta não punitiva ao erro" foi evidenciada em 30 dos 36 estudos. **Conclusões:** a identificação de áreas de força e áreas críticas da cultura de segurança é relevante para incitar a melhoria de problemas de segurança do paciente em uma instituição.

Descritores: Segurança do Paciente; Cultura Organizacional; Qualidade da Assistência à Saúde; Hospitais; Indicadores de Qualidade em Assistência à Saúde.

RESUMEN

Objetivos: describir, a partir de la literatura, las características de la cultura de seguridad del paciente en los hospitales brasileños que aplicaron el Hospital Survey on Patient Safety Culture. **Métodos:** esta es una revisión de alcance. Se realizaron búsquedas en las bases de datos LILACS, PuBMed, SciELO, CINAHL, Web of Science, Scopus y el Banco de Disertaciones y Tesis CAPES en septiembre y octubre de 2020. **Resultados:** se identificaron 36 estudios. Nueve estudios identificaron áreas fortalecidas como: "trabajo en equipo dentro de las unidades", "expectativas del supervisor/jefe y acciones que promuevan la seguridade", "aprendizaje organizacional", "apoyo a la gestión hospitalaria para la seguridad del paciente" y "frecuencia de notificación de eventos". Como área crítica, la dimensión "respuesta no punitiva al error" se evidenció en 30 de los 36 estudios. **Conclusiones:** la identificación de áreas de fortaleza y áreas críticas de la cultura de seguridad es relevante para incentivar la mejora de los problemas de seguridad del paciente en una institución.

Descriptores: Seguridad del Paciente; Cultura Organizacional; Calidad de la Atención de Salud; Hospitales; Indicadores de Calidad de la Atención de Salud.

INTRODUCTION

Patient safety culture is one of the indicators that allows us to understand how an organization routinely deals with the various issues and approaches related to patient safety. Knowing the extent to which health professionals perceive patient safety is an important step in understanding the general view of the health organization on this topic[1].

Safety culture has a multidimensional concept and stands out by reflecting the commitment of an organization's professionals to continuous promotion of a safe therapeutic environment. This commitment influences safety behaviors and results, not only for patients, but also for professionals and the organizations themselves[2].

In general, when assessing safety culture, it is possible to obtain a clear view of the aspects of patient safety that need adjustments and require more attention. Such assessment helps in the identification and measurement of organizational conditions that lead to adverse events, in addition to encouraging the development and assessment of interventions to improve patient safety in health organizations[1,3].

Safety culture assessment tools provide a way to understand a culture, confront it, and then transform it, since safety culture assessment provides the organization with a basic understanding of safety-related perceptions and attitudes from the viewpoint of the employees of an institution[3].

Currently, two validated instruments are available to assess patient safety culture in the Brazilian context: the Hospital Survey on Patient Safety Culture (HSOPSC) and the Safety Attitudes Questionnaire (SAQ). Both instruments are reliable, but HSOPSC was chosen in this study because it addresses issues that SAQ does not address, such as the frequency of reported events and the general perception of patient safety[4].

HSOPSC is a quantitative method of analyzing hospital safety culture. It was originally developed by the Agency for Healthcare Research and Quality (AHRQ) in 2004, translated and validated in Brazil in 2012. This questionnaire is applied worldwide in hospital institutions to measure patient safety culture and its implications[5-6]. HSOPSC allows to identify areas whose culture needs improvement; assess the effectiveness of actions implemented to improve safety over time; perform internal and external benchmarking to assist the organization to identify how its culture of security differs from the culture of other organizations and prioritizing efforts to strengthen the culture by identifying its weaknesses[3].

Through questions about the essential points related to patient safety, HSOPSC assesses the multiple dimensions of culture present in the health institution. Such dimensions include the values, beliefs and norms of the health organization as well as the organization's communication, leadership and management processes that are directly and indirectly related to patient safety and the assistance provided[5].

OBJECTIVES

To describe, from literature, the characteristics of patient safety culture in Brazilian hospitals that applied the Hospital Survey on Patient Safety Culture.

METHODS

Ethical aspects

This study was not submitted to ethical review because it is a review that uses public domain data; these data had their ethical aspects ensured in their original studies[7].

Type of study

This is a study using the framework proposed by the Joanna Briggs Institute (JBI), through a scoping review, whose method allows to map the main concepts and identify gaps in the knowledge of the studied topic. For this, this review followed the steps recommended by JBI: identification of the research question, identification of relevant studies, selection of studies, analysis of data and reporting of results[8].

The research question was constructed considering PCC strategy, which is a mnemonic for: Population (P), Concept (C) and Context (C)[8]. In this study, PCC was defined as: P - Brazilian hospitals, C - patient safety culture and C - HSOPSC. Based on this strategy, this review was guided by the following question: how has patient safety culture been assessed in Brazilian hospitals using the HSOPSC?

Data source and search strategy

The search for the studies was carried out according to the JBI criteria[8]. Two reviewers independently selected and assessed each study and, when necessary, a third reviewer was consulted. The search took place between September and October 2020 in the Latin American and Caribbean Literature in Health Sciences (LILACS), National Library of Medicine (PubMed), Scientific Electronic Library Online (SciELO), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Web of Science, Scopus databases. Access to these databases was made through the Federated Academic Community (CAFe - *Comunidade Acadêmica Federada*) through the Periodicals Portal of the Coordination for the Improvement of Higher Education Personnel (CAPES - *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*). A search was also carried out at the CAPES Dissertations and Theses Database of the Ministry of Education of Brazil, through its own website.

For each database, a search strategy was established using descriptors and/or their synonyms, considering the Medical Subject Headings (MeSH) and Health Sciences Descriptors (DeCS) terms for all items defined in the strategy.

The descriptors used for the search were: "patient safety", "organizational culture", "quality of health care", "patient safety", "organizational culture", "quality of health care", "Brazil" associated with operators Booleans AND and OR.

