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SURGICAL PATIENT SAFETY: EVALUATION OF THE CULTURE OF NURSING PROFESSIONALS IN A UNIVERSITY HOSPITAL

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ABSTRACT

Introduction: The evaluation of the safety culture is recommended because it helps the planning of interventions to improve safety. However, in some countries, such as Brazil, this practice is still not widespread. Objective: to evaluate the safety culture of nursing professionals in the surgical clinic and surgical block, involved in the care of surgical patients at a university hospital in the north of Minas Gerais. Materials and method: a quantitative, descriptive and cross-sectional study. Professionals who had worked in the sectors for at least six months, provided direct care to the patient and agreed to participate in the research were considered. Data were collected using the validated instrument, Hospital Survey on Patient Safety Culture (HSOPSC). The Statistical Package for the Social Sciences, v 25.0, was used, in which descriptive and bivariate analyses (Pearson's chi-square test or Fisher's exact test) were conducted. Results: 34 nursing professionals participated in the research. Female professionals, aged up to 45 years, and nursing technicians, with higher education or postgraduate degrees, predominated. The average length of time in the profession was 18.06 years. A significant association was observed between the classification of the safety culture with the dimensions "feedback and communication about errors" (p=0.00) and "non-punitive responses to errors" (p=0.00) and

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with the frequency of notifications (p=0.02). Conclusions: The evaluation of the safety culture of nursing professionals involved in surgical patient care evidenced the absence of fortified areas of the safety culture and pointed out areas with potential for improvement.

Keywords: Hospital Care. Organizational Culture. Perioperative Nursing. Quality of Health Care. Patient Safety.

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INTRODUCTION

Historically, the first definitions of the expression "Safety Culture" emerged after the incident at the Chernobyl nuclear power plants in 1986, when they related what happened to low safety levels. The report, published by the *International Atomic Energy Agency* (IAEA) in 1991, defined safety culture as characteristics and attitudes of individuals and organizations together, which enable the establishment of safety1.

In 1999, the terminology became part of the health context, when the *Committee of the Institute of Medicine* (IOM) issued a report entitled "To err is human", in which it demonstrated the lack of safety in American hospital care, since a high number of annual deaths caused by medical errors was pointed out. In this report, it was listed that deficient systems and processes establish the conditions for the occurrence of errors, emphasizing the importance of adopting a "safety culture" in health service organizations, as a tool to guarantee quality care2.

In Brazil, Ordinance No. 529, of April 1, 2013, instituted the National Patient Safety Program, aiming at collaboration and promotion of quality care in all health service delivery environments. It is expected that there will be a culture that involves all employees of the organization, contributing to learning from identified and reported errors, promoting structures and conditions for maintaining safety3. Thus, it was recommended the implementation of protocols aimed at ensuring the safety of care, namely: hand hygiene; safe surgery; safety in the prescription, use and administration of medications; patient identification; communication in health services; fall prevention and pressure injury (LP) prevention4.

Thus, safety culture is defined as the set of behaviors that determine the management of health and safety, proposing the replacement of punitive views with learning habits. Also, the concept of patient safety is understood as the minimum reduction of harm related to health care5. Each institutional unit can contemplate a safety subculture, as it contains its peculiarities, so the cultural evaluation of safety levels allows the institution as a whole or its care subdivisions to be covered6.

In this sense, considering the complexity of care, the safety of surgical care is highlighted. Among the global challenges of patient safety, established by the members of the World Health Organization (WHO), the attention to "Safe Surgery" stands out, in which it is intended to achieve the reduction of complications resulting from surgery, since surgical care is one of the main therapeutic plans to the detriment of the incessant

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advancement of conditions and health problems. such as trauma, neoplastic diseases, and cardiovascular disorders7.

However, it is necessary to guarantee security at all stages. The time span that covers the entire surgical process, also called the perioperative period, is basically subdivided into three stages: preoperative, intraoperative, and postoperative8. Surgical care becomes safe from the combination of congruent management strategies and the full commitment of the team involved9.

In this context, nursing plays a fundamental role in building a positive safety culture in relation to surgical care. In addition to making up the largest workforce in hospital institutions10, it monitors all the care that individuals in surgical treatment circumstances are subjected to, enabling them to identify situations of risk to safety11.

