Cogitare Enfermagem

ORIGINAL ARTICLE

Assessment of patient safety culture in a Brazilian trauma reference hospital

HIGHLIGHTS

1. None of the twelve dimensions reached the cutoff point for strengths.
2. Non-punitive response and frequency of notifications had the lowest percentages.
3. Neutral dimensions indicate institutional potential to strengthen the culture.
4. Actions on patient safety need to be improved.

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ABSTRACT

Objective: To assess the patient safety culture in a trauma reference hospital in Rio Grande do Norte. **Method:** Cross-sectional, quantitative study conducted between May and August 2023, using the E-Questionnaire on Hospital Safety Culture with professionals from the multi-professional team. Descriptive analysis was performed, based on the percentage of positive responses in the twelve dimensions of the instrument. **Results:** 97 professionals participated (16.4%). No dimension was classified as a strength. The weakest were management support for safety (21.7%), non-punitive response to errors (26.8%), and frequency of reported events (27.3%). The best, although neutral, were organizational learning/continuous improvement (73.2%), management/supervision expectations and actions (55.8%), and teamwork (54.9%). **Conclusion:** The safety culture was found to be weakened, suggesting institutional interventions with non-punitive approaches to errors and greater management engagement with the care context.

DESCRIPTORS: Organizational Culture; Quality of Health Care; Safety Management; Risk Management; Patient Safety.

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INTRODUCTION

Patient safety (PS) is one of the central pillars of quality healthcare and is defined as the set of organized actions aimed at reducing risks, preventing avoidable harm, and mitigating the consequences of errors when they occur. In the hospital context, especially in high-complexity services such as trauma hospitals, the probability of Adverse Events (AE) is increased due to patients' clinical severity, the unpredictability of care situations, and the need for rapid and coordinated responses from teams[1-2].

In Brazil, the institutionalization of PS began with the creation of the National Patient Safety Program (NPSP) in 2013, which established guidelines for implementing Patient Safety Centers (PSC), adopting care protocols, and strengthening the reporting and analysis of AEs. These initiatives are based on the recognition that errors are largely the result of systemic failures, rather than solely individual failures, requiring an organizational culture oriented towards learning and continuous improvement[3].

The Patient Safety Culture (PSC) refers to the set of values, attitudes, perceptions, and behaviors shared by healthcare professionals that determine the organization's commitment to safety[4]. National and international evidence shows that organizations with more mature PSCs have better care outcomes, greater adherence to safe practices, and increased transparency in incident communication[5-7].

According to data from the World Health Organization (WHO), 134 million AEs occur annually in hospitals in middle- and low-income countries, resulting in 2.6 million avoidable deaths[1]. In Brazil, according to data from the monitoring panel of incidents and adverse events related to healthcare from the National Health Surveillance Agency (ANVISA), there were 425,983 notifications in 2024 alone, demonstrating the need to prioritize safety actions in healthcare services[8].

Thus, evaluating PSC in healthcare services is of utmost importance, as it serves as an indicator of improvements through the results of situational analysis, helps reduce AEs, assists leaders and managers in identifying barriers and strengths in care, and allows for quantifying and monitoring the quality and safety of care in a structured manner, guiding the development of continuous improvement strategies[1,9].

Among the available instruments for evaluating PSC, the Hospital Survey on Patient Safety Culture (HSOPSC), developed in the United States of America (USA), stands out as a diagnostic tool for measuring PSC in health institutions, allowing the identification of strengths and areas for improvement[4,10].

In high-complexity hospitals, where the urgency and clinical severity of patients pose a high risk to care, evaluating PSC is a strategic tool for identifying opportunities to improve processes and professional behaviors, reduce adverse events, prevent medical errors, and promote better clinical outcomes[11].

In this context, it is essential to understand how PSC is expressed in a reference trauma hospital from the perspective of healthcare professionals. Despite the topic's relevance, knowledge gaps persist regarding this care setting. Thus, this study aimed to evaluate the patient safety culture in a reference trauma hospital in Rio Grande do Norte.