The selection criteria were articles available in full in Brazilian Portuguese, English and Spanish, which addressed the theme of patient safety culture assessment through HSOPSC in Brazilian health institutions. Articles in languages other than those established, publications of opinions, consensus, retractions, editorials, websites and advertisements in the media were not

included. Studies that were not authorized for publication and that were not available in full were also excluded.

No time frame has been defined. Although the methodology proposed by JBI is not limited to the exploration of only quantitative studies and considers articles of different methodological criteria as potential sources of data, review studies or validation and cross-cultural adaptation of HSOPSC were excluded.

The preliminary selection of articles was carried out by reading and analyzing the titles and abstracts. Duplicate articles that did not include the theme and/or the inclusion criteria were discarded. Subsequently, the articles were read in full, as well as data extraction for the construction of results, considering the strategy proposed by JBI.

This strategy guides the extraction of the following data, in order to briefly describe the main information: author, year of publication, country of conduct, publication of the study, objective, population and size of the sample, type and duration of intervention, results and main related findings to the research question[8].

An instrument built by the author herself was also used for different analysis of the information that HSOPSC can provide, such as response rate of the research instrument, assessed unit, participating professionals, patient safety score, areas of strength, neutral areas and areas criticism.

A flow diagram was used to represent the inclusion and exclusion process of the studies, shown in Figure 1, according to the PRISMA methodology[9].

RESULTS

Thirty-six studies were selected. Of the selected studies, 11 were dissertations and 25 were articles. Only three studies were originally published in English.

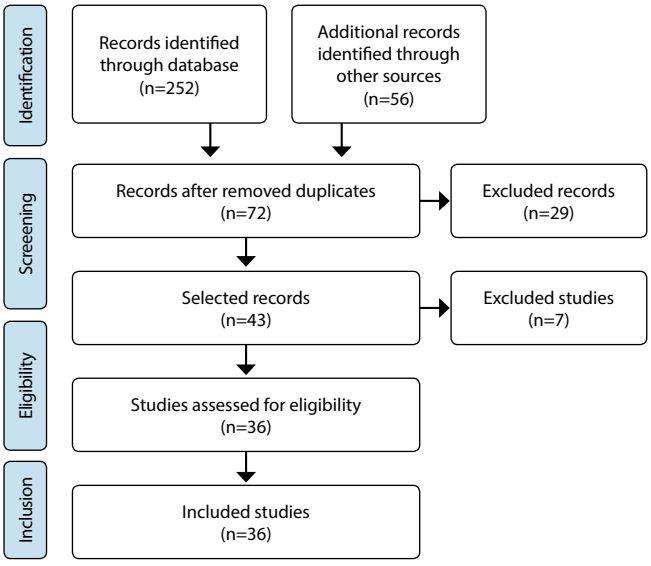

Figure 1 - Flowchart of the process of selection and inclusion of studies. Adapted from the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) diagram flow[9]

The included studies were categorized according to title, year, population/sample, interventions, outcomes and are listed in Chart 1.

All studies had a quantitative approach, due to the very characteristic of HSOPSC. Regarding the year of publication, a study was published in 2013, one in 2014, four in 2015, six in 2016, six in 2017, five in 2018, eight in 2019 and five in 2020.

According to the databases, 12 studies were found at LILACS, 11 at SciELO, three at CINAHL, one at Web of Science and nine at the dissertation and thesis database of CAPES. The articles found in PubMed and Scopus were all repeated, thus being not included in the research.

Chart 1 - Identification of studies according to methodology proposed by the Joanna Briggs Institute

Author/Year/ Country	Title	Population/ Sample	Interventions	Outcomes
Notaro KAM, et al. (2019)[10] Brazil	*Cultura de segurança da equipe multiprofissional em Unidades de Terapia Intensiva Neonatal de hospitais públicos*	Five hundred fourteen health professionals	Cross-sectional, survey study. The HSOPSC was used.	No dimension was considered strengthened. The dimension non-punitive response to error was classified as a critical area.
Kawamoto AM, et al. (2016)[11] Brazil	*Liderança e cultura de segurança do paciente: percepções de profissionais em um hospital universitário*	Seventy-six health professionals	Descriptive-exploratory, quantitative research. The HSOPSC was used.	Most participants demonstrated a perception of a safety culture favorable to immediate leadership and unfavorable to hospital management.
Schuh LX, et al. (2020)[12] Brazil	*Cultura de segurança do paciente em unidades de urgência/ emergência*	One hundred twelve nursing professionals	Cross-sectional quantitative study. The HSOPSC was used.	The dimensions "expectations about your supervisor" and "actions promoting safety and teamwork within the units" were considered as areas of strength.
Souza VS, et al. (2015)[13] Brazil	Errors and adverse events: the interface with health professionals' safety culture	Seventy-one health professionals	Descriptive, quantitative study. The HSOPSC was used.	Most participants demonstrated a perception of a safety culture unfavorable to communication about failures and pointed to a punitive culture.
Silva ACAB, Rosa DOS (2016)[14] Brazil	*Cultura de segurança do paciente em organização hospitalar*	One hundred twenty-eight nursing professionals	Survey study. The HSOPSC was used.	The dimensions with the most negative responses were non-punitive response and support from management and communication about error. There were no strengthened dimensions.

