Research Article
Artigo de Pesquisa
Artículo de Investigación

DOI: https://doi.org/10.12957/reuerj.2024.87675

Assessment of patient safety culture among professionals in a family health strategy service

Avaliação da cultura de segurança do paciente entre profissionais da estratégia saúde da família

Evaluación de la cultura de seguridad del paciente entre profesionales de la estrategia salud de la familia

Mitsi Silva Moisés[I]; David Lopes Neto[I]; Enock Barroso dos Santos[II]; Linda Karolinne Rodrigues Almeida Cunha[III]; Carlos Herbert Sousa de Moraes[I]; Laíse Picanço Barbosa[I]; Elen Palmeira Assunção dos Santos[II]

[I]Universidade Federal do Amazonas. Manaus, AM, Brazil; [II]Secretária Municipal de Saúde de Manaus. Manaus, AM, Brazil; [III]Faculdade Estácio do Amazonas. Amazonas, AM, Brazil

ABSTRACT

Objective: to evaluate patient safety culture from the perspectives of nurses, nursing technicians, and community health agents working in a Family Health Strategy service. **Method:** =descriptive, cross-sectional study with a quantitative approach included nurses, nursing technicians, and community health agents from a Family Health Strategy service in a health district of Manaus, AM, Brazil, conducted from November 2017 to May 2018. Data were collected using the Brazilian version of the Medical Office Survey on Patient Safety Culture and analyzed using the Chi-square test and analysis of variance. The Institutional Review Board approved the study protocol. **Results:** Among the 283 participants, "patient care" and "teamwork" were identified as strong, while four were considered weak dimensions. **Final Considerations:** The findings indicate an adequate patient safety culture from the perspectives of nurses, nursing technicians, and community health agents.

Descriptors: Patient Safety; Organizational Culture; Total Quality Management; Health Personnel; Primary Health Care.

RESUMO

Objetivo: avaliar a cultura de segurança do paciente entre enfermeiros, técnicos de enfermagem e agentes comunitários de saúde da equipe de uma estratégia saúde da família. **Método:** estudo descritivo, transversal, com abordagem quantitativa realizado entre os profissionais, enfermeiros, técnicos de enfermagem e agentes comunitários de saúde da estratégia de saúde da família de um distrito de saúde do munícipio de Manaus, Amazonas, de novembro de 2017 a maio de 2018, utilizando o questionário "Pesquisa sobre Cultura de Segurança do Paciente para Atenção Primária". Dados analisados pelo teste qui-quadrado e análise de variância. Protocolo aprovado pelo comitê de ética em pesquisa. **Resultados**: entre 283 participantes, "assistência ao paciente" e "trabalho em equipe" foram dimensões fortes, enquanto quatro apresentaram fragilidade. **Considerações finais:** os achados apontam para uma avaliação da cultura de segurança do paciente adequada na percepção dos enfermeiros, técnicos de enfermagem e agentes comunitários de saúde.

Descritores: Segurança do Paciente; Cultura Organizacional; Gestão da Qualidade; Profissionais de Saúde; Atenção Primária à Saúde.

RESUMEN

Objetivo: evaluar la cultura de seguridad del paciente entre enfermeros, técnicos de enfermería y agentes comunitarios de salud del equipo de estrategia salud de la familia. **Método:** estudio descriptivo, transversal, con abordaje cuantitativo, realizado entre los profesionales enfermeros, técnicos de enfermería y agentes comunitarios de la salud de la estrategia de salud de la familia de un distrito de salud del municipio de Manaus, Amazonas, de noviembre de 2017 a mayo de 2018, utilizando el cuestionario "Investigación sobre Cultura de Seguridad del Paciente para la Atención Primaria". Datos analizados por el test chi-cuadrado y análisis de variancia. Protocolo aprobado por el comité de ética en investigación. **Resultados:** entre 283 participantes, las dimensiones "asistencia al paciente" y "trabajo en equipo" fueron fuertes, en cuanto cuatro presentaron fragilidad. **Consideraciones finales:** los hallazgos apuntan para una evaluación de la cultura de seguridad del paciente adecuada bajo la percepción de los enfermeros, técnicos de enfermería y agentes comunitarios de salud.

Descriptores: Seguridad del Paciente; Cultura Organizacional; Gestión de la Calidad Total; Personal de Salud; Atención Primaria de Salud.

