Patient safety culture at a surgical center: the nursing perception

Cultura de segurança do paciente em centro cirúrgico: visão da enfermagem

Cultura de la seguridad del paciente en un centro quirúrgico: visión de la enfermería

Ingrid Moura de Abreu[a]
Ruth Cardoso Rocha[a]
Fernanda Valéria Silva Dantas Avelino[a]
David Bernar Oliveira Guimarães[a]
Lidya Tolstenko Nogueira[a]
Maria Zélia de Araújo Madeira[a]

ABSTRACT

Objective: To analyze the safety culture of the patient from the perception of the nursing team of a surgical center.

Method: This is a cross-sectional and analytical study with 92 professionals from the nursing of a surgical center of a hospital in Teresina-PI, the data were collected from January to June of 2016, through the Hospital Survey on Patient Safety Culture questionnaire. In the analysis and interpretation of the data the guidelines of the AHRQ were followed.

Results: The evaluation of patient safety by the professionals was "Regular" (48.9%). The dimension of the safety culture with the most positive result was "Organizational learning-continuous improvement" (58.7%), and with least positive results were "Opening for communication" (32.3%) and "Feedback and communication about errors" (32.6%).

Conclusion: There are problematic areas in the safety culture of the sector, which shows that this culture needs to be better developed, with special attention to the dimensions of the culture that presented a less positive evaluation.

Keywords: Patient safety. Organizational culture. Surgicenters. Nursing.

RESUMO

Objetivo: Analisar a cultura de segurança do paciente a partir da visão da equipe de enfermagem de um centro cirúrgico.

Método: Estudo transversal e analítico realizado com 92 profissionais de enfermagem de um centro cirúrgico em um hospital de Teresina-PI, os dados foram coletados de janeiro a junho de 2016, por meio da aplicação do questionário Hospital Survey on Patient Safety Culture. Na análise e interpretação dos dados foi seguido as orientações da AHRQ.

Resultados: A avaliação da segurança do paciente pelos profissionais foi "Regular" (48,9%). A dimensão da cultura de segurança com resultado mais positivo foi "Aprendizado organizacional-melhoria contínua" (58,7%) e com resultados menos positivos foram "Abertura para comunicação" (32,3%) e "Feedback e comunicação sobre erros" (32,6%).

Conclusão: Existem áreas problemáticas na cultura de segurança do setor, mostrando que essa cultura precisa ser melhor desenvolvida, com especial atenção às dimensões da cultura que apresentaram avaliação menos positiva.

Palavras-chave: Segurança do paciente. Cultura organizacional. Centros cirúrgicos. Enfermagem.

RESUMEN

Objetivo: Analizar la cultura de la seguridad del paciente, a partir de la visión de un equipo de enfermería de un centro quirúrgico.

Método: Estudio analítico y transversal con 92 profesionales de enfermería de un centro quirúrgico en un hospital de Teresina-PI. Se recolectaron los datos entre enero y junio de 2016, a través de una encuesta del Hospital Surveyon Patient Safety Culture. En el análisis e interpretación de los datos se siguieron las orientaciones de la AHRQ.

Resultados: La evaluación de la seguridad del paciente por los profesionales fue "Regular" (48,9%). La dimensión de la cultura de la seguridad con un resultado más positivo fue "Aprendizaje organizacional y mejoría continua" (58,7%), y con resultados menos positivos fueron "Apertura para la comunicación" (32,3%); y "Feedback y comunicación sobre los errores" (32,6%).

Conclusión: Existen áreas problemáticas en la cultura de la seguridad en el sector que demuestran que esta cultura necesita desarrollarse mejor, especialmente en la parte de atención a las dimensiones de la cultura que presentaron evaluación menos positiva.

Palabras clave: Seguridad del paciente. Cultura organizacional. Centros quirúrgicos. Enfermería.

[a] Universidade Federal do Piauí (UFPI). Programa de Pós-graduação em Enfermagem, Departamento de Enfermagem. Teresina, PI, Brasil.