To be continued

Chart 1

Author/Year/ Country	Title	Population/ Sample	Interventions	Outcomes
Cruz EDA, et al (2018)[15] Brazil	*Cultura de segurança entre profissionais de saúde em hospital de ensino*	Six hundred forty-five health professionals	Survey study. The HSOPSC questionnaire was used.	No dimension was considered strengthened. A higher rate of positive responses was obtained in the dimension non-punitive responses to error.
Serrano ACFF, et al. (2019)[16] Brazil	*Avaliação da cultura de segurança do paciente em um hospital filantrópico*	Two hundred nine health professionals	Quantitative, cross-sectional study. The HSOPSC was used.	No dimension was considered to be strengthened. The dimensions with the lowest percentage of positive responses were "non-punitive responses", "professionals and general perception of safety".
Lopez ECMS, et al. (2020)[17] Brazil	*Cultura de segurança do paciente em unidades cirúrgicas de hospitais de ensino*	Three hundred eighty-one medical and nursing professionals	Survey, cross-sectional study. The HSOPSC was used.	The dimension "teamwork within the units" was identified as strengthened in the private hospital; in the others, no dimension showed a strong culture.
Macedo TR, et al. (2016)[18] Brazil	*Cultura de segurança do paciente na perspectiva da equipe de enfermagem de emergências pediátricas*	Seventy-five nursing team professionals	Descriptive, quantitative, cross-sectional survey study. The HSOPSC was used.	No dimension was considered strengthened. The areas identified as critical were non-punitive response and support from the hospital administration for patient safety.
Tomazoni A et al. (2014)[19] Brazil	*Cultura de segurança do paciente em unidades de terapia intensiva neonatal: perspectivas da equipe de enfermagem e médica*	One hundred forty-one medical and nursing professionals	Quantitative and survey study. The HSOPSC was used.	There was a difference in relation to the shorter working time in the hospital and working time in the unit with a higher number of positive responses.
Pinheiro MP (2015)[20] Brazil	*Segurança do paciente: diagnóstico e intervenções da educação permanente em um hospital universitário*	Two hundred three nursing professionals	Descriptive-exploratory study, with a quantitative approach. The HSOPSC was used.	No dimension was considered strengthened. The most critical dimensions were non-punitive response, support of hospital management and shift crossings.
Fassarella CS et al. (2018)[21] Brazil Portugal	*Avaliação da cultura de segurança do paciente: estudo comparativo em hospitais universitários*	One hundred ninety-five nurses	Survey, cross-sectional, comparative, quantitative study. The HSOPSC was used.	Of the 12 dimensions of safety culture measured in a Brazilian hospital, eight dimensions were considered fragile and amenable to improvement.
Moretão DIC (2019)[22] Brazil	*A cultura de segurança do paciente em unidades cirúrgicas de um hospital de ensino da rede pública de saúde*	Two hundred forty-six healthcare team professionals	Mixed study, with descriptive-exploratory design. The HSOPSC was used.	No dimension was considered strengthened. The area considered more fragile was non-punitive responses to errors.
Fassarella CS, et al. (2019)[23] Brazil	*Cultura de segurança dos enfermeiros entre os serviços de um hospital universitário*	One hundred ninety-five nurses	Cross-sectional and quantitative study. The HSOPSC was applied.	A significant difference was identified between the services for five dimensions of safety culture.
Sanchis DZ, et al. (2020)[24] Brazil	*Cultura de segurança do paciente: percepção de profissionais de enfermagem em instituições de alta complexidade*	Four hundred sixty-seven nursing professionals	Descriptive and quantitative study. The HSOPSC was used.	Safety culture was considered fragile, especially openness to communications and non-punitive responses to errors.
Tomazoni A, et al. (2015)[25] Brazil	*Avaliação da cultura de segurança do paciente em terapia intensiva neonatal*	One hundred forty-one professionals (nursing and medical team)	Quantitative and survey study. The HSOPSC was used.	No dimension was considered strengthened. As a critical area, non-punitive response and support from hospital management were identified.
Galvão TS, et al. (2018)[26] Brazil	*Cultura de segurança do paciente em um hospital universitário*	Three hundred eighty-one health professionals	Cross-sectional study with data collection through HSOPSC.	No dimension was considered to be strengthened. Nine dimensions had low positivity, with emphasis on "non-punitive responses".
Pedroni VS, et al (2020)[27] Brazil	*Cultura de segurança do paciente na área materno-infantil de hospital universitário*	Forty-one professionals (nurses and doctors)	Cross-sectional study using HSOPSC.	The action of supervisors/bosses was considered a fortress; communication, on the other hand, was considered a weakness.
Andrade LEL et al (2018)[28] Brazil	*Cultura de segurança do paciente em três hospitais brasileiros com diferentes tipos de gestão*	One hundred fifteen health professionals	Cross-sectional observational study. The HSOPSC was used.	The type of hospital management, service unit, position and amount of report of adverse events were associated with the overall note of patient safety.
Santiago THR, Turrini RNT (2015)[29] Brazil	*Cultura e clima organizacional para segurança do paciente em Unidades de Terapia Intensiva*	Eighty-eight health and administrative professionals	Cross-sectional study. The HSOPSC and the other questionnaire were used.	The dimension non-punitive response to error was considered a critical area. The strengths were supervisor expectations and organizational learning for continuous improvement.