METHOD

This is a cross-sectional study with a quantitative design, conducted at a reference trauma hospital in the state of Rio Grande do Norte. The institution has 385 beds distributed among wards, clinical observation, polytrauma, trauma observation, Burn Treatment Center, and Intensive Care Units (ICUs). In addition, since 2014, it has had the PSC that carries out actions aimed at preventing adverse events and implementing the patient safety protocols recommended by the NPSP.

This research was developed within the context of a university extension project in which the hospital participates, focused on analyzing AEs and strengthening reporting in the NOTIVISA and VigiMed systems, national platforms for recording and monitoring healthcare and medication-related incidents, respectively.

The study population consisted of professionals from the multi-professional assistance and administrative team working during the data collection period, including doctors, nurses, technicians, nursing assistants, physiotherapists, nutritionists, pharmacists, dentists, and other administrative professionals not directly involved in care. Professionals with a permanent contract and at least 3 months of service at the institution were included. Workers on leave, outsourced workers, interns, and professionals hired on a temporary basis were not included. The sampling was non-probabilistic, based on convenience and without prior sample calculation. Participation in the research depended on the voluntary response of the invited professionals.

The instrument used was the E-Questionnaire on Hospital Safety Culture, a self-administered questionnaire developed by the CNPq QualiSaúde Research Group at the Federal University of Rio Grande do Norte (UFRN), in partnership with ANVISA, which currently coordinates its application through a national assessment. It is a free electronic system, accessible online (https://www.cultura.qualisaude.ccs.ufrn.br), valid, fast, and reliable for assessing CSP in Brazilian hospitals, corresponding to the Brazilian adapted version of the Hospital Survey on Patient Safety Culture (HSOPSC), version 1.0, from the Agency for Healthcare Research and Quality (AHRQ)[12].

The HSOPSC evaluates 12 dimensions of safety culture and includes 62 questions divided into seven sections, where 52 are answered on a *Likert* scale of five points for agreement (Disagree, Strongly Disagree, Agree, Strongly Agree) or frequency (Never, Always), or one more response option (Not applicable/Blank response), as shown in Chart 1.

Sections G and H of the instrument included questions about the professional's characterization, work unit, time worked in the hospital and in the current unit/area, weekly hours worked, and whether they have direct patient contact, as well as comments on the PS in the hospital.

Data collection occurred from May to August 2023, based on the analysis of consolidated responses to the questionnaire provided by the hospital's PSC, as reflected in the evaluation report.

The PSC conducted the cultural evaluation, registering professionals and collecting data both in person and remotely. There was an active search to confirm and register the active professionals. Afterward, the questionnaire was sent via email, containing evaluation instructions, an Informed Consent Form (ICF), and a link to access the questionnaire.

Chart 1. Evaluated dimensions in the Hospital Survey on Patient Safety Culture. Natal, RN, Brazil, 2023

Dimensions
1. Frequency of reported events.
2. Perception of safety.
3. Expectations and actions of management/supervision of the unit/service that favor safety.
4. Organizational learning/continuous improvement.
5. Teamwork in the unit/service.
6. Openness to communications.
7. Feedback and communication about errors.
8. Non-punitive response to errors.
9. Staffing levels.
10. Support from hospital management for patient safety.
11. Teamwork between units.
12. Problems in shift changes and transitions between units/services.

Source: The authors (2023).

The aggregated data was requested from the service, which provided it in an anonymized form, and was subsequently exported to a *Microsoft Excel* 2021 spreadsheet for organization and descriptive analysis.

The percentage of positive responses for each of the twelve dimensions of the CSP was calculated, considering positive responses as those classified as 'Agree'/'Strongly Agree' or 'Frequently'/'Always.' The classification of the dimensions followed the criteria proposed in the User's Guide of the HSOPSC and in the Brazilian validation of the instrument: ≥75% (strong), 50–74% (neutral), and <50% (weakened)[4]. Missing data or 'Not applicable' were excluded from the denominator.

This study was approved by the Ethics and Research Committee of the Maternity School Januário Cicco/UFRN, with approval number 7.261.875.