INTRODUCTION

The delivery of healthcare has become increasingly challenging due to a significant rise in demands and the growing complexity of patients' needs. This situation heightens potential risks and failures, leading to healthcare-related incidents and adverse events[1].

However, advancements in technology and a growing global focus on delivering safer healthcare have significantly improved care quality over the past decade. These improvements are primarily driven by a culture of patient safety, demonstrating the commitment of various stakeholders to creating a therapeutic environment that minimizes risks to patients[1].

This study was financed in part by the Post-Graduate Support Program (POSGRAD) and by the *Fundação de Amparo à Pesquisa do Estado do Amazonas* (FAPEAM), under Resolution No. 002/2024 - Decision No. 069/2024, Issue 2024/2025/FAPEAM.

Corresponding author: Carlos Herbert Sousa de Moraes. E-mail: Herbert27091997@gmail.com

Editor in chief: Cristiane Helena Gallasch; Associated Editor: Renata Flavia Abreu da Silva

Received: Oct 8th 2024 – Accepted: Dec 9th 2024

Research Article
Artigo de Pesquisa
Artículo de Investigación

DOI: https://doi.org/10.12957/reuerj.2024.87675

Patient safety culture encompasses a set of attitudes, values, skills, and behaviors that demonstrate a commitment to managing health and safety. Effectively implementing patient safety requires an understanding of beliefs, values, and standards, along with clearly defined actions and behaviors aimed at ensuring patient safety[2].

One of the key milestones in patient safety culture was the publication of the report "To Err is Human" by the Institute of Medicine (IOM) in the United States in 1999. This document highlights the prevalence of healthcare-related adverse events and their impact on patients and organizations. After its release, patient safety discussions intensified, emphasizing the need for professional and organizational behavior changes. According to the World Health Organization, healthcare organizations should incorporate system-based models into their organizational culture to prevent, detect, mitigate, or reduce the risk or occurrence of incidents. Patient safety culture, therefore, should embody characteristics such as a fair culture—one that is non-punitive when such events occur, prioritizes identifying root causes, promotes incident reporting, and fosters a learning culture[3,4].

Implementing effective strategies to promote a patient safety culture is essential for reducing adverse events and healthcare-associated risks. Recent studies highlight that evidence-based practices, such as protocol standardization and the continuous education of healthcare teams, are critical to mitigating these risks and creating a safer care environment[5].

Improving patient safety practices requires a multifaceted approach that combines information and communication technologies with continuous training strategies for healthcare professionals. These initiatives aim to minimize errors and enhance care quality[6]. Research underscores that integrating evidence-based practices and cultivating a safety culture is essential for improving clinical outcomes and reducing risks in healthcare[7].

Patient safety in primary health care (PHC) is strengthened through the ongoing implementation of monitoring and evaluation systems to assess care delivery. In this context, risk management tools and analyzing adverse events are crucial for minimizing errors, ensuring quality care, and fostering a robust patient safety culture[8].

Expanding studies in the PHC field focused on patient safety culture is essential to gaining a deeper understanding of the topic. Such research can facilitate the implementation of targeted interventions to enhance the quality and safety of care in these healthcare settings.

Accordingly, this study evaluates the patient safety culture among professionals working within a Family Health Strategy team (FHS).

METHOD

This quantitative, descriptive, cross-sectional study involved professionals, including nurses, nursing technicians, and community health agents (CHAs), from Family Health Strategy (FHS) units in a health district (*DISA*, in Portuguese) of Manaus, AM, Brazil.

A representative sample was calculated for each professional group based on a population of 403 professionals (41 nurses, 80 nursing technicians, and 282 community health agents). The sample size was proportionally distributed across 49 FHS teams. A stratified sampling technique was applied, with a 95% confidence interval and a 5% margin of error. Consequently, the final sample included 283 participants: 38 nurses, 66 nursing technicians, and 179 CHAs.

The study's inclusion criteria were working at least 20 hours per week and being employed in the sector for at least six months. Professionals on leave during the data collection period were excluded.

The "*Pesquisa sobre Cultura de Segurança do Paciente para Atenção Primária*," the Brazilian version of the Medical Office Survey on Patient Safety Culture (MOSPSC), was used to collect data. Originally designed by the Agency for Healthcare Research and Quality for the PHC setting, this instrument was later adapted and validated for the Brazilian context.[9] Its authors granted permission for its use in this study.