To be continued

Chart 1

Author/Year/ Country	Title	Population/ Sample	Interventions	Outcomes
Batista J, et al. (2019)[30] Brazil	*Cultura de segurança e comunicação sobre erros cirúrgicos na perspectiva da equipe de saúde*	One hundred fifty-eight health professionals	Survey study. The HSOPSC was used.	No dimension was considered to be strengthened. There was a difference, with less negative perception of nursing in relation to medicine in the dimensions "return of information and communication about error" and "frequency of reporting events".
Carmo, JMA et al. (2020)[31] Brazil	*Cultura de segurança do paciente em unidades hospitalares de ginecologia e obstetrícia: estudo transversal*	Three hundred one health professionals	Descriptive, cross-sectional, quantitative study. The HSOPSC was used.	Of the 12 dimensions of patient safety culture, none was considered strengthened.
Abreu IM, et al. (2019)[32] Brazil	*Cultura de segurança do paciente em centro cirúrgico: visão da enfermagem*	Ninety-two nursing professionals	Cross-sectional and analytical study. The HSOPSC was used.	The dimension of safety culture with the most positive result was "organizational learning", and with less positive results, it was "openness to communication and feedback" and "communication about errors".
Okuyama JHH, et al (2019)[33] Brazil	Health professionals' perception of patient safety culture in a university hospital in São Paulo: A cross-sectional study applying the Hospital Survey on Patient Safety Culture	Three hundred fourteen health professionals	Cross-sectional study. The HSOPSC was used.	Nine of the 12 dimensions presented percentages of positive responses below 50%. The worst results were related to "non-punitive response to errors".
Mello, JF; Barbosa, SFF (2013)[34] Brasil	*Cultura de segurança do paciente em terapia intensiva: recomendações da enfermagem*	Ninety-seven nursing professionals	Quantitative, survey, cross-sectional and comparative study. The HSOPSC was used.	There were a greater number of recommendations for the dimensions "organizational learning" and "continuous improvement and general perception of patient safety".
Tavares APM et al. (2018)[35] Brazil	*Cultura de segurança do paciente na perspectiva da equipe de enfermagem*	Two hundred twenty-one nursing professionals	Cross-sectional study, survey type. The HSOPSC was used.	Teamwork within the units was an area of strength and the non-punitive response to errors constituted an area of improvement.
Tobias GC et al. (2016)[36] Brazil	Safety culture in a teaching hospital: strengths and weaknesses perceived in nurses	One hundred seventeen nurses	Descriptive-exploratory study, with a quantitative approach. The HSOPSC was used.	The weaknesses were sacrifice of quality and safety at work, insufficient staffing, problems with shift change; and fear of punishment when reporting an incident. The strengths were teamwork, nurses' active work and managers' consideration of their suggestions.
Corona ARPD (2017)[37] Brazil	*Avaliação da cultura de segurança do paciente em hospital público de ensino de Mato Grosso do Sul*	Three hundred ninety-seven health professionals	Cross-sectional quantitative descriptive-exploratory study. The HSOPSC was used.	No dimension of safety culture was considered an area of force. The hospital management's support to patient safety obtained the lowest score of positive answers.
Neto AVL (2017)[38] Brazil	*Percepção da cultura de segurança do paciente pelos enfermeiros de unidades de terapia intensiva*	Forty-five nurses	Descriptive and exploratory study with a mixed approach. The HSOPSC was used.	No dimension was considered strengthened. With regard to weaknesses and opportunities for improvement, the non-punitive responses to errors dimension and the personal dimension were emphasized.
Silva MF (2017)[39] Brazil	*Cultura de segurança da equipe de enfermagem no serviço de urgência e emergência*	One hundred four nursing team professionals	Descriptive study with a mixed approach. The HSOPSC was used.	The dimensions "non-punitive responses to errors", "frequency of report of events" and "adequacy of professionals" were considered critical.
Rocha RC (2017)[40] 2020	*Cultura de segurança do paciente em centro cirúrgico: perspectiva da equipe de enfermagem*	Two hundred nursing professionals	Quantitative, descriptive study. The HSOPSC was used.	The municipal hospital did not present any strengthened area and the most deficient was an opening for communication. The state and federal hospitals presented areas of strength, and both presented the dimension non-punitive response as a critical area.
Rodrigues WVD (2016)[41] Brazil	*Avaliação da Cultura de Segurança do Paciente entre profissionais de saúde de um hospital público*	One thousand two hundred seventy-three professionals of all areas	Cross-sectional, descriptive study. The HSOPSC was used.	No dimension was considered strengthened. Of the 12 dimensions assessed, 9 were characterized as fragile areas.
Cassago RM (2017)[42] Brazil	*Avaliação da percepção da cultura de segurança do paciente com o questionário HSOPSC em um hospital público de São Paulo*	Four hundred eighty-eight professionals of all areas	Cross-sectional descriptive study The HSOPSC was used.	Six dimensions were considered critical. The overall result of culture indicates that professionals have a perception that institutional safety culture is globally fragile.

Continua

Chart 1 (concluded)

Author/Year/ Country	Title	Population/ Sample	Interventions	Outcomes
Félix RS (2017)[43] Brazil	*Cultura de segurança do paciente em uma maternidade na perspectiva de usuárias e equipe multiprofissional*	Sixty-two health team professionals	Cross-sectional study. The HSOPSC was used.	Areas of positive strength were not identified. The critical dimensions were management support and non-punitive responses to errors.
Andrade LEL (2016)[44] Brazil	*Evolução da cultura de segurança em hospitais antes e após a implantação do Programa Nacional de Segurança do Paciente*	Six hundred sixty-five health professionals, 215 in the first assessment and 450 in the second	Quasi-experimental design with a descriptive-analytical approach. The HSOPSC was used.	The hospitals had improved in 11 of the 12 assessed dimensions. The hospital that showed the greatest improvement was the state, followed by the federal and private.
Nicácio MC (2019)[45] Brazil	*Cultura de segurança da mulher no parto hospitalar: um estudo misto das percepções dos profissionais de enfermagem e médicos*	Twenty-six medical and nursing professionals	Mixed study, with explanatory sequential design. The HSOPSC was used.	No dimension was considered strengthened. The personal dimension was one of the critical points of security compromise.

The studies found were published in 12 different journals. Eleven studies have not been published in journals and consist of 10 dissertations and one thesis. Of these 11 studies, two were found in the LILACS database and the rest (nine studies) were found in the CAPES Dissertations and Theses Database.

Fifteen studies assessed safety culture in all sectors of the hospital. The other areas assessed were surgical units (assessed in six studies), maternity and obstetric centers (assessed in four studies), ICUs (assessed in three studies), Neonatal ICUs (assessed in three studies), emergency units (assessed in two studies), inpatient units (assessed in one study) and pediatric units (assessed in one study). One study assessed safety culture in three sectors: inpatient units, ICU and surgical units.