■ Abreu IM, Rocha RC, Avelino FVSD, Guimarães DBO, Nogueira LT, Madeira MZA

■ INTRODUCTION

Safe care has been one of the most talked about topics in health discussions around the world, especially after the publication of the *Institute of Medicine* of the United States of America entitled "*Toerrishuman*" which alerted the public to the risks posed by modern health care. This study described which errors occur and are frequent and can lead to irreversible deaths and sequelae[1].

In a survey carried out in Ireland, it was found that the prevalence of adverse events (AE) was 12.2% and that more than 70% were considered avoidable[2]. In Brazil, data from the Unified Health System (SUS) showed that in 2015 there were 31,774 incidents in the country, of which 93% occurred in a hospital setting[3].

At the national level, Order No. 529 of 2013, of the Ministry of Health, launched the National Patient Safety Program (PNSP) with the aim of providing subsidies for all health institutions in the territory to have a starting point to implant and promote security measures[4]. Nursing as the greatest workforce in this sector has a direct relationship with the issue. For such measures to be instituted, health organizations should adopt a safety culture model.

The safety culture is a product of individual and group values, attitudes, perceptions and competencies that determine a pattern of behavior and commitment to the institution's security management. In order to be incorporated, a high level of management and professional commitment is required, as well as a strong spirit of cohesion between the various departments, which are decisive factors in ensuring safe care[5].

In this context, the surgical center (SC) is one of the hospital environments where one of the largest numbers of AE occurs, the cause of which is multifactorial and attributed mainly to complexity of procedures, interaction of multiprofessional teams and work under pressure[6].

Considered as a high-risk scenario, in CC, surgical complications are responsible for a significant proportion of deaths or damages (temporary or permanent) caused by the care process, considered avoidable. Therefore, the activities performed in this sector require special attention in the processes that involve the patient and their safety[6].

In order to improve patient safety in this area and the prevention of AD, the implementation of an institutional safety culture policy is fundamental. To promote this change it is necessary to carry out the survey of the factors of the organization that make difficult the formation of this culture. The institution's safety culture measurement provides important information about the safety status of a group or unit of work and of the organization[7].

A study carried out in a hospital environment in the south of Brazil, using an instrument to measure the safety culture of the patient, demonstrated a safety culture with potential for improvement in all dimensions analyzed. In this way, the evaluation served to instrumentalize the planning of strategies aimed at improving patient safety in this institution[8].

In view of the above, this study is justified since the results of evaluation of the patient's safety culture in the hospital setting would facilitate the identification of the deficiency and thus help in the planning of institutions with the intention of initiating, maintaining or adopting actions that lead to practices secure.

From this perspective, we try to answer the following question: How is the safety culture of the patient from the perspective of the nursing professionals of a surgical center? Thus, the objective was to analyze the safety culture of the patient from the vision of the nursing team of a surgical center.

■ METHODS

This article is from the dissertation "Patient Safety Culture at a Surgical Center: The Nursing Perception", held at the Federal University of Piauí[9]. This is a cross-sectional and analytical study, developed in the SC of a reference hospital in the city of Teresina, state of Piauí. The hospital under study has patients, both from the capital and the interior of the state, as well as from other states of the country, referred through the referral and referral system.

The study population consisted of the members of the nursing team that practiced their professional activities in the sector in question, composed of 15 nurses and 130 technicians and nursing auxiliaries, totaling 145 professionals in the nursing area. A non-probabilistic sample was used for convenience.

The inclusion criteria were: being a nursing professional present during the data collection. Those who worked less than six months in the sector and were on leave or health leave were excluded. Thus, of the total, 25 people refused to participate or did not return the instrument, totaling 92 participants of the research.

Data collection was carried out from January to June 2016 through the application of a questionnaire, instrument of the *Agency for Health care Research and Quality (AHRQ)* prepared in 2004 and available for public domain. The instrument is entitled *Hospital Survey on Patient Safety Culture (HSOPSC)*, widely used for evaluation of patient safety culture, indicated by its favorable psychometric properties. The version used has been translated and adapted into the Portuguese language[7].

After approval by the institution, the researchers invited the professionals to participate in the research, went to the study site and distributed the questionnaires, which were later stored in an envelope and received by the researchers on a day and at a combined time.