The evaluation of the safety culture is an indicator for health institutions, since it allows the identification of fragile dimensions of the process that need greater attention of investments and improvement measures, aiming to achieve the reduction of incidents to the patient. Studies have recommended that the evaluation of safety culture be used as a management tool on a constant basis12.

Considering the above, the objective of this study was to evaluate the safety culture of nursing professionals in the surgical clinic and surgical block, involved in the care of surgical patients at a university hospital in the north of Minas Gerais.

METHODOLOGY

This is a quantitative, descriptive and cross-sectional census study, carried out with nursing professionals from the surgical clinic and surgical block. The inclusion criterion was professionals who had worked in the sectors for at least six months, provided direct care to the patient, and agreed to participate in the research voluntarily by signing the Informed Consent Form (ICF). Professionals who were away from work activities at the time of data collection were excluded.

The population universe was considered, based on the scale of dimensioning of professionals working in the respective sectors, encompassing day and night shifts, (N=37), so that all professionals who met the research criteria had equal opportunity to participate. The research population comprised 34 nursing professionals who agreed to participate in the study.

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The instrument used for data collection was the *Hospital Survey on Patient Safety Culture* (HSOPSC) 1.0, developed by the *Agency Healthcare Research and Quality* in 2004 and validated in Brazil in 201313. It is noteworthy that it is a reliable instrument, used worldwide to evaluate the Safety Culture, in the hospital environment, and can be applied in units or in the institution as a whole. It consists of 12 dimensions, referring to specific factors that determine the safety culture, namely: D1 - teamwork in the unit/service; D2- expectations and actions to promote safety of supervisors and managers; D3- organizational learning/ continuous improvement; D4- support from hospital management for patient safety; D5- general perception of patient safety; D6- feedback and communication about errors; D7- opening of communication; D8- frequency of reported events; D9 - teamwork among hospital units; D10 - adequacy of Professionals; D11 - shift/shift transfers and internal transfers; D12 - non-punitive responses to errors. It also has 42 items, arranged in response options on Likert-type scales of agreement. Thus, the HSOPSC evaluates the safety culture according to the percentage of positive and negative responses, answered in each of the dimensions14.

The collection took place from October 2022 to April 2023. The professionals were approached in their sector of activity, at an opportune time, in which they performed care for pre, trans and postoperative patients, namely: surgical clinic and surgical block. The visits were previously scheduled and in accordance with the routine of the sector and the institution. The theme was presented and delivered to the professionals, the ICF. Thus, after signature and consent, data collection began, making the self-administered questionnaire available to the health professional in printed form.

The data obtained were organized and stored using *Microsoft Excel software* and imported into *the Statistical Package for the Social Sciences* (SPSS) *v.25.0*, where they were submitted to descriptive statistical analysis. The participants were characterized according to sociodemographic variables, arranged through the distribution of relative and absolute frequencies, central and dispersion tendency. To investigate the existence of a statistical association between the dependent variable (General Classification of Safety Culture) and the independent variables, bivariate analyses (Pearson's chi-square test or Fischer's exact test) were conducted, adopting a significance level of 5% ($p < 0.05$).

Regarding the safety culture of the professionals, an analysis of the positive and negative responses was carried out. Participants who marked 4 (agree/always) or 5 (totally agree/almost always) for positively formulated items were considered positive responses.

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For the questions formulated in a negative way, options 1 (disagree/never) or 2 (strongly disagree/rarely) were considered as positive answers. For the items written in negative format, the direction of the answers was reverse-coded so that the lowest scores for each item were 1 and the highest was 5. The percentage of positive responses was calculated for each item and for each dimension. Thus, the items answered with a percentage of 50% or less of positive responses were considered fragile areas; and strong areas, the items answered with a percentage of 75% or more of positive responses14.

The entire study was developed considering the recommendations of Resolution No. 466 of December 12, 2012, which guarantees the participant, in the development of studies, respect for their dignity and autonomy, the evaluation of risks and benefits, respect for their willingness to participate or not in the study, in addition to the preservation of their personal information and data15. Thus, data collection was initiated only after consideration and approval by the Research Ethics Committee (REC) of UNIMONTES, under substantiated opinion number 5,691,896.