RESULTS

97 professionals participated in the study, corresponding to 16.4% of the questionnaires sent. Of the total respondents, 78 (80.4%) fully completed the professional characterization questions. The 19 participants who did not answer these questions were included in the analysis of the safety culture dimensions, as they fully responded to the HSOPSC items. Missing responses were treated as missing data (*missing values*) and excluded from the specific descriptive analyses of characterization.

The sample was predominantly composed of nursing professionals, 45 (53.9%), with a highlight on nursing technicians, 29 (37.2%), followed by other assistance categories, as shown in Table 1.

Table 1. Characterization of professionals. Natal, RN, Brazil, 2023

Profession	n	%
Nursing technician	29	37.2
Physiotherapist, Occupational Therapist, or Speech Therapist	20	25.6
Nurse	13	16.7
Others	4	5.1
Nursing assistant	3	3.8
Dentist	3	3.8
Nutritionist	2	2.6
Medical staff physician	2	2.6
Pharmacist	1	1.3
Administrative assistant/Secretary	1	1.3
TOTAL	78	100
No responses	22	
Total overall	100	

Source: The authors (2023).

Regarding the specific area of activity in the service, most participants were from intensive care unit 28 (35.9%). It was observed that the various/other sectors (which also do not have space for description in the instrument) received the second highest percentage 23 (29.5%), followed by rehabilitation 11 (14.1%), emergency seven (9.0%), pediatrics three (3.8%), surgery two (2.6%), pharmacy two (2.6%), clinical medicine one (1.3%), and obstetrics one (1.3%).

Regarding the time worked in the hospital, the study showed a higher percentage of responses for 2 to 5 years 21 (26.9%). Furthermore, there is participation from professionals who have worked for less than 1 year three (3.8%), 6 to 10 years 16 (20.5%), 11 to 15 years 18 (23.1%), 16 to 20 years one (1.3%), 21 years or more 16 (20.5%). Regarding the time worked in the current area/unit, the following results were highlighted: less than 1 year five (6.4%), between 2 and 5 years 21 (26.9%), from 6 to 10 years 18 (23.1%), from 11 to 15 years 12 (15.4%), from 16 to 20 years three (3.8%), and 21 years or more nine (11.5%).

Furthermore, regarding the time worked in the current specialty/profession, the following data was obtained: 2 to 5 years 11 (14.3%), from 6 to 10 years 10 (13%), from 11 to 15 years 17 (22.1%), from 16 to 20 years 14 (18.2%), and above 21 years or more 20 (26%). Regarding the work hours per week, the following percentages were obtained: up to 20 hours five (6.4%), up to 21 to 39 hours 40 (51.3%), and with 40 or more hours 33 (42.3%).

Regarding contact with patients, most professionals report direct contact or interaction, 68 (86.1%), while the others report no frequent interaction, 11 (13.9%).

Regarding the assessment of the dimensions of the safety culture, none reached the cutoff point for strength, which is greater than or equal to 75%. Three dimensions showed a neutral classification, particularly Organizational learning/continuous improvement at 73.2%. The other dimensions were classified as weakened, with Hospital management support for patient safety, non-punitive response to errors, and "Frequency of reported events" having the lowest percentages of positive responses. These results are described in Table 2.

Table 2. Percentage of positive responses from the twelve dimensions of the patient safety culture. Natal, RN, Brazil, 2023

Dimensions of the Patient Safety Culture	% Positive responses	Assessment of the dimensions of the Culture
1- Frequency of reported events	27.3%	Weakened
2- Perception of safety	29.3%	Weakened
3- Expectations and actions of the management/supervision of the unit/service that favor safety	55.8%	Neutral
4- Organizational learning/continuous improvement	73.2%	Neutral
5- Teamwork in the unit/service	54.9%	Neutral
6- Openness to communication	44.4%	Neutral
7- Feedback and communication about errors	35.8%	Weakened
8- Non-punitive responses to errors	26.8%	Weakened
9- Staffing levels	38.4%	Weakened
10- Support from hospital management for patient safety	21.7%	Weakened
11- Teamwork between units	27.9%	Weakened
12- Problems with shift changes and transitions between units/ services	28.7%	Weakened

Source: The authors (2023).