The MOSPSC comprises 52 items rated on a Likert scale to evaluate professionals' perceptions of safety culture across 12 dimensions: open communication, error reporting, information exchange with other sectors, work processes and standardization, organizational learning, general perceptions of patient safety and quality, managerial support for patient safety, patient care follow-up, patient safety and quality issues, team training,

Research Article
Artigo de Pesquisa
Artículo de Investigación

DOI: https://doi.org/10.12957/reuerj.2024.87675

teamwork, work pressure and pace. It also includes a section for the overall care quality assessment, addressing patient-centeredness, effectiveness, timeliness, efficiency, and equity[10].

Data were collected between November 2017 and May 2018. Participants were individually approached in their work environments at a time convenient for their participation. After signing the free and informed consent form, they received instructions on how to complete the instrument.

The collected data were double entered into a database using the Statistical Package for Social Sciences (SPSS®) software, version 21.0 for Windows.

The results were interpreted following the recommendations of the original instrument[9], which classifies dimensions based on the percentage of positive responses. The frequency of responses for each item and the mean score for each dimension were calculated. Dimensions were classified as strong if 75% or more of participants selected "I totally agree/agree" or "often/always" for positively worded statements or "I totally disagree/disagree" or "never/rarely" for negatively worded statements. Patient safety culture was classified as an area requiring improvement if 50% or more of participants provided negative responses, selecting "I totally disagree/disagree" or "never/rarely" for positively worded statements, or "I totally agree/agree" or "always/frequently" for negatively worded statements.

Simple absolute and relative frequencies were calculated for categorical variables. The Chi-square test was used to analyze associations between variables. For quantitative data, means and standard deviations were calculated when the normality assumption, verified by the Shapiro-Wilk test, was met. Analysis of Variance (ANOVA)[11] was conducted to compare means, with the significance level set at 95%.

The confidentiality of participants' identities was maintained in compliance with guidelines and regulatory standards for research involving human subjects, ensuring respect for human dignity and the protection of participants[12,13]. The hosting university's Institutional Review Board approved the study protocol.

RESULTS

This study included 283 participants, a representative sample including 38 nurses, 66 nursing technicians, and 179 CHAs. Women comprised the majority across all three professions (n = 247; 87.2%). The participants' average age ranged from 41.5 (±6.0) to 47.6 (±8.7) years. Regarding professional experience, 219 participants (77.7%) reported working within the FHS team for over 11 years. Regarding weekly workload, 236 participants (83.4%) indicated working between 32 and 40 hours per week.

Regarding the professionals' level of training, 30 nurses (79%) had completed a specialist program, 17 nursing technicians (26.1%) had completed higher education, and seven of these (10.8%) had also completed a specialist program. Among the CHAs, 65 (36.3%) had completed secondary-level training courses, and 23 (12.9%) had attained higher education.

Table 1 shows the frequencies of positive responses obtained in each dimension.

Table 1: Frequency of positive responses provided by FHS professionals to the MOSPSC dimensions (above 75%). Manaus, AM, Brazil, 2018.

Dimensions	Positive Responses (%)	Classification
Teamwork	82.9	Strong
Patient care monitoring	84.5	Strong
Organizational learning	66.0	Adequate
Perception of patient safety and quality	63.6	Adequate
Team training	28.8	Weak
Managerial support for patient safety	14.7	Weak
Error Reporting	68.3	Adequate
Open communication	49.3	Weak
Work process and standardization	56.6	Adequate
Work pressure	13.5	Weak
Patient safety and quality	57.3	Adequate
Exchange of information with other sectors	66.4	Adequate

Research Article
Artigo de Pesquisa
Artículo de Investigación

DOI: https://doi.org/10.12957/reuerj.2024.87675

The general perception of patient safety culture among the three professional groups indicated that, among the 12 dimensions analyzed, “Patient Care” (84.5%) and “Teamwork” (82.9%) were identified as strong.

On the other hand, four dimensions concerning patient safety were identified as weak, obtaining the lowest scores among the professionals surveyed: “Team Training” (28.8%), “Managerial support for patient safety” (14.7%), “Open Communication” (49.3%), and “Work Pressure and Pace” (13.5%).

Table 2 shows the distribution of means in each dimension according to the professional group.

Table 2: Distribution of means in the MOSPSC dimensions by professional group, FHS team/DISA-South, Manaus, Amazonas, Brazil, 2018.