The HSOPSC contains 42 questions related to patient safety culture that are grouped into 12 dimensions: Teamwork in the unit; Expectations and actions of the supervisor/manager to promote patient safety; Organizational learning - continuous improvement; Hospital management support for patient safety; General perception of patient safety; Feedback and communication about errors; Opening for communication; Frequency of reported events; Teamwork among hospital units; Staff table; Internal transfers and shift; Non-punitive response to error.

The 12 dimensions were evaluated individually in the CC unit using the *Likert* scale, with assignments ranging from "strongly disagree" to "strongly agree". The evaluation of each dimension is made from the percentage of positive responses obtained by calculating the combination of the two highest response categories. Higher percentages indicate positive attitudes towards the safety culture.

In the analysis and interpretation of the data the guidelines of the AHRQ were followed. The percentage of positive responses represents a positive reaction to the patient's safety culture and allows the identification of strong and fragile areas. "Strong areas of patient safety" were those whose positively written items obtained 75% positive responses ("totally agree" or "agree"), or those whose negatively written items obtained 75% of the negative responses ("totally disagree" or "disagree"). Similarly, "fragile areas of patient safety" and needing improvement were considered those whose items obtained 50% or less of positive responses[5].

Data were presented by means of absolute (n) and relative (%) frequencies, central tendency (minimum and maximum) and dispersion measures (mean and standard deviation). The quantitative variables were evaluated by the Kolmogorov-Smirnov test to verify adherence to the normal distribution. Pearson's Chi-square test was used to verify the statistical association between the socio-demographic variables and the total number of responses (negative, neutral and positive) in the instrument. As the data did not present normality, the Spearman correlation was used to relate the dimensions of the translated version of the HSOPSC. The level of significance was set at $p < 0.05$, CI=95%. The data were tabulated and analyzed in the program *IBM Statistical Package for the Social Sciences* version 20.0. For the presentation of the results, tables and figures were used.

This study complied with Resolution 466/2012, all participants signed the informed consent form (ICF). He obtained a favorable opinion from the Research Ethics Committee of the Federal University of Piauí, with the following opinion: 1.238.858 and CAAE: 47879315.6.0000.5214.

◼ RESULTS

Of the 92 professionals in the nursing area, the majority were female (89.1%). The mean age was 38.34 years (± 11.72), with the highest level of education being the high school (high school), which was complete (43.5%). Most of the professionals were nursing technicians (76.1%), followed by nurses (13%) and nursing auxiliaries (10.9%), most of them worked from 1 to 5 years in the hospital (51.1%), .

The patient safety assessment of the CC by position/function could be observed in Table 1. 50% of nurses were considered regular, as were most nursing technicians (52.8%), while nursing assistants evaluated as very good (40%). Overall, 48.9% of the professionals judged it to be normal.

Table 1 - Evaluation of patient safety in the area/unit of a reference hospital (Teresina - PI, 2016)

Patient safety	Job/Position			
	Nurse	Nursing technician	Nursing assistant	Total
	n=12 (%)	n=70 (%)	n=10 (%)	N=92 (%)
Excellent	0 (0.0)	2 (2.9)	1 (10.0)	3 (3.3)
Very good	4 (33.4)	20 (28.6)	4 (40.0)	28 (30.4)
Regular	6 (50.0)	37 (52.8)	2 (20.0)	45 (48.9)
Poor	1 (8.3)	9 (12.8)	2 (20.0)	12 (13.0)
Too poor	1 (8.3)	2 (2.9)	1 (10.0)	4 (4.4)
Total	12 (100.0)	70 (100.0)	10 (100.0)	92 (100.0)

Source: Research data, 2016.

Considering the 42 questions of the HSOPSC instrument, we can see in Figure 1 the dimensions that presented the highest percentages of positive response: 58.7% in organizational learning-continuous improvement and 47.1% in general perception for patient safety. The dimensions with the lowest percentage of positive response were *feedback* and communication about errors (32.6%) and openness for communication (32.3%).

Figure 1 - Percentage of positive, neutral and negative responses of the twelve dimensions of the patient safety culture in the surgical center of a reference hospital (Teresina - PI, 2016)
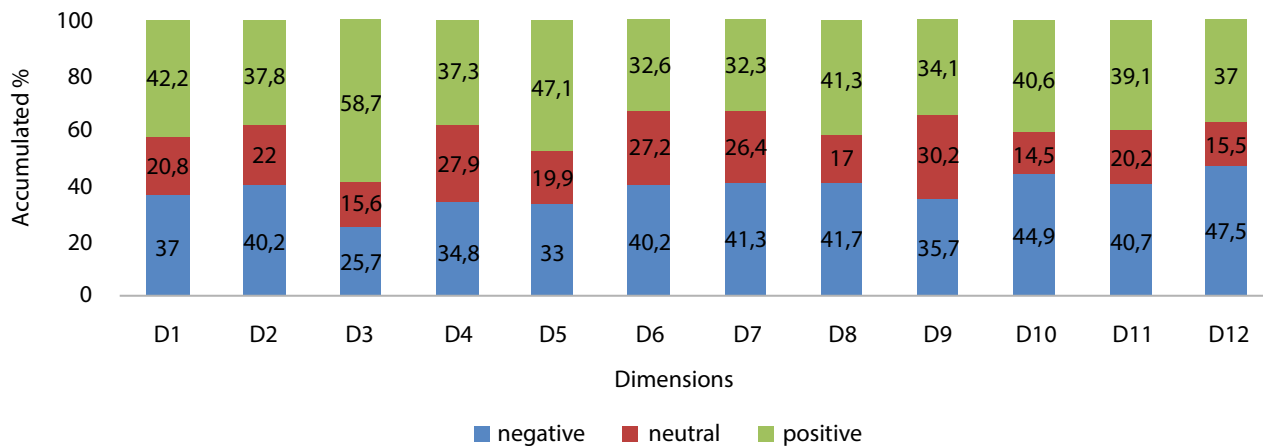
Source: Research data, 2016.
Caption: D1: Teamwork in the unit; D2: Expectations and actions of the supervisor/manager to promote patient safety; D3: Organizational learning – continuous improvement; D4: Hospital management support for patient safety; D5: General perception of patient safety; D6: Feedback and communication about errors; D7: Opening for communication; D8: Frequency of reported events; D9: Teamwork among hospital units; D10: Staff; D11: Internal transfers and shift; D12: Non-punitive response to error.

Table 2 shows that there was a significant statistical association (p <0.001) between the sociodemographic variables of gender, age, educational level, hospital work time and the position/function performed with positive of the HSOPSC questionnaire.

Table 2 - Association between sociodemographic variables and total positive responses of dimensions of the translated version of the HSOPSC in the surgical center of a reference hospital (Teresina - PI, 2016)

Sociodemographic variables	Positive n (%)	Total	p-value*
Gender			<0.001
Female	1295 (37.6)	3442	
Male	**207 (49.6)**	417	
Age Group (years)			<0.001
20 – 30	**447 (41.0)**	1091	
31 – 40	473 (40.4)	1172	
41 – 50	281 (37.2)	756	
51 or more	301 (35.8)	840	
Degree of education			<0.001
High school (incomplete)	9 (21.4)	42	
High School (complete)	659 (39.2)	1680	
Incomplete higher education	263 (48.2)	546	
Complete higher education	191 (30.3)	630	
Postgraduate (specialization)	246 (32.6)	755	

Postgraduate (masters or doctorate)	**123 (75.0)**	164
Not informed	11 (26.2)	42
Job/Position		<0.001
Nurse	**224 (44.9)**	499
Nursing technician	1132 (38.5)	2940
Nursing assistant	146 (34.8)	420
Working time in the hospital		<0.001
Less than 1 year	36 (28.5)	126
1 to 5 years	**792 (40.2)**	1972
6 to 10 years	625 (38.2)	1635
21 years or more	49 (38.9)	126
Total	1502	3859

Source: Research data, 2016.
*Chi-square test of adhesion

■ DISCUSSION

The security established by the CC's employees was "Regular". A study carried out in São Paulo found that this same sector was one of the units that obtained the highest percentage in the classification of patient safety as "very bad", showing that the safety measures in this environment are not effective[10].

It was also verified that this note varies according to the position/function, with a "regular" grade for nurses and nursing technicians and "very good" for auxiliaries. In another study conducted in Florianópolis (SC) with 141 professionals[11], both categories rated as "regular".

In general, the "regular" classification was emphasized in some of the studies carried out in Brazil. However, a study in Palestine hospitals, which compared their findings and studies in two similar regions (Lebanon and Saudi Arabia) and in the USA, pointed out that the general level of patient safety in Palestine (63.5%) was higher than Saudi Arabia (60%), but lower than Lebanon (73.4%) and the United States (75%)[12].

More developed countries are better able to provide adequate security. In underdeveloped countries there is an association of harmful conditions, leading to the occurrence of errors and AEs, such as inadequate staffing, overcrowding, lack of adequate structure, and shortage of equipment. In addition, it is important to emphasize that the critical view of nursing professionals in identifying safety fragilities is fundamental, as well as the need for management support to develop actions that provide a better quality of care.

According to the guidelines of the authors of the HSOP-SC, the results obtained did not show any dimension with a positive response score above 75%, to be considered an area of force for the patient safety culture. However the dimensions that reached higher percentages stood out. The "Organizational Learning-Continuous Improvement" and "General Perception of Patient Safety" dimension have potential to become strong areas in the safety culture of the CC in question.'

The results were like that of a survey carried out in a network of Spanish hospitals, where "Organizational learning-continuous improvement" achieved 63.2% positive responses and "Safety perception" with 48.7%[13]. In a study conducted in surgical units in China, the highest score was "teamwork" (88.9%), followed by "organizational learning" (79.1%)[14].

According to these results, it is pointed out that even with the cultural differences of these countries, the scores indicated that organizational learning is a positive factor in the patient's safety culture, which seeks to understand the causal factors of errors, extracting educational lessons for the improvement of the system. Organizational learning is directly tied to the "supervisor/manager's expectations and actions for patient safety promotion", because when leadership promotes a learning culture, it sensitizes employees and establishes a learning environment[15].

The lack of leadership support has been pointed out as a threat to patient safety, since for the development of a safety culture all participants in a system (in this case, the CC of a hospital) must understand and engage with the factors which determine patient safety, from management to care workers[16].

On the other hand, two dimensions obtained lower positive response percentages, being problematic areas

for the safety culture of the patient, among them: "Feedback and communication about errors" and "Opening for communication". In another exploratory study carried out in several units of a public hospital in São Paulo, the lowest scores were "Non-punitive response to error" (29.6%), "openness to communication" (50.4%) and "feedback and communication on errors" obtained 54.1%[17].

Surgical units in China presented a communication gap with worse performance than others, the "return and error communication" dimension with a higher degree of safety and more events reported, so if there is a deficit in these dimensions, the degree of patient safety is deficient, and the events reported are minimized[18].

The low adherence to communication may be related to the punitive approach to errors. The "non-punitive response to the error" is necessary in the health services, since the search for the culprits has not led to the reduction of the errors, on the contrary, they have favored underreporting, making difficult the implantation of protocols that lead to its prevention. Thus, it is important to emphasize the need to insert an organizational culture that allows nursing professionals to identify and explain the mistakes made and their causes, allowing the creation of patient safety strategies for the purpose of prevention[18].

The finding of an error and its immediate report are essential for the implementation of interventions and preventive measures, in order to reestablish the patient's conditions, minimizing the damages caused. Considering CC as a critical environment, the reporting of an error can be decisive for a satisfactory outcome. In this way, the importance of notifying AS as a preventive measure is returned, so that it is possible to learn from mistakes and improve the management of the security culture in organizations[16].

The positive responses to the dimensions of the safety culture obtained a statistically significant association with the sociodemographic sex variable, indicating that the male sex was related to the positive responses more than the female sex. As well as the variable age group, which also had a statistically significant association, and the younger age groups (20-30 years) had a greater relation with the positive responses to the safety culture, already a study carried out in clinics in Norway, using another instrument also measures the safety culture, has shown that older health professionals scored more positively than young people, a fact that can be justified because of a degree of attachment to the workplace itself among the most experienced nurses[19].

Analyzing the degree of education that obtained the highest statistical association with the score of positive answers, was found the postgraduate (master's or doctorate),

being able to relate it to the position that also obtained a greater association, which was that of nurse. In this aspect, a study in Spanish hospitals also demonstrated that the post of nurse was a favorable factor associated with the evaluation of the culture, since these were the ones that responded more positively[13].

It is also possible that the culture is perceived differently by individuals of the same professional category, the working position within the organization can influence this perception. Nurses with managerial positions evaluate the culture more positively than nursing assistants[10]. Nurses, in adopting the position of team leaders, should further encourage commitment to patient safety, which can generate a more positive perception of the safety culture.

The hospital work time, showed a statistically significant association with the positive responses, where the period from one to five years of work reached the highest correspondence with the positive percentage of safety culture of the patient, as well as in the study conducted in Riyadh, capital of Saudi Arabia, where the longtime of professional experience was associated with the progressively lower perception of patient safety, i.e., the longer the duration of the unit, the less positive responses[20]. This can be explained by the more experienced professionals being more likely to detect risks and feel more comfortable in revealing their true perceptions because they feel more secure.

It is important to emphasize that as a safety culture evaluation research, the results obtained through the application of questionnaires should not be interpreted in isolation. They need to be analyzed in conjunction with the organizational characteristics of the institution. Thus, the HSOPSC can be used as a managerial tool that helps decision making in order to plan and promote a favorable work environment, which reflects on quality patient care.

◼ CONCLUSION:

It was possible to show in the study that the safety culture of the patient of the CC in question, from the perspective of the nursing professionals, was evaluated containing problematic areas. The analysis of the safety culture contributed to obtain more knowledge about the factors involved in the safety culture and enabled the detection of the best evaluated dimensions, which may become areas of force, and critical areas in the culture, important for improving the care provided and guaranteeing assistance.

This research on the culture of patient safety sought to contribute to teaching in the area and instigate the development of new research that results in effective interventions by nursing professionals.

It is worth noting that the research presented in this article did not include the investigation of safety culture among all professional health categories, only nursing. This can be considered as a gap or limitation because, for safe and error-free assistance, the whole multi-professional team must be involved and committed to patient safety. Thus, it is important to carry out new studies that include professionals from all health teams and categories.

■ REFERENCES

1. Kohn KT, Corrigan JM, Donaldson MS, editors. To err is human: building a safer health system. Washington, D.C.: National Academies Press; 2000 [cited 2018 Apr 10]. Available from: https://www.ncbi.nlm.nih.gov/books/NBK225182/pdf/Bookshelf_NBK225182.pdf.

2. Rafter N, Hickey A, Conroy RM, et al. The Irish National Adverse Events Study (INAES): the frequency and nature of adverse events in Irish hospitals: a retrospective record review study. BMJ Qual Saf. 2017;26(2):111-9. doi: https://doi.org/10.1136/bmjqs-2015-004828.

3. Agência Nacional de Vigilância Sanitária (BR). Boletim de segurança do paciente e qualidade em serviços de saúde: incidentes relacionados à assistência à saúde – 2015. Brasília: Anvisa; 2016 [cited 2018 May 10]. Available from:

4. https://www20.anvisa.gov.br/segurancadopaciente/index.php/publicacoes/item/13-boletim-seguranca-do-paciente-e-qualidade-em-servicos-de-saude-n-13-incidentes-relacionados-a-assistencia-a-saude-2015.

5. Ministério da Saúde (BR). Portaria Nº 529, de 1º de abril de 2013. Institui o Programa Nacional de Segurança do Paciente. Brasília, DF; 2013[cited 2018 May 10]. Available from: https://www20.anvisa.gov.br/segurancadopaciente/index.php/legislacao/item/portaria-529.

6. Sorra J, Gray L, Streagle S, Famolaro T, Yount N, Behm J.AHRQ Hospital Survey on Patient Safety Culture: user's guide. Rockville, MD: Agency for Healthcare Research and Quality; 2016 [cited 2018 May 10]. AHRQ Publication Nº 15(16)-0049-EF. Available from: https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/patientsafetyculture/hospital/userguide/hospcult.pdf.

7. Manrique BT, Soler LM, Bonmati AN, Montesinos MJL, Roche FP. Patient safety in the operating room and documentary quality related to infection and hospitalization. Acta Paul Enferm. 2015;28(4):355-60.

8. Reis CT, Laguardia J, Martins M. Adaptação transcultural da versão brasileira do Hospital Survey on Patient Safety Culture: etapa inicial. Cad Saude Pública. 2012;28(11):2199-210. doi: https://doi.org/10.1590/S0102-311X2012001100019.

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

10. Rocha RC. Cultura de segurança do paciente em centro cirúrgico: perspectiva da equipe de enfermagem [dissertação]. Teresina (PI): Programa de Pós-graduação em Enfermagem, Universidade Federal do Piauí; 2017.

11. Silva-Batalha EMS, Melleiro MM. Patient safety culture in a teaching hospital: differences in perception existing in the different scenarios of this institution. Texto Contexto Enferm. 2015;24(2):432-41. doi: https://doi.org/10.1590/0104-07072015000192014.

12. Tomazoni A, Rocha PK, Souza S, Anders JC, Malfussi HFC. Patient safety culture at neonatal intensive care units: perspectives of the nursing and medical team. Rev Latino-Am Enfermagem. 2014;22(5):755-63.doi: https://doi.org/10.1590/0104-1169.3624.2477.

13. Hamdan M, Saleem A A. Assessment of patient safety culture in Palestinian public hospitals. Int J Qual Health Care. 2013;25(2):167-75. doi: https://doi.org/10.1093/intqhc/mzt007.

14. Gama ZAS, Oliveira ACS, Hernández PJS. Cultura de seguridad del paciente y factores asociados en una red de hospitales públicos españoles. Cad Saúde Pública. 2013;29(2):283-93. doi: https://https:/.doi.org/10.1590/S0102-311X2013000200015.

15. Shu Q, Cai M, Tao H, Cheng Z, Chen J, Hu Y, et al. What does a hospital survey on patient safety reveal about patient safety culture of surgical units compared with that of other units? Medicine (Baltimore). 2015;94(27):e1074. doi: https://doi.org/10.1097/MD.0000000000001074.

16. Tomazoni A, Rocha PK, Kusahara DM, Souza AIJ, Macedo TR. Evaluation of the patient safety culture in neonatal intensive care. Texto Contexto Enferm. 2015;24(1):161-9. doi: https://doi.org/10.1590/0104-07072015000490014.

17. Schwonke CRGB, Lunardi Filho WD, Lunardi GL, Silveira RS, Rodrigues MCS, Guerreiro MO. Safety culture: the perception of intensivist nurses. Enferm Glob. 2016 [cited 2018 May 11];15(1):233-43. Available from: http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S1695-61412016000100012&lng=es&nrm=iso&tlng=en.

18. Santiago THR, Turrini RNT. Organizational culture and climate for patient safety in Intensive Care Units. Rev Esc Enferm USP. 2015;49(esp):123-30. doi: https://doi.org/10.1590/S0080-623420150000700018.

19. Massoco ECP, Malleiro MM. Comunicação e segurança do paciente: percepção dos profissionais de enfermagem de um hospital de ensino. Rev Min Enferm. 2015;19(2):187-91. doi: https://doi.org/10.5935/1415-2762.20150034.

20. Bondevik GT, Hofoss D, Hansen EH, Deilkas ECT. Patient safety culture in Norwegian primary care: a study in out-of-hours casualty clinics and GP practices. Scand J Prim Health Care. 2014;32(3):132-8. doi: https://doi.org/10.3109/02813432.2014.962791.

21. El-Jardali F, Sheikh F, Garcia NA, Jamal D, Abdo A. Patient safety culture in a large teaching hospital in Riyadh: baseline assessment, comparative analysis and opportunities for improvement. BMC Health Serv Res. 2014;14:122. doi: https://doi.org/10.1186/1472-6963-14-122.

■ **Corresponding author:**
Ingrid Moura de Abreu
E-mail: ingridmabreu@outlook.com