Regarding the perception of patient safety in the workplace, most professionals, 38 (48.1%), rated it as fair, while 28 (35.4%) rated it as good. As for the frequency of adverse event notifications, the majority reported one to two notifications 19 (61.3%), however, the other participants reported a higher number of notifications, as presented in Table 3.

Table 3. Perception of patient safety in the workplace and frequency of reported adverse events. Natal, Rio Grande do Norte, Brazil, 2023

Perception of patient safety in the workplace	n	%
Poor	3	3.8%
Fair	38	48.1%
Bad	7	8.9%
Excellent	3	3.8%
Good	28	35.4%
TOTAL	79	100%
No responses	21	-
Total overall	100	
Frequency of reported adverse events	**n**	**%**
1 to 2 cases	19	61.3%
3 to 5 cases	5	16.1%
6 to 10 cases	3	9.7%
11 to 20 cases	2	6.5%
more than 21 cases	2	6.5%
TOTAL	31	100%
No responses	69	-
Total overall	100	

Source: The authors (2023)

DISCUSSION

The results highlight the fragility of CSP in a trauma hospital, a context characterized by high complexity of care and greater exposure to risks.

Despite advances in research on CSP in hospital settings, there remains a significant gap in studies that specifically address reference hospitals for trauma. Most investigations focus on general hospitals or isolated sectors, such as ICUs and emergency services, which limits the understanding of the organizational, care, and managerial particularities inherent to trauma care.

It was observed from the results that there was a predominance of participation from the Nursing team as a professional category, especially from Nursing Technicians, since this class makes up the largest portion of the workforce in hospitals due to providing direct care to patients full-time, in addition to performing fundamental functions for the promotion of PS[2,13-14].

A similar result was identified in a systematic review involving hospitals in North and South America, Europe, the Middle East, and the Far East, where it was observed that Nursing comprises the largest percentage of health team professionals[15]. This finding reflects the typical composition of hospital teams and the ongoing involvement of these professionals with patients, which may lead to a more critical perception of care safety.

The limited participation of some professional categories may be associated with factors such as workload, low awareness of the PS theme, or reduced perception of the institutional impact of research[16]. The significant participation of ICU professionals warrants attention, as these workers have more direct patient contact. In addition, these sectors concentrate patients in severe clinical conditions, with a high risk load. According to the literature, the Safety Culture tends to be perceived as more sensitive to organizational failures, especially regarding communication, staffing, and management support[17].

Regarding the Time of work in the hospital and the Time of work in the current area/unit, these variables directly relate to the consolidation of professional experience within the organizational context. The literature indicates that both dimensions are related to the work environment, which can positively contribute to the development of a culture by allowing professionals to become more integrated into the work process and the organization, thus acting with greater safety and preventing risks of AE[16-17].

Among the dimensions with the best results are "Organizational learning/ continuous improvement", "Expectations and actions of management/supervision of the unit/service that favor safety", and "Teamwork in the unit/service". These were also cited in other studies as strengths or neutral dimensions, as potential factors for a strengthened CSP[18-19].

The dimensions classified as neutral indicate institutional potentialities related to teamwork, organizational learning, and local leadership performance. Such findings suggest the existence of structural bases that can be strengthened through participatory management strategies, ongoing education, and systematic feedback to the teams[6,20-21].

In an HSPSC questionnaire administered in China, the majority of participants agreed that the hospital develops activities aimed at improving CSP, as evidenced by 87.1% positive responses in the domain "Organizational Learning – Continuous Improvement."

This finding indicates a high level of professional perception of institutional initiatives aimed at strengthening the Safety Culture[2].

Regarding the dimension Teamwork in the unit/service, it is observed that the percentage of responses was considered neutral. Studies with similar results indicate that there may be a divergence of opinions about teamwork in the institution[22-23]. This indicator usually shows percentages above 75% in other evaluations, as evidenced by a study conducted in Jordan that identified 81.6% positive responses[24], representing a consistently high aspect in CSP analyses.