Dimensions	Profession						
	Nurse		Technician		CHA		
	Mean	SD	Mean	SD	Mean	SD	p-value
Teamwork	90.1[a]	16.0	78.8[b]	28.6	85.2[ab]	22.6	***0.045***
Patient care monitoring	84.9[ab]	22.9	79.2[b]	27.9	89.7[a]	17.5	***0.002***
Organizational learning	83.8	23.0	82.2	27.8	84.6	25.6	0.827
Perception of patient safety and quality	77.9	24.0	72.5	26.9	69.4	29.9	0.265
Team training	69.3[a]	32.9	67.9[ab]	32.3	57.4[b]	33.0	***0.026***
Managerial support for patient safety	25.4	27.8	29.5	28.5	30.8	28.8	0.580
Error Reporting	77.4	19.2	68.8	30.6	70.2	25.0	0.229
Open communication	75.2[a]	29.3	58.6[b]	37.2	58.3[b]	33.0	***0.017***
Work process and standardization	71.5	24.0	66.0	30.1	68.2	26.2	0.608
Work pressure	35.6	31.9	32.6	29.2	34.0	25.0	0.535
Patient safety and quality	77.8	23.5	76.1	23.0	74.5	25.7	0.727
Exchange of information with other sectors	67.6	40.5	78.5	36.2	70.0	41.9	0.333
Total	71.6	11.9	66.5	16.0	67.6	13.3	0.175

The comparison of mean scores across professions for the instrument’s dimensions revealed statistically significant differences in “Teamwork” (p = 0.045), “Monitoring Patient Care” (p = 0.002), “Team Training” (p = 0.026), and “Open Communication” (p = 0.017).

Nurses assigned a higher mean score to the “Teamwork” dimension than nursing technicians, while CHAs assigned a higher mean score to the “Monitoring of Patient Care” dimension than nursing technicians.

Statistical associations were observed in two of the four dimensions classified as weak: “Team Training” and “Open Communication.” Nurses gave higher scores to “Team Training” compared to CHAs and higher scores to “Open Communication” than nursing technicians.

Table 3: Distribution of classifications of professionals based on the frequency of units’ global and general assessments. Manaus, AM, Brazil, 2018.

	Responses (%)									
	Poor		Moderate		Good		Very good		Excellent	
Variables (n = 283)	f_i	%	f_i	%	f_i	%	f_i	%	f_i	%
Global assessment										
Patient-centered	1	0.4	42	14.8	143	50.5	70	24.7	27	9.5
Effective	2	0.7	38	13.5	125	44.3	86	30.5	31	11.0
Punctual	9	3.1	58	20.5	133	47.0	69	24.4	14	5.0
Efficient	12	4.2	51	18.0	128	45.2	66	23.3	26	9.2
Impartial	1	0.4	21	7.4	89	31.4	88	31.1	84	29.7
General Assessment	4	1.4	40	14.3	140	50.0	81	28.9	15	5.4

Research Article
Artigo de Pesquisa
Artículo de Investigación

DOI: https://doi.org/10.12957/reuerj.2024.87675

Four dimensions were identified as areas of weakness, though, in general, professionals rated the ability of health services to prevent, identify, and resolve problems with the potential to harm patients as follows: good (50%), very good (28.9%), moderate (14.3%), excellent (5.4%), and poor (1.4%).

The instrument facilitated a global assessment of healthcare quality across five areas, with impartiality in care delivery emerging as the highest-rated area (31.4% rated it as good, 31.1% as very good, and 29.7% as excellent). The areas related to effective, patient-centered, efficient, and timely care were next, emphasizing the minimization of potentially harmful waits and delays.

Table 4 presents the distribution of means across dimensions based on the professionals' length of service.

Table 4: Distribution of means in MOSPSC dimensions by FHS professionals' length of service. Manaus, AM, Brazil, 2018.