RESULTS

Of the total number of participants (N=34), there was a predominance of female professionals (79.4%), aged up to 45 years (67.6%) and a mean age of 43.27 (SD± 7.9) years. Regarding education, 58.8% had higher education or post-graduation. Regarding occupation, most were nursing technicians (79.4%). Also, 61.8% worked in the Surgical Clinic and 38.2% in the Surgical Block. The mean length of professional experience was 18.06 (SD± 6.4) years, and 67.6% of the professionals had up to 15 years of service in the hospital (Table 1).

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Table 1 - Sociodemographic and occupational characterization of nursing professionals in the Surgical Clinic and Surgical Block of the university hospital, from October 2022 to April 2023, (N=34).

Feature		F	%
Sex	Female	27	79,4%
	Male	7	20,6%
*Age group	Up to 45 years old	23	67,6
	46 years or older	10	29,4
*Educational level	Complete High School	13	38,2%
	Higher Education/Postgraduate	20	58,8%
Work Unit	Surgical clinic	21	61,8%
	Surgical Block	13	38,2%
Job title/function	Nurse	7	20,6%
	Nursing Technician	27	79,4%
*Time in the profession	Up to 15 years	15	44,1%
	16 years or older	13	52,9%
Length of work in hospital	Up to 15 years	23	67,6%
	16 years or older	11	32,4%
Working time in the area/unit	Up to 15 years	26	76,5%
	16 years or older	8	23,5%
Total		34	100%

(*) Values other than 34 refer to non-respondents or lost information./Source: survey data.

Regarding the safety culture of nursing professionals, of the 42 items that made up the dimensions, only 3 obtained a percentage of positive responses above 75%, being considered strong aspects of the culture, namely: "in this unit, people support each other" (82.4%); "in this unit, people treat each other with respect" (91.2%) and "we are actively doing things to improve patient safety" (88.2%).

On the other hand, 31 of the items obtained a percentage of positive responses below 50%, being considered fragile. Of these, the items with the lowest scores stand out: "we have enough staff to handle the workload" (2.9%); "patient safety is never compromised due to a greater amount of work to be completed" (17.6%); "we received information about implemented changes from the event reports" (17.6%); "we work in a crisis situation, trying to do a lot and very fast" (17.6%); and "professionals consider that their mistakes can be used against them" (17.6%) (Table 2).

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Table 2 - Percentage of positive responses by items of the dimensions, marked by nursing professionals from the Surgical Clinic and Surgical Block, of the university hospital, from October 2022 to April 2023, (N=34).

Dimension items	f	(%)
D1		
A1_Nesta unity, people support each other	28	82,4%
A3_Quando there is a lot of work to be done quickly, we work together as a team to complete it properly	25	73,5%
A4_Nesta unity, people treat each other with respect	31	91,2%
A11_Quando an area of this unit becomes overloaded, the other professionals in this unit help	16	47,1%
D2		
B1_O my supervisor/boss praises when he sees a job done in accordance with established patient safety procedures	16	47,1%
B2_O my supervisor/boss really takes into consideration the suggestions of the professionals for the improvement of patient safety	15	44,1%
B3R_Sempre the pressure mounts, my supervisor/boss wants us to work faster, even if it means "skipping steps"	19	55,9%
B4R_O my supervisor/boss doesn't pay enough attention to patient safety issues that happen over and over again	19	55,9%
D3		
A6_Estamos actively doing things to improve patient safety	30	88,2%
A9_Erros have led to positive changes here	12	35,3%
A13_Após we implement changes to improve patient safety, we evaluate effectiveness	22	64,7%
D4		
F1_A hospital's management provides a work climate that promotes patient safety	10	29,4%
F8_As actions of the hospital's management demonstrate that patient safety is a top priority	14	41,2%
F9R_A hospital management only seems interested in patient safety when an adverse event occurs	14	41,2%
D5		
A10R_É only by chance, that more serious mistakes don't happen here	15	44,1%
A15_A patient's safety is never compromised due to a greater amount of work to be completed	6	17,6%
A17R_Nesta unit we have patient safety issues	7	20,6%
A18_Os our procedures and systems are adequate to prevent errors from occurring	9	26,5%
D6		
C1_Nós we receive information about implemented changes from event reports	6	17,6%
C3_Nós we are informed about the errors that happen in this unit	14	41,2%
C5_Nesta unit, we discussed ways to prevent errors from happening again	16	47,1%
D7		
C2_Os professionals are free to say when they see something that may negatively affect patient care	24	70,6%
C4_Os professionals feel free to question the decisions or actions of their superiors	14	41,2%
C6R_Os professionals are afraid to ask when something seems not right	14	41,2%
D8		
D1_Quando an error occurs, but it is noticed and corrected before it affects the patient, how often is it notified?	12	36,4%
D2_Quando an error occurs, but there is no risk of harm to the patient, how often is the patient notified?	15	45,5%