Regarding the participants involved in the studies, 18 studies involved the entire health team at the hospital (medical, nursing and multidisciplinary staff that provide direct and indirect assistance to patients). Ten studies involved the nursing team. The other studies involved only nurses (four studies), doctors and nurses (one study), medical staff and nursing staff (one study). Only two studies involved professionals from all care and non-care areas of the hospital, such as administrative and support areas.

Of the studies assessed, 27 did not present dimensions of patient safety culture considered to be strengthened. Of the studies that presented strengthened areas, the dimensions that presented the highest percentage of positive responses, that is, above 75%, were: "teamwork within the units", "expectations of supervisor/boss and actions that promote safety", "organizational learning", "hospital management support for patient safety" and "frequency of event report".

The dimensions that were most considered neutral were: "expectations of the supervisor/boss and actions that promote safety", "organizational learning", "teamwork within the units" and "open communication". These dimensions were identified in most studies with a percentage of positive responses between 50 and 75%.

Thirty studies pointed out as a critical area "non-punitive response to error". Other dimensions such as "general perception of safety", "adaptation of professionals", "support of hospital management for patient safety", "shift changes and transitions between units and services", "Teamwork between units", "feedback and communication about errors", "frequency of report of events" were also identified as critical areas.

DISCUSSION

Assessment studies of patient safety culture using HSOPSC started to be published in Brazil in 2013, shortly after its translation and cross-cultural adaptation in 2012. This demonstrates that in hospital institutions patient safety is a constant concern and studies are increasingly being carried out that can express patient safety culture in the institution, in order to improve and adapt institutional strategies for improving patient safety[46].

The HSOPSC assesses 12 dimensions of patient safety culture. The measure to assess safety culture is the percentage of positive responses obtained in the dimensions of the culture. The percentage of positive responses greater than or equal to 75% in the dimension indicates a strengthened safety culture. The percentage of positive responses less than or equal to 50% in the dimension indicates a fragile culture. The dimensions that present a percentage of positive responses between 50 and 75% are considered neutral.

Different perceptions and behaviors related to safety culture are found in different institutions or even in the institution itself. Studies comparing different services show differences in the percentage of positive responses in various dimensions, which demonstrates that patient safety culture perception varies according to each service/sector/hospital[23,28,31]. In healthcare environments, behaviors and attitudes shape the culture of each organization[6,47].

A study that carried out comparisons between professional categories, found a difference in the number of positive responses from HSOPSC, safety score and number of events reported, according to professional characteristics. There was a difference in the mean time spent working in the hospital and working time in the unit with the highest number of positive responses; longer working time in the profession represented better grades and fewer reported events[19]. In another study, a better safety culture was observed among more experienced employees, nurses and employees with less education[33]. It was observed, in a study, that the type of management, service unit, position and the number of incident reports directly influence patient safety culture[28].

Most studies, when assessing the safety culture of hospitals, sought to identify areas of strength and critical areas of safety culture dimensions. However, some studies have used HSOPSC for different purposes or have not shown areas of strength or critical

areas of safety culture. This is due to the fact that the instrument allows analysis in several ways, which varies with the objective of each study. Some studies focused only on areas of strength[12] and others analyzed only specific dimensions[11,30].

It is possible, with HSOPSC, to make comparisons between different professional categories, sectors of the same hospital and between different hospital institutions. It is also possible to analyze each dimension separately, which was the focus of some selected articles. Often, the analysis of only one or part of dimensions makes it impossible to analyze safety culture in general, since assessing only one dimension, it is not possible to diagnose safety culture in order to identify areas for improvement and strengthened areas[4].

The dimensions classified as strengthened can be used as a support for the process of improving patient safety, since they exert a positive force in the perception of safety of professionals as a whole[28,48].

Areas classified as neutral and fragile have the potential to be strengthened, since there are dimensions with positive percentages in some of the items that comprise them. Therefore, it is necessary for hospital leaders to recognize these dimensions in order to build an organizational culture focused on patient safety[37].

Hospitals with private management showed better percentages of positive responses in some dimensions, including areas considered to be strengthened. Although they also present dimensions that present weaknesses, it is clear that hospitals with private management and/or accredited are at a higher level in view of patient safety perception in relation to public and non-accredited hospitals[17,28]. In a study that carried out comparisons between municipal, state and federal hospitals, the federal hospital presented strengthened areas of patient safety culture while the other hospitals did not present areas considered strengthened[40].

The involvement and performance of leaders and managers are fundamental to encourage the team to look at care differently, making it safe. When realizing that management is concerned with improving patient safety, it is possible to encourage the team to learn from errors that have occurred and been communicated[16,22]. Errors are experienced as opportunities to improve the care provided to patients. In the meantime, the continuing education movements that are usually part of the organizational dynamics, mainly in nursing, strengthen learning based on the needs and circumstances experienced by team organization[29].

On the other hand, the lack of support from leaders and managers can be a threat to patient safety, since this behavior can discourage the health team in terms of greater involvement and responsibility in qualification of care[27,32].

The dimension "Teamwork in the units" was well assessed in most studies. This dimension is characterized by support and respect between employees and teamwork in the same sector/unit. Studies show that the strength of teamwork is precisely in combining the knowledge and skills of several people in favor of a common goal, in this case, patient care[22]. Thus, completing the tasks, working together even in situations of work overload, was something positive within the units[10,16].

The same situation was not evidenced in the dimension "teamwork between units", which was considered weak in many studies. Such a situation may be due to the sense of protection and team that employees have with their current sector. As teamwork requires interaction between professionals, communication, empathy and support, it is essential that all professionals understand the integrality of care and that the ultimate goal of care is the same in all sectors of the institution[24].