	Length of Service (years)						
	< 3		3 |--- 11		≥ 11		
Variables	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**p-value**
Teamwork	83.7	23.2	83.3	25.1	84.6	23.5	0.940
Patient care monitoring	84.9[ab]	28.2	77.0[b]	27.6	88.6[a]	18.9	***0.005***
Organizational learning	84.2	28.0	83.3	23.2	84.0	26.0	0.987
Perception of patient safety and quality	69.2	32.8	70.8	28.0	71.6	28.4	0.934
Team training	58.8[a]	32.9	68.3[ab]	38.7	72.2[b]	29.4	***0.034***
Managerial support for patient safety	32.1	26.9	27.6	28.6	30.0	28.8	0.818
Error Reporting	71.1	24.9	67.3	25.9	71.6	25.9	0.615
Open communication	60.3	40.6	66.3	32.4	59.6	33.6	0.510
Work process and standardization	61.5	27.6	70.2	27.4	68.4	26.7	0.460
Work pressure	38.5	31.1	35.7	24.4	33.6	27.1	0.683
Patient safety and quality	68.8	23.7	82.0	21.3	74.7	25.2	0.098
Exchange of information with other sectors	68.7	39.7	84.0	35.4	69.6	41.0	0.141
Total	67.3	16.7	69.0	15.6	67.7	13.2	0.834

A significant difference was found in the dimensions of "Monitoring Patient Care" and "Team Training" when analyzing the length of service variable. Professionals with an intermediate length of service (three to 11 years) assigned a lower score to the "Monitoring Patient Care" dimension than those with less time of service, whereas professionals with less time of service assigned lower scores to the "Team Training" dimension compared to their more experienced counterparts.

DISCUSSION

The results obtained using the Brazilian version of the Medical Office Survey on Patient Safety Culture (MOSPSC) allowed for an assessment of the perceptions of professionals from an FHS service regarding patient safety culture. Four dimensions were identified as areas of weakness: "Team Training," "Managerial Support for Patient Safety," "Open Communication," and "Work Pressure and Work Pace."

A study conducted in a PHC unit in the Eastern Region of the Federal District, Brazil, which also utilized the MOSPSC, identified the dimensions "Work Pace and Pressure," "Staff Training," "Open Communication," and "Managerial Support for Patient Safety" as areas professionals perceived as vulnerable or weak regarding patient safety[14]. A similar situation is observed among FHS professionals, who increasingly work under inadequate physical conditions, face a lack of material resources, and contend with management failures[15].

Work overload, coupled with insufficient support from leadership and management, highlights the urgent need for health management to implement interventions that address the needs identified by professionals. These interventions should include providing training and creating spaces that value experience sharing in alignment with the Unified Health System (SUS) principles and the promotion of worker health. Such factors, along with organizational elements, often play a significant role in contributing to individual errors, thereby hindering the development of an organizational culture that supports patient safety in health services[16].

Research Article
Artigo de Pesquisa
Artículo de Investigación

DOI: https://doi.org/10.12957/reuerj.2024.87675

The qualification and training of healthcare staff are fundamental for implementing safe practices in the workplace. These processes are widely acknowledged as effective strategies for fostering the skills and competencies necessary to prevent errors and promote quality care, thereby contributing to the continuous improvement of patient safety[17]. Continuous improvement through staff development and training serves as a cornerstone for adopting safe practices in healthcare, significantly reducing errors and enhancing the quality of care[18].

Although in-service education for FHS professionals is considered a priority for enhancing daily practice in Brazil, it has not yet been systematically organized or implemented[19].

The health workers in this study also highlighted this issue, identifying team training as a dimension with weaknesses. They reported inadequate training for implementing new processes, workflows, or routines. As a result, they occasionally performed tasks without proper preparation, exposing patients to risks associated with care-related errors or workflow failures, ultimately leading to care discontinuity.

Another aspect identified in this study is the association between the "Team Training" dimension and the professionals length of service. Professionals with less experience assigned lower scores to the "Team Training" dimension compared to their more experienced counterparts.

Effective communication among health professionals is crucial for ensuring continuity and quality of care, preventing errors, and enhancing patient safety. Conversely, poor communication within healthcare teams can lead to failures in care continuity and compromise the quality of patient care.[20] Clear and effective communication is critical in multidisciplinary care, as it facilitates the exchange of information and coordination of efforts, ultimately improving patient outcomes[21].

A similar situation was identified regarding the items concerned with communication between teams, interaction with the medical staff, and opportunities to express dissenting opinions. Professionals regarded open communication as a dimension with weaknesses, with a statistically significant difference observed; nurses assigned higher scores to this dimension than nursing technicians.

Strategies to enhance communication and safety culture in Family Health Strategy services include implementing continuing education programs and establishing clear communication protocols among professionals[22]. Promoting a safety culture and fostering effective communication among Family Health Strategy professionals is critical for ensuring the quality and safety of care delivered to patients[23].