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D3_Quando an error occurs, which could cause harm to the patient, but does not, how often is it notified?	19	57,6%
D9		
F2R_As hospital units are not well coordinated with each other	8	23,5%
F4_Há good cooperation between the hospital units that need to work together	10	29,4%
F6R_Muitas sometimes it is unpleasant to work with professionals from other units of the hospital	15	44,1%
F10_As hospital units work well together to provide the best care for patients	16	47,1%
D10		
A2_Temos enough staff to handle the workload	1	2,9%
A5R_Os professionals in this unit work more hours than would be best for patient care	11	32,4%
A7R_Utilizamos more temporary/outsourced professionals than would be desirable for patient care	21	61,8%
A14R_Nós we work in a "crisis situation", trying to do a lot and a lot fast	6	17,6%
D11		
F3R_O care process is compromised when a patient is transferred from one unit to another	16	47,1%
F5R_É common to lose important information about patient care during shift or shift changes	9	26,5%
F7R_Com frequently, there are problems in the exchange of information between the hospital units	7	20,6%
F11R_Neste hospital, shift or shift changes are problematic for patients	22	64,7%
D12		
A8R_Os professionals consider that their mistakes can be used against them	6	17,6%
A12R_Quando an event is notified, it seems that the focus is on the person and not on the problem	12	35,3%
A16R_Os professionals worry that their mistakes are recorded in their functional files	8	23,5%

Source: survey data.

In relation to the 12 dimensions that constitute the safety culture, in none of them was obtained a percentage of satisfactory positive responses that characterized them as a strong area of the culture. In addition, 8 dimensions were classified as weak points of culture, namely: support from hospital management for patient safety (37.3%); general perception of patient safety (36.3%); feedback and communication about errors (35.3%); frequency of reported events (46.5%); teamwork among hospital units (36.0%); adequacy of professionals (38.2%); shift/shift changes and internal transfers (39.7%); non-punitive responses to errors (25.5%) (Table 3).

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Table 3 – Percentage of positive responses by dimension, marked by nursing professionals from the Surgical Clinic and Surgical Block of the university hospital, from October 2022 to April 2023, (N=34).

Dimension	(%) positive responses
1 Teamwork in the unit/service	73,5%
2 Expectations and safety promotion actions of supervisors and managers	50,7%
3 Organizational learning/continuous improvement	62,7%
4 Hospital Management Support for Patient Safety	37,3%
5 General Perception of Patient Safety	36,3%
6 Feedback and communication about errors	35,3%
7 Opening of communication	51,0%
8 Frequency of reported events	46,5%
9 Teamwork between hospital units	36,0%
10 Suitability of Professionals	38,2%
11 Shift/shift handovers and internal transfers	39,7%
12 Non-punitive responses to errors	25,5%

Source: survey data.

Regarding the frequency of notification in the last 12 months, 64.7% stated that they had not filled out any notification of events. Regarding the evaluation of safety in the unit, 61.8% classified safety as regular, 32.4% as very good and 5.8% as poor or very poor.

In the bivariate analysis (Pearson's chi-square test *or* Fisher*'s exact* test), no statistically significant association was found between the classification of the safety culture and the professional characteristics of the participants. An association was observed between the number of notifications made and the classification of the crop (p=0.02). The number of notifications was associated with the length of professional experience (p=0.01).

Regarding the items and dimensions of the instruments, the following items were significantly associated with the Classification of Safety Culture (p<0.05): "professionals consider that their mistakes can be used against them" (p=0.00); "when an event is notified, it seems that the focus falls on the person and not on the problem" (p=0.03); "we work in a crisis situation, trying to do a lot and very fast" (p=0.01); "professionals are concerned that their errors are recorded in their functional records" (p=0.03); "our procedures and systems are adequate to prevent the occurrence of errors" (p=0.03); "Professionals feel free to question the decisions or actions of their superiors" (p=0.01). There was also an association with the dimensions "feedback and communication about errors" (p=0.00) and "non-punitive responses to errors" (p=0.00) (Table 4).

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Table 4 - Association between the safety culture and the items of the dimensions. Montes Claros- MG, 2022. (Bivariate Analysis) (N=34)

Variables	Safety culture		P-value
	Strong or neutral N (%)	Fragile N (%)	
A1			
Positive	10 (32,3%)	21 (67,7%)	1,00
Negative	1 (33,3%)	2 (66,7%)	
A2			
Positive	4 (66,7%)	2 (33,3%)	0,07
Negative	7 (25,0%)	21 (75,0%)	
A3			
Positive	10 (35,7%)	18 (64,3%)	0,63
Negative	1 (16,7%)	5 (83,3%)	
A5			
Positive	9 (42,9%)	12 (57,1%)	0,14
Negative	2 (15,4%)	11 (84,6%)	
A8			
Positive	9 (64,3%)	5 (35,7%)	0,00
Negative	2 (10,0%)	18 (90,0%)	
A9			
Positive	8 (34,8%)	15 (65,2%)	1,00
Negative	3 (27,3%)	8 (72,7%)	
A10			
Positive	9 (39,1%)	14 (60,9%)	0,27
Negative	2 (18,2%)	9 (81,8%)	
A11			
Positive	8 (36,4%)	14 (63,6%)	0,70
Negative	3 (25,0%)	9 (75,0%)	
A12			
Positive	8 (50,0%)	8 (50,0%)	0,03
Negative	3 (16,7%)	15 (83,3%)	
A14			
Positive	7 (63,6%)	4 (36,4%)	0,01
Negative	4 (17,4%)	19 (82,6%)	
A15			
Positive	3 (30,0%)	7 (70,0%)	1,00
Negative	8 (33,3%)	16 (66,7%)	
A16			
Positive	8 (50,0%)	8 (50,0%)	0,03
Negative	3 (16,7%)	15 (83,3%)	
A17			
Positive	4 (30,8%)	9 (69,2%)	1,00
Negative	7 (33,3%)	14 (66,7%)	
A18			
Positive	8 (50,0%)	8 (50,0%)	0,03
Negative	3 (16,7%)	15 (83,3%)	
B1			
Positive	9 (40,9%)	13 (59,1%)	0,25
Negative	2 (16,7%)	10 (83,3%)	
B2			
Positive	10 (41,7%)	14 (58,3%)	0,11
Negative	1 (10,0%)	9 (90,0%)	
B4			
Positive	10 (38,5%)	16 (61,5%)	0,22
Negative	1 (12,5%)	7 (87,5%)	
C4			

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Positive	10 (50,0%)	10 (50,0%)	0,01
Negative	1 (7,1%)	13 (92,9%)	
C6			
Positive	9 (32,1%)	19 (67,9%)	1,00
Negative	2 (33,3%)	4 (66,7%)	
D1			
Positive	8 (33,3%)	16 (66,7%)	0,68
Negative	2 (22,2%)	7 (77,8%)	
D2			
Positive	9 (36,0%)	16 (64,0%)	0,38
Negative	1 (12,5%)	7 (87,5%)	
F1			
Positive	10 (41,7%)	14 (58,3%)	0,11
Negative	1 (10,0%)	9 (90,0%)	
F2			
Positive	7 (41,2%)	10 (58,8%)	0,27
Negative	4 (23,5%)	13 (76,5%)	
F3			
Positive	7 (31,8%)	15 (68,2%)	1,00
Negative	4 (33,3%)	8 (66,7%)	
F4			
Positive	8 (38,1%)	13 (61,9%)	0,46
Negative	3 (23,1%)	10 (76,9%)	
F5			
Positive	6 (40,0%)	9 (60,0%)	0,47
Negative	5 (26,3%)	14 (73,7%)	
F7			
Positive	9 (36,0%)	16 (64,0%)	0,68
Negative	2 (22,2%)	7 (77,8%)	
F10			
Positive	10 (43,5%)	13 (56,5%)	0,06
Negative	1 