The "non-punitive culture for error" dimension was undoubtedly the one that drew the most attention as a critical area in most studies. The punitive culture assigns professionals the responsibility for an error, blaming them for this. In this situation, professionals feel restrained, which prevents the identification of problems in the work processes. Thus, without identifying the errors and analyzing the reasons for their occurrence, the process improvement process is impaired and error occurrence can become frequent. A punitive culture discourages incident reporting through reports and hinders organizational learning. Errors need a systemic approach to improve processes through learning from incidents. Assuming this non-punitive attitude to error, the institution emphasizes patient safety as an institutional priority[1-2,24].

One of the impacts of punitive error culture is the low reporting of events emphasized in several studies as a fragile area. The misconception that only nurses can report an incident and staff overload also reduces report of events. Underreporting can prevent the identification of failures and the consequent improvement of processes. It is necessary to emphasize the anonymous nature of the report, and it is indicated that the report instrument is available in an easily accessible place, so that professionals can carry out the report[24,49].

The dimension "adequacy of professionals" was also listed as weakened in several studies. Excessive workload, insufficient human resources, an exhausting day, in addition to work under a lot of pressure and responsibility can indicate dissatisfaction with working conditions, affecting the fragility of this dimension[24,28].

Many health professionals work in conditions considered inadequate due to the work environment and the activities performed. This environment, permeated by physical and psychological wear, lack of professional recognition and lack of motivation, lack of materials, inadequate remuneration, need for a double workday, incorrect sizing of professionals and night work reflects professionals' dissatisfaction, especially those who make up the nursing team[24,50].

All of these factors impact on patient safety, which makes the improvement of professionals' working conditions essential for safety culture strengthening[24].

The dimension "shift changes/shift transitions and transitions between units and services" was also considered to be weakened in several studies. Shift transition is a crucial moment in the teams' practice, as it is at that moment that the most relevant information related to patient care is passed on and that guarantees its continuity[15]. At that moment, it is possible to view patients' condition and all their particularities, and can even prepare strategies that can prevent possible failures[27]. Problems related to the shift change can directly interfere with patient care and the good progress of care, negatively impacting patient safety[14-15]. Effective communication during shift changes makes it possible to maintain continuity of care. To ensure patient safety in this process, some communication strategies can be used as checklists and other standardized instruments according to the sectors' needs[24].

In addition to assessing dimensions, a study collected recommendations suggested by the team to improve each of the twelve dimensions assessed by HSOPSC. According to the authors, such recommendations represent weaknesses that could be improved in some aspects of safety culture. Among the recommendations, the need for training, improvement of work processes including the development and implementation of protocols, availability of equipment and materials in sufficient quantity and good quality, as well as better dimensioning of professionals so that they can meet the demands of the sector, stand out[34].

Study limitations

This scoping review did not consider analyzing literature that assessed the safety culture of hospitals outside the Brazilian context.

Contributions to nursing

It is believed that this review, by allowing a general analysis of safety culture situation in Brazilian hospitals, encourages institutions to look differently at patient safety issues in the search for effective strategies to improve quality of care.

CONCLUSIONS

Recognition of patient safety culture, in an attempt to know the obstacles related to patient safety from caregivers' perception, is crucial for the institution to understand and reflect on how it can improve the institution's safety culture.

Based on the knowledge acquired in the assessment of patient safety culture, strategies can be considered to improve the care process, prioritizing critical areas and reinforcing the best conditions found in the assessment.

SUPPLEMENTARY MATERIAL

This manuscript is one of the results of a dissertation published in the repository of the Federal University of São Carlos (UFSCar), available through the link https://repositorio.ufscar.br/handle/ufscar/13907.

REFERENCES

1. Khoshakhlagh AH, Khatooni E, Akbarzadeh I, Yazdanirad S, Sheidaei A. Analysis of affecting factors on patient safety culture in public and private hospitals in Iran. BMC Health Serv Res. 2019;19(1):1009. https://doi.org/10.1186/s12913-019-4863-x
2. Reis CT. Cultura em segurança do paciente. In: Sousa P, Mendes W, (Orgs.). Segurança do Paciente: criando organizações de saúde seguras. Rio de Janeiro: Editora Fiocruz; 2014:75-99. https://doi.org/10.7476/9788575416426
3. Nieva VF, Sorra J. Safety culture assessment: a tool for improving patient safety in healthcare organizations. Qual Saf Health Care [Internet]. 2003[cited 2020 Nov 25];12(Suppl 2):17-23. Available from: https://qualitysafety.bmj.com/content/12/suppl_2/ii17
4. Etchegaray JM, Thomas EJ. Comparing two safety culture surveys: Safety Attitudes Questionnaire and Hospital Survey on Patient Safety. BMJ Qual Saf. 2012;21:490-8. https://doi.org/10.1136/bmjqs-2011-000449
5. Reis CT. A cultura de segurança do paciente: validação de um instrumento de mensuração para o contexto hospitalar brasileiro [Tese] [Internet]. Rio de Janeiro: Fundação Oswaldo Cruz; 2013[cited 2020 Nov 25]. Available from: https://www.arca.fiocruz.br/handle/icict/14358
6. Okuyama JHH, Galvao TF, Silva MT. Healthcare professional's perception of patient safety measured by the hospital survey on patient safety culture: a systematic review and meta-analysis. Scien World J. 2018;2018:9156301. https://doi.org/10.1155/2018/9156301
7. Melo JMA, Oliveira PP, Souza RS, Fonseca DF, Gontijo TF, Rodrigues AB. Prevenção e conduta frente ao Extravasamento de agentes antineoplásicos: scoping review. Rev Bras Enferm. 2020;73(4):e20190008. https://doi.org/10.1590/0034-7167-2019-0008
8. Joanna Briggs Institute. Reviewer's manual: 2015 edition/supplement [Internet]. The University of Adelaide, Austrália: JBI; 2015[cited 2020 Nov 25]. Available from: https://nursing.lsuhsc.edu/JBI/docs/ReviewersManuals/Scoping-.pdf
9. Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. PLoS Med. 2009;6(7):e1000097. https://doi.org/10.1371/journal.pmed.1000097
10. Notaro KAM, Corrêa AR, Tomazoni A, Rocha PK, Manzo BF. Cultura de segurança da equipe multiprofissional em Unidades de Terapia Intensiva Neonatal de hospitais públicos. Rev Latino-Am Enfermagem. 2019;27:e3167. https://doi.org/10.1590/1518-8345.2849.3167
11. Kawamoto AM, Oliveira JLC, Tonini NS, Nicola AL. Liderança e cultura de segurança do paciente: percepções de profissionais em um hospital universitário. Rev Pesqui: Cuid Fundam. 2016;8(2):4387-98. https://doi.org/10.9789/2175-5361.2016.v8i2.4387-4398
12. Schuh LX, Krug SBF, Possuelo L. Cultura de segurança do paciente em unidades de urgência/emergência. Rev Pesqui: Cuid Fundam [Internet]. 2020[cited 2020 Nov 25];12:616-21. Available from: https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1097372
13. Souza VS, Kawamoto AM, Oliveira JLC, Tonini NS, Fernandes LM, Nicola AL. Errors and adverse events: the interface with health professionals' safety culture. Rev Bras Enferm. 2019;72(2):498-505. https://doi.org/10.5380/ce.v20i3.40687
14. Silva ACAS, Santa Rosa DO. Cultura de segurança do paciente em organização hospitalar. Cogitare Enferm. 2016;21(N.esp): 01-10. https://doi.org/10.5380/ce.v21i5.45583
15. Cruz EDA, Rocha DJM, Mauricio AB, Ulbrich FS, Batista J, Maziero EC. Cultura de segurança entre profissionais de saúde em hospital de ensino. Cogitare Enfermagem. 2018;23(1) https://doi.org/10.5380/ce.v23i1.50717