A significant proportion of professionals identified the ability to detect, address, and prevent issues affecting patients' health as a key positive aspect of the health service. These findings support the understanding that quality of care is multidimensional rather than one-dimensional, indicating that it extends beyond a limited set of structural or procedural components[24]. The global evaluation of healthcare quality, based on indicators such as efficiency, effectiveness, and impartiality, is considered essential for improving health service delivery and achieving better patient outcomes.

The emphasis on impartiality in care, identified as the highest-rated dimension, represents a significant step forward in advancing equity within health services. Impartiality is closely linked to humanization, ensuring that all patients receive adequate and respectful care regardless of their background or individual circumstances. Furthermore, integrating essential elements for effective care coordination —such as electronic medical records, internet access, computer availability, and improved referral and counter-referral mechanisms—play a role in enhancing service delivery[25].

Good results were also observed for effectiveness, patient-centered care, and the provision of efficient and timely services, emphasizing efforts to reduce waiting times and delays that could harm patients. Efficiency and punctuality are fundamental for ensuring patient safety and satisfaction[26].

Reducing waiting times and optimizing resource management are critical for improving patient experience and safety, as well as maintaining the sustainability of health services. Furthermore, implementing a management model that enhances the effectiveness of care processes is essential for promptly meeting patients' needs without compromising service quality[27].

Research Article
Artigo de Pesquisa
Artículo de Investigación

DOI: https://doi.org/10.12957/reuerj.2024.87675

These findings show that the analysis presented provides a comprehensive overview of healthcare delivery quality and a foundation for implementing strategies to foster continuous improvement. Employing analytical measures that address various quality dimensions, such as the instrument proposed in this article, is relevant for identifying areas needing enhancement and contributing to a more effective, equitable, patient-centered health system.

Study's limitations

One limitation of this study concerns its cross-sectional design, which restricts the depth of analysis. Additional limitations include some items on the instrument marked as "not applicable" or "I do not know," potentially resulting in dimensions with low positivity rates and introducing biases into the findings. The tendency to choose a neutral response was more frequent among CHAs, likely due to limited knowledge of the topic and the short time allotted to complete the questionnaire. Despite these limitations, the study successfully achieved its proposed objectives.

The results of this study cannot be broadly generalized to represent patient safety in FHS services, as the sample is limited to a micro region of Manaus, AM, Brazil. Furthermore, assessing the culture of patient safety in FHS requires a comprehensive analysis of the perceptions of professionals and patients, as well as the contexts in which health actions are implemented. This is particularly relevant because care delivery occurs in diverse settings and is closely tied to patients' life circumstances.

FINAL CONSIDERATIONS

The results of this study indicated an adequate patient safety culture from the perspectives of nurses, nursing technicians, and CHAs within the FHS team. Additionally, the general assessment revealed no statistically significant differences in perceptions among the three professional groups. The dimensions "Team Training," "Managerial Support for Patient Safety," "Open Communication," and "Work Pressure and Pace" were identified as areas of weakness. Therefore, managerial actions should be implemented to address and strengthen these areas.

The interpretation, analysis, and reflection presented in this study offer a technical-scientific situational diagnosis of a FHS service, emphasizing areas of weakness in patient safety that demand attention from management and professionals. Tackling these weaknesses is crucial for devising strategic plans in the FHS that align with internationally established patient safety policies.

Therefore, alongside the method used in this study, other intervention strategies utilizing method triangulation are recommended to characterize this phenomenon within the context of FHS services more thoroughly.