According to the literature, strengthened teamwork is evidenced by improved inter-professional communication, greater cooperation among professionals, reduced conflicts, increased reporting of AEs, positive perceptions of workers about teamwork, and management support, as well as active participation of teams in ongoing training[23-25]. Such actions generate positive impacts on care, especially in a trauma institution where patients are physiologically unstable[26].

Although the three mentioned dimensions do not reach the percentage corresponding to a strength, it is worth noting that they represent favorable factors for the development of a solid culture[27], as they reflect the involvement of leadership regarding actions aimed at the quality of care and PS.

Regarding the dimensions that showed greater fragility, Management support for patient safety, "Frequency of reported events," and "Non-punitive response to errors," the results highlight the need for specific attention to these aspects, indicating the relevance of educational strategies and strengthening of patient safety monitoring actions directed at such dimensions.

In relation to the dimension Management support for patient safety, there is a need for greater awareness from management to support actions aimed at promoting safety, such as ongoing education initiatives on the safe use of medications, AE simulations, and prevention strategies, in addition to encouraging reporting, analysis of adverse events, and conducting clinical audits and record reviews[24].

The fragility identified in this dimension underscores the relevance of management's commitment to PS, given that leadership involvement is essential for the dissemination of the Safety Culture and for the planning, implementation, and evaluation of improvement actions aligned with a participatory management model[28].

In an evaluation of CSP conducted in hospitals in Tabriz, Iran, this dimension yielded a result of 65.8%[27]. In this sense, it is perceived that professionals will hardly feel committed to the topic if they do not perceive management's effort[29].

However, in an evaluation of CSP conducted in hospitals in Shenzhen, 86.6% of positive responses for this dimension were identified[30], differing from the results found in the present study. This discrepancy highlights contrasts between the analyzed contexts and may indicate differences in professionals' perceptions of management's actions related to patient safety.

The dimensions "Non-punitive response to errors" and "Frequency of reported events" were characterized as weaknesses, and are generally the most critical dimensions among CSP evaluations from other Brazilian institutions. When compared to the results of the national evaluation conducted by ANVISA in Brazil, a similar situation is observed, as the average percentages of these dimensions are 56.5% and 31.8%, respectively[9].

An international study[20] reported the lowest percentage for "Non-punitive responses to errors" at 18%, indicating that most of the team expect to be punished for some error, and that they also express concern about reprisals and dismissals after reporting AEs.

In the hospital context, professionals' perceptions of a punitive approach to errors have been associated with lower rates of AE reporting, which may limit organizational learning and influence perceptions of care safety. Additionally, the literature indicates that weaknesses in security systems are associated with adverse care outcomes, including higher rates of harm, increased costs, and prolonged hospitalization[26].

In the face of an error, the situation should be analyzed broadly, considering all aspects involved, rather than directing blame at the individual who made the mistake[16]. Thus, an environment should be developed in which all team members can identify and communicate errors without fear, so that they can be analyzed and avoided in the future.

Another aspect that draws attention concerns the perception of patient safety, which is reported as regular in the evaluated hospital. This data shows a significant difference when compared to the evaluation by ANVISA, classified as 'good'[9], and highlights that teams do not feel confident regarding the safety of care provided to patients in this environment, unlike the evaluation conducted in public health units in Morocco, which perceived patient safety as 'poor'[28], demonstrating how much improvement is needed in patient safety at the institution to provide safer care[30].

Regarding limitations, it is essential to note that the results are based on professionals' self-assessments and voluntary responses to the survey, which may not fully reflect the reality of the service culture. It is emphasized that the instrument allows participants to self-declare in the 'other' category during professional characterization; however, there is no specific field for describing the profession, which is considered a limitation of the questionnaire.

Moreover, the occurrence of missing data in key items of the instrument may have affected the robustness of the analyses. Therefore, it was necessary to exclude instruments with incomplete responses, which may limit the generalizability of findings and reflections on the difficulties that professionals face when addressing sensitive topics, such as incident reporting.

Thus, new studies are needed to analyze the institution's patient safety culture using a more representative sample of participants and a more controlled method.