16. Serrano ACFF, Santos DF, Matos SS, Goveia VR, Mendoza IYQ, Lessa AC. Avaliação da cultura de segurança do paciente em um hospital filantrópico REME Rev Min Enferm [Internet]. 2019[cited 2020 Nov 25];23:e-1183. Available from: https://cdn.publisher.gn1.link/reme.org.br/pdf/e1183.pdf

17. Lopez ECMS, Cruz EDA, Alpendre FT, Batista, J. Cultura de segurança do paciente em unidades cirúrgicas de hospitais de ensino. REME Rev Min Enferm [Internet]. 2020[cited 2020 Nov 25];24:e-1298. Available from: https://cdn.publisher.gn1.link/reme.org.br/pdf/e1298.pdf

18. Macedo TR, Rocha PK, Tomazoni A, Souza S, Anders JC, Davis K. Cultura de segurança do paciente na perspectiva da equipe de enfermagem de emergências pediátricas. Rev Esc Enferm USP. 2016;50(5):756-62. https://doi.org/10.1590/s0080-623420160000600007

19. Tomazoni A, Rocha PK, Souza S, Anders JC, Malfussi HFC. Cultura de segurança do paciente em unidades de terapia intensiva neonatal: perspectivas da equipe de enfermagem e médica. Rev Latino-Am Enfermagem. 2014;22(5):755-63. https://doi.org/10.1590/0104-1169.3624.2477

20. Pinheiro MP. Segurança do paciente: diagnóstico e intervenções da educação permanente em um hospital universitário[Dissertação]. Rio de Janeiro. Universidade Federal do Estado do Rio de Janeiro; 2015.

21. Fassarella CS, Camerini FG, Henrique DM, Almeida LF, Figueiredo MCB. Avaliação da cultura de segurança do paciente: estudo comparativo em hospitais universitários. Rev Esc Enferm USP. 2018;52:e03379. https://doi.org/10.1590/s1980-220x2017033803379

22. Moretão DIC. A cultura de segurança do paciente em unidades cirúrgicas de um hospital de ensino da rede pública de saúde[Dissertação]. Belo Horizonte: Universidade Federal de Minas Gerais; 2019.

23. Fassarella CS, Silva LD, Camerini FG, Figueiredo MCAB. Cultura de segurança dos enfermeiros entre os serviços de um hospital universitário. Rev Bras Enferm. 2019;72(3):767-73. https://doi.org/10.1590/0034-7167-2018-0376

24. Sanchis DZ, Haddad MCFL, Girotto E, Silva AMR. Cultura de segurança do paciente: percepção de profissionais de enfermagem em instituições de alta complexidade. Rev Bras Enferm. 2020;73(5):e20190174. https://doi.org/10.1590/0034-7167-2019-0174

25. Tomazoni A, Rocha PK, Kusahara DM, Souza AIJ, Macedo TR. Avaliação da cultura de segurança do paciente em terapia intensiva neonatal. Texto Contexto Enferm. 2015;24(1):161-9. https://doi.org/10.1590/0104-07072015000490014

26. Galvão TF, Lopes MCC, Oliva CCC, Araújo MEA, Silva MT. Cultura de segurança do paciente em um hospital universitário. Rev Latino-Am Enfermagem. 2018;26:e3014. https://doi.org/10.1590/1518-8345.2257.3014

27. Pedroni VS, Gouveia HG, Vieira LB, Wegner W, Oliveira ACS, Santos MC, et al . Cultura de segurança do paciente na área materno-infantil de hospital universitário. Rev Gaúcha Enferm. 2020;41(spe):e20190171. https://doi.org/10.1590/1983-1447.2020.20190171

28. Andrade LEL, Lopes JM, Souza FMCM, Vieira JRF, Farias LPC, Santos CCM, et al . Cultura de segurança do paciente em três hospitais brasileiros com diferentes tipos de gestão. Ciênc Saúde Coletiva. 2018;23(1):161-72. https://doi.org/10.1590/1413-81232018231.24392015