REFERENCES

1. Reis CT. Cultura em segurança do paciente. Sousa P, Mendes W. Segurança do paciente: criando organizações de saúde segura. Rio de Janeiro: Fiocruz, 2014 [cited 2024 Nov 30]; p. 75-99. Available from: https://books.scielo.org/id/bskw2.
2. Dal Pai S, Brigo Alves DF, Pluta P, Dalsasso Batista Winter V, Kolankiewicz ACB. Evaluation of the patient safety culture in primary health care. Rev Baiana Enferm. 2020 [cited 2024 Nov 30]; 34:e3484. DOI: https://doi.org/10.18471/rbe.v34.34849.
3. World Health Organization, WHO Patient Safety. Conceptual framework for the international classification for patient safety version 1.1: final technical report January 2009. World Health Organization, 2010 [cited 2024 Nov 30]. Available from: https://iris.who.int/handle/10665/70882.
4. Institute of Medicine (US) Committee on Quality of Health Care in America, Kohn LT, Corrigan JM, Donaldson MS. To Err is Human: Building a Safer Health System. Washington (DC): National Academies Press (US); 2000 [cited 2024 Jul 26]. DOI: Kohn LT, Corrigan JM, Donaldson MS, https://doi.org/10.17226/9728.
5. Aquino LAP, Araújo DAS, Cunha YA, Santos VEP, Saraiva COPO, Martins QCS. Estratégias para a promoção da cultura de segurança do paciente no centro cirúrgico: uma revisão sistemática. Rev. enferm. UFPE on line. 2024 [cited 2024 Dec 02]; 18:e257173. DOI: https://doi.org/10.5205/1981-8963.2024.257173.
6. Yuan CT, Dy SM, Lai AY, Oberlander TBA, Hannum SM, Lasser E, et al. Challenges and strategies for patient safety in primary care: a qualitative study. Am J Med Qual. 2022 [cited 2024 Dec 06]; 37(5):379-87. DOI: https://doi.org/10.1097/JMQ.0000000000000054.
7. Noviyanti LW, Ahsan A, Sudartya TS. Exploring the relationship between nurses' communication satisfaction and patient safety culture. J Public Health Res. 2021 [cited 2024 Dec 06]; 10(2):2225. DOI: https://doi.org/10.4081/jphr.2021.2225.
8. Mendes RS, Pessoa NRC, Santos MRG, Costa NFCG, Frazão CMFQ, Ramos VP. Strategies to promote patient safety in hemodialysis: an integrative review. Nephrol Nurs J. 2020 [cited 2024 Dec 06]; 47(5):447-54. Available from: https://pubmed.ncbi.nlm.nih.gov/33107717/.
9. Timm M, Rodrigues MCS. Cross-cultural adaptation of safety culture tool for Primary Health Care. Acta paul enferm. 2016 [cited 2024 Dec 07]; 29(1):26–37. DOI: https://doi.org/10.1590/1982-0194201600005.