It is added that the few pieces of evidence regarding patient safety culture specific to trauma hospitals found in the literature restricts more in-depth comparative analyses and the generalization of findings for this care profile.

Despite the limitations of the study, the analyzed data constitute an important contribution to fostering reflections and debates at the institutional level, which can inform the planning of actions and interventions aimed at strengthening patient safety culture.

CONCLUSION

The present study found that the patient safety culture in a general trauma hospital in Rio Grande do Norte is weakened, with no dimensions identified as strengths.

Despite this, those classified as neutral are configured as strategic foundations for the development of a more mature patient safety culture, highlighting the relevance of teamwork linked to continuous learning processes, which aim to sustain and strengthen a consistent patient safety culture capable of driving continuous cycles of improvement, fostering innovation, and enhancing institutional efficiency.

The low frequency of reporting adverse events suggests the presence of a punitive culture, favoring underreporting and compromising the quality of care for patients who are victims of trauma. This reinforces the need to reframe errors as learning opportunities, and it is up to management and team leaders to promote a psychologically safe environment so that professionals feel encouraged to report incidents without fear of punishment, which favors safe care.

It is recommended to conduct new studies with more representative samples, more robust methodological designs, and analyses that account for the specificities of different care sectors, to deepen understanding of safety culture in trauma hospitals and support more effective, measurable interventions.

REFERENCES

1. World Health Organization (WHO). Patient safety incident reporting and learning systems: technical report and guidance [Internet]. Geneva: World Health Organization (WHO); 2020 [cited 2024 Apr 10]. 51 p. Available from: https://www.who.int/publications/i/item/9789240010338

2. Zhou L, Li L, Xiao S, Yang N. Concern for patient safety culture of ECMO team in emergency department: a cross-sectional survey. Inquiry [Internet]. 2022 [cited 2025 Feb 17];59:1-8. Available from: https://doi.org/10.1177/00469580221129168

3. Ministério da Saúde (BR). Portaria N° 529, de 1° de abril de 2013. Institui o Programa Nacional de Segurança do Paciente (PNSP). Institui o Programa Nacional de Segurança do Paciente (PNSP). Diário Oficial da União. [Internet]. 2013 [cited 2024 Apr 10](Seção 1). Available from: https://bvsms.saude.gov.br/bvs/saudelegis/gm/2013/prt0529_01_04_2013.html

4. Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services. Hospital Survey on Patient Safety Culture [Internet]. Rockville (MD): Agency for Healthcare Research and Quality; 2004 [cited 2024 Apr 10]. 66 p. Available from: https://www.ahrq.gov/sites/default/files/publications/files/hospcult.pdf

5. Vikan M, Haugen AS, Bjørnnes AK, Valeberg BT, Deilkås ECT, Danielsen SO. The association between patient safety culture and adverse events - a scoping review. BMC Health Serv Res [Internet]. 2023 [cited 2024 Aug 13];23:300. Available from: https://doi.org/10.1186/s12913-023-09332-8

6. Prieto MMN, da Fonseca REP, Zem-Mascarenhas SH. Assessment of patient safety culture in Brazilian hospitals through HSOPSC: a scoping review. Rev Bras Enferm [Internet]. 2021 [cited 2025 Oct 24];74(6):e20201315. Available from: https://doi.org/10.1590/0034-7167-2020-1315

7. Hoffmann MA, Menezes AC, Azevedo C, Amaral FMA, Rodrigues TA, Ribeiro HCTC, et al. Patient safety culture in dialysis services during the COVID-19 pandemic: nursing perspective. Cogitare Enferm [Internet]. 2023 [cited in 2025 Dec 19];28:e92134. Available in: https://dx.doi.org/10.1590/ce.v28i0.92134

8. Brasil. Agência Nacional de Vigilância Sanitária (ANVISA). Incidentes/eventos adversos relacionados à assistência à saúde notificados no Notivisa [Internet]. Brasília: ANVISA; [2025] [cited 2025 Dec 19]. Available from: https://www.gov.br/anvisa/pt-br/acessoainformacao/dadosabertos/informacoes-analiticas/servicos-de-saude/notivisa-modulo-assistencia-a-saude