29. Santiago THR, Turrini RNT. Cultura e clima organizacional para segurança do paciente em Unidades de Terapia Intensiva. Rev Esc Enferm USP. 2015;49(Spe):123-30. https://doi.org/10.1590/S0080-623420150000700018

30. Batista J, Cruz EDA, Alpendre FT, Paixão DPSS, Gaspari AP, Mauricio AB. Cultura de segurança e comunicação sobre erros cirúrgicos na perspectiva da equipe de saúde. Rev Gaúcha Enferm. 2019;40(spe):e20180192. https://doi.org/10.1590/1983-1447.2019.20180192

31. Carmo JMA, Mendoza IYQ, Goveia VR, Souza KV, Manzo BF, Guimarães GL. Cultura de segurança do paciente em unidades hospitalares de ginecologia e obstetrícia: estudo transversal. Rev Bras Enferm. 2020;73(5):e20190576. https://doi.org/10.1590/0034-7167-2019-0576

32. Abreu IM, Rocha RC, Avelino FVSD, Guimarães DBO, Nogueira LT, Madeira MZA. Cultura de segurança do paciente em centro cirúrgico: visão da enfermagem. Rev Gaúcha Enferm. 2019;40(Spe):e20180198. https://doi.org/10.1590/1983-1447.2019.20180198

33. Okuyama JHH, Galvão TF, Crozatti MTL, Silva MT. Health professionals' perception of patient safety culture in a university hospital in São Paulo: a cross-sectional study applying the Hospital Survey on Patient Safety Culture. Sao Paulo Med J. 2019;137(3):216-22. https://doi.org/10.1590/1516-3180.2018.0430140319

34. Mello JF, Barbosa SFF. Cultura de segurança do paciente em terapia intensiva: recomendações da enfermagem. Texto Contexto Enferm. 2013;22(4):1124-33. https://doi.org/10.1590/S0104-07072013000400031

35. Tavares APM, Moura ECC, Avelino FVSD, Lopes VCA, Nogueira LT. Cultura de segurança do paciente na perspectiva da equipe de enfermagem. Rev Rene. 2018;19:e3152. https://doi.org/10.15253/2175-6783.2018193152

36. Tobias GC, Bezerra ANQ, Paranaguá TTB, Silva AEBC. Cultura de segurança em hospital de ensino: fortalezas e fraquezas percebidas por enfermeiros. Rev Enferm UFPE. 2016;10(3):1063-70. https://doi.org/10.5205/reuol.8702-76273-4-SM.1003201616

37. Corona ARPD. Avaliação da cultura de segurança do paciente em hospital público de ensino de Mato Grosso do Sul[Tese]. São Paulo: Universidade de São Paulo; 2017.

38. Lima Neto AV. Percepção da cultura de segurança do paciente pelos enfermeiros de unidades de terapia intensiva[Dissertação]. Natal: Universidade Federal do Rio Grande do Norte; 2017.

39. Silva MF. Cultura de segurança da equipe de enfermagem no serviço de urgência e emergência [Dissertação]. Natal: Universidade Federal do Rio Grande do Norte; 2017.

40. Rocha RC. Cultura de segurança do paciente em centro cirúrgico: perspectiva da equipe de enfermagem [Dissertação]. Teresina: Universidade Federal do Piauí; 2017.

41. Rodrigues WVD. Avaliação da Cultura de Segurança do Paciente entre profissionais de saúde de um hospital público [Dissertação]. São Paulo: Instituto Sírio-Libanês de Ensino e Pesquisa do Hospital Sírio-Libanês; 2016.

42. Cassago RM. Avaliação da percepção da cultura de segurança do paciente com o questionário HSOPSC em um hospital público de São Paulo [Dissertação]. São Paulo: Instituto Sírio-Libanês de Ensino e Pesquisa do Hospital Sírio-Libanês; 2017.

43. Félix RS. Cultura de segurança do paciente em uma maternidade na perspectiva de usuárias e equipe multiprofissional [Dissertação]. Santa Maria: Centro Universitário Franciscano; 2017.

44. Andrade LEL. Evolução da cultura de segurança em hospitais antes e após a implantação do programa nacional de segurança do paciente [Dissertação]. Natal: Universidade Federal do Rio Grande do Norte; 2016.

45. Nicácio MC. Cultura de segurança da mulher no parto hospitalar: um estudo misto das percepções dos profissionais de enfermagem e médicos [Dissertação]. Rio de Janeiro: Universidade do Estado do Rio de Janeiro; 2019.

46. Toso GL, Golle L, Magnago TSBS, Herr GEG, Loro MM, Aozane F, et al . Cultura de segurança do paciente em instituições hospitalares na perspectiva da enfermagem. Rev Gaúcha Enferm. 2016;37(4):e58662. https://doi.org/10.1590/1983-1447.2016.04.58662

47. Kaufman G, McCaughan D. The effect of organizational culture on patient safety. Nurs Stand. 2013;27(43):50-6. https://doi.org/10.7748/ns2013.06.27.43.50.e7280

48. Wagner C, Smits M, Sorra J, Huang CC. Assessing patient safety culture in hospitals across countries. Int J Qual Health Care. 2013;25(3):213-21. https://doi.org/10.1093/intqhc/mzt024

49. Furini ACA, Nunes AA, Dallora MELV. Notificação de eventos adversos: caracterização dos eventos ocorridos em um complexo hospitalar. Rev Gaúcha Enferm. 2019;40(n-esp):e20180317. https://doi.org/10.1590/1983-1447.2019.20180317

50. Amaral JF, Ribeiro JP, Paixão DX. Qualidade de vida no trabalho dos profissionais de enfermagem em ambiente hospitalar: uma revisão integrativa. Rev Espaço Saúde. 2015;16(1):66-74 https://doi.org/10.22421/1517-7130.2015v16n1p66