Research Article
Artigo de Pesquisa
Artículo de Investigación

DOI: https://doi.org/10.12957/reuerj.2024.87675

10. Inácio ALR, Rodrigues MCS. Aplicação do Medical Office Survey on Patient Safety Culture: revisão integrativa. Acta paul enferm. 2022 [cited 2024 Dec 07]; 35:eAPE001222. DOI: https://doi.org/10.37689/acta-ape/2022AR01223.
11. Rayat CS. Variance-Ratio Test and Analysis of Variance (ANOVA). In: Statistical Methods in Medical Research. Singapore: Springer; 2018. DOI: https://doi.org/10.1007/978-981-13-0827-7_12.
12. Brasil. Lei Nº 14.874, de 28 de maio de 2024. Dispõe sobre a pesquisa com seres humanos e institui o Sistema Nacional de Ética em Pesquisa com Seres Humanos. : Conselho Nacional de Saúde; 2024 [cited 2024 Nov 28]. Available from: https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2024/lei/l14874.htm.
13. Brasil. Resolução nº 510, de 7 de abril de 2016. Dispõe sobre as normas e diretrizes para a pesquisa com seres humanos. Brasília: Conselho Nacional de Saúde; 2016 [cited 2024 Nov 28]. Available from: https://bvsms.saude.gov.br/bvs/saudelegis/cns/2016/res0510_07_04_2016.html.
14. Bohrer JKL, Vasconcelos ACL, Bezerra ALQ, Teixeira CC, Andrade J, Santos PHF, Paranaguá TTB. Patient safety culture in Primary Health Care. Rev Rene. 2021 [cited 2024 Nov 30]; 22:e70874. DOI: https://doi.org/10.15253/2175-6783.20212270874.
15. Soratto J, Pires DEPD, Trindade LL, Oliveira JSAD, Forte ECN, Melo TPD. Job dissatisfaction among health professionals working in the family health strategy. Texto Contexto Enferm. 2017 [cited 2024 Nov 30]; 26(3):e2500016. DOI: https://doi.org/10.1590/0104-07072017002500016.
16. Assis BCS, Sousa GS, Silva GG, Pereira MO. Que fatores afetam a satisfação e sobrecarga de trabalho em unidades da atenção primária à saúde? Rev Eletrônica Acervo Saúde. 2020 [cited 2024 Nov 30]; 12(6):e3134. DOI: https://doi.org/10.25248/reas.e3134.2020.
17. Lamattina AA, Morais RCR. Segurança e saúde no trabalho: guia prático para técnicos. Formiga: Editora MultiAtual; 2024 [cited 2024 Nov 30]; 164 p. DOI: https://doi.org/10.5281/zenodo.10932499.
18. Paranaguá TT, Teixeira CC, Santana TS, Afonso TC, Oliveira MG, Bezerra AL. Aplicação do aprendido em treinamento sobre segurança do paciente: estratégias utilizadas por profissionais da atenção primária à saúde. Enferm Foco. 2022 [cited 2024 Dec 07]; 13:e-202220. DOI: https://doi.org/10.21675/2357-707X.2022.v13.e-202220.
19. Dolny LL, derda Lace JT, Nilson LG, Calvo MCM, Natal S, Maeyama MA. Educação permanente em saúde (EPS) no processo de trabalho de equipes de saúde da família (ESF). Braz J Health Rev. 2020 [cited 2024 Nov 30]; 3(1):15-38. DOI: https://doi.org/10.34119/bjhrv3n1-002.
20. Castro JVR, Amaro MDOF, Mendonça ET, Siman AG, Zanelli FP, de Carvalho CA. Effective communication in the reach of safe practices: conceptions and practices of the nursing team. Rev Enferm Atenção Saúde. 2023 [cited 2024 Nov 30]; 12(1):e202359. DOI: https://doi.org/10.18554/reas.v12i1.5153.
21. Rocha MP, Viana IS, Vieira IF. Patient Safety in Primary Health Care in a Brazilian municipality. Physis. 2021 [cited 2024 Dec 07]; 31(4):e310420. DOI: https://doi.org/10.1590/S0103-73312021310420.
22. Pacenko CL, Figueiredo KC, Nunes E, Cruchinho P, Lucas P. Mapping strategies for strengthening safety culture: a scoping review. Healthcare (Basel). 2024 [cited 2024 Dec 07]; 12(12):1194. DOI: https://doi.org/10.3390/healthcare12121194.
23. Alanazi FK, Lapkin S, Molloy L, Sim J. The impact of safety culture, quality of care, missed care and nurse staffing on patient falls: a multisource association study. J Clin Nurs. 2023 [cited 2024 Dec 07]; 32(19-20):7260-72. DOI: https://doi.org/10.1111/jocn.16792.
24. Bohrer JKL, Vasconcelos ACL, Bezerra ALQ, Teixeira CC, Andrade J, Santos PHF, Paranaguá TTB. Patient safety culture in Primary Health Care. Rev Rene. 2021 [cited 2024 Nov 30]; 22:e70874. DOI: https://doi.org/10.15253/2175-6783.20212270874.
25. Cruz MJB, Santos ADFD, Macieira C, Abreu DMXD, Machado ATGDM, Andrade EIG. Avaliação da coordenação do cuidado na atenção primária à saúde: comparando o PMAQ-AB (Brasil) e referências internacionais. Cad Saúde Pública. 2022 [cited 2024 Nov 30]; 38:e00088121. DOI: https://doi.org/10.1590/0102-311X00088121.
26. Silva LS, Menezes C, Nascimento LCD, Nitschke RG, Duarte DC, Fonseca Viegas SM. Demanda espontânea e acesso no Sistema Único de Saúde: vivências de usuários da atenção primária. Advances Enferm. 2021 [cited 2024 nov 30]; 39(1):30-9. Available from: https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1151181.
27. Ribeiro SP, Cavalcanti MDLT. Primary Health Care and Coordination of Care: device to increase access and improve quality. Ciênc Saúde Coletiva. 2020 [cited 2024 Nov 30]; 25(5):1799-808. DOI: https://doi.org/10.1590/1413-81232020255.34122019.

Author's contributions

Conceptualization, M.S.M. and D.L.N.; methodology, M.S.M. and D.L.N; formal analysis, M.S.M. and E.B.S.; investigation; M.S.M.; resources, M.S.M.; manuscript writing, M.S.M. and L.K.R.A.C.; writing – review and editing, L.K.R.A.C., C.H.S.M. and L.P.B.; visualization, E.P.A.S e C.H.S.M.; supervision, M.S.M. and D.L.N.; project administration, M.S.M. and D.L.N. All authors read and agreed with the published version of the manuscript.