9. Reis CT, Laguardia J, de Barros CG, Andreoli PBA, Martins M. Reliability and validity of the Brazilian version of the HSOPSC: a reassessment study. Cad Saúde Pública [Internet]. 2019 [cited 2024 Apr 10];35(8):e00246018. Available from: https://doi.org/10.1590/0102-311X00246018

10. Agência Nacional de Vigilância Sanitária (ANVISA). Avaliação Nacional da Cultura de Segurança do Paciente em Hospitais - 2021 [Internet]. Brasília: Anvisa; 2021 [cited 2026 Mar 2]. 10 p. Available from: https://www.gov.br/anvisa/pt-br/centraisdeconteudo/publicacoes/servicosdesaude/publicacoes/relatorio-avaliacao-da-cultura-de-seguranca-2021.pdf

11. Minuzzi AP, Salum NC, Locks MOH. Assessment of patient safety culture in intensive care from the health team's perspective. Texto Contexto - Enferm [Internet]. 2016 [cited 2025 Dec 15];25(2):e1610015. Available from: https://doi.org/10.1590/0104-07072016001610015

12. de Andrade LEL, de Melo LOM, da Silva IG, de Souza RM, de Lima ALB, de Freitas MR, et al. Adaptation and validation of the Hospital Survey on Patient Safety Culture in an electronic Brazilian version. Epidemiol Serv Saúde [Internet]. 2017 [cited 2025 Apr 19];26(3):455-68. Available from: https://www.scielo.br/j/ress/a/WWrcjrQH3r5LvwRKV3VbPSy/?lang=pt

13. Pirhofer J, Bükki J, Vaismoradi M, Glarcher M, Paal P. A qualitative exploration of cultural safety in nursing from the perspectives of Advanced Practice Nurses: meaning, barriers, and prospects. BMC Nurs [Internet]. 2022 [cited 2025 Feb 17];21:(178):1-14. Available from: https://doi.org/10.1186/s12912-022-00960-9

14. Sátiro LSP, Rodrigues CCFM, Tibúrcio MP, Oliveira PMS, Salvador PTCO. Perceptions of professionals working in a university hospital about the patient safety culture. Cogitare Enferm. [Internet]. 2024 [cited 2025 Dec 19];29:e95250Available from: https://doi.org/10.1590/ce.v29i0.95250

15. Waterson P, Carman EM, Manser T, Hammer A. Hospital Survey on Patient Safety Culture (HSPSC): a systematic review of the psychometric properties of 62 international studies. BMJ Open [Internet]. 2019 [cited 2025 Dec 19];9(9):e026896. Available from: https://doi.org/10.1136/bmjopen-2018-026896

16. Aires-Moreno GT, Marques LG, Sodré MMX, Lima MMM, Ramos SF, Araújo-Neto FC, et al. Perceptions of patient safety culture in a teaching hospital in Brazil. BMC Health Serv Res [Internet]. 2025 [cited 2025 Dec 16];25:1427. Available from: https://doi.org/10.1186/s12913-025-13190-x

17. Kruschewsky NDF, Freitas KS, da Silva Filho AM. Patient safety culture in intensive care: integrative review. Rev Baiana Enferm [Internet]. 2020 [cited 2025 Dec 18];35: e37164.Available from: https://doi.org/10.18471/rbe.v35.37164

18. Nwosu ADG, Ossai E, Ahaotu F, Onwuasoigwe O, Amucheazi A, Akhideno I. Patient safety culture in the operating room: a cross-sectional study using the Hospital Survey on Patient Safety Culture (HSOPSC) Instrument. BMC Health Serv Res [Internet]. 2022 [cited 2024 Jun 10];22:1445. Available from: https://doi.org/10.1186/s12913-022-08756-y

19. Akologo, A, Abuosi, AA, Anaba, EA. A cross-sectional survey on patient safety culture among healthcare providers in the Upper East region of Ghana. PLoS One [Internet]. 2019 Aug 20 [cited 2024 Jun 10];14(8):e0221208. Available from: https://doi.org/10.1371/journal.pone.0221208

20. Jye AKR, Hing CZ , Peter S, Bartholomew P, Senok J. Hospital survey on patient safety culture in Sarawak General Hospital: a cross sectional study. Med J Malaysia [Internet]. 2019 [cited 2024 Aug 13];74(5):385-388. Available from: https://www.researchgate.net/publication/336716844_Hospital_survey_on_patient_safety_culture_in_Sarawak_General_Hospital_A_cross_sectional_study

21. Ahmed FA, Asif F, Munir T, Halim MS, Ali ZF, Belgaumi A, et al. Measuring the patient safety culture at a tertiary care hospital in Pakistan using the Hospital Survey on Patient Safety Culture (HSOPSC). BMJ Open Qual [Internet]. 2023 [2024 Aug 13];12(1):e002029. Available from: https://doi.org/10.1136/bmjoq-2022-002029

22. Kakemam E, Albelbeisi AH, Davoodabadi S, Ghafari M, Dehghandar Z, Raeissi P. Patient safety culture in Iranian teaching hospitals: baseline assessment, opportunities for improvement and benchmarking. BMC Health Serv Res [Internet]. 2022 Mar 26[cited 2024 Aug 13];22:403. Available from: https://doi.org/10.1186/s12913-022-07774-0

23. Lotici A, Zonta FNS, Lotici G, Gaffuri T. Evaluation of patient safety culture from the perspective of intensive care professionals. Enf Global [Internet]. 2022 [cited 2024 Jun 10];21(3):67. Available from: https://doi.org/10.6018/eglobal.488311

24. Mrayyan MT. Predictors and outcomes of patient safety culture: a cross-sectional comparative study. BMJ Open Qual [Internet]. 2022 [cited 2024 Aug 13];11(3):e001889. Available from: https://doi.org/10.1136/bmjoq-2022-001889

25. Chegini Z, Janati A, Afkhami M, Behjat M, Islam SMS. A comparative study on patient safety culture among emergency nurses in the public and private hospitals of Tabriz, Iran. Nurs Open [Internet]. 2020 Jan 28 [cited 2024 Aug 13];7(3):768-75. Available from: https://doi.org/10.1002/nop2.449

26. Metelski FK, Engel FD, de Mello ALSF, Meirelles BHS. Patient safety and error from the perspective of complex thinking: documentary research. Physis [Internet]. 2023 [cited 2025 Dec 15];33:e33009. Available from: https://doi.org/10.1590/S0103-7331202333009

27. Zabin LM, Zaitoun RSA, Abdullah AA. Patient safety culture in Palestine: university hospital nurses' perspectives. BMC Nurs [Internet]. 2022 Jul 28 [cited 2024 Aug 13];21:204. Available from: https://doi.org/10.1186/s12912-022-00987-y

28. Fassi CF, Mourajid Y, Chahboune M, Hilali A. Patient Safety Culture Perception among Moroccan Healthcare professionals: cross-sectional study in public hospitals. Ethiop J Health Sci [Internet]. 2023 [cited 2024 Aug 13];33(2):273-280. Available from: https://doi.org/10.4314/ejhs.v33i2.12

29. Tenza IS, Attafuah PYA, Abor P, Nketiah-Amponsah E, Abuosi AA. Hospital managers' views on the state of patient safety culture across three regions in Ghana. BMC Health Serv Res [Internet]. 2022 [cited 2024 Aug 13];22:1300. Available from: https://doi.org/10.1186/s12913-022-08701-z

30. Hao HS, Gao H, LI T, Zhang D. Assessment and comparison of patient safety culture among health-care providers in shenzhen hospitals. Risk Manag Healthc Policy [Internet]. 2020 Sep 11 [cited 2025 Feb 17];2020(13):1543-52. Available from: https://doi.org/10.2147/RMHP.S266813

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Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - **de Souza MTS, Saraiva COPO.** Drafting the work or revising it critically for important intellectual content - **de Souza MTS, Saraiva COPO, de Lima Neto AV, Maciel AC, Guerra SDSF, de Souza MT.** Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - **de Souza MTS, Saraiva COPO.** All authors approved the final version of the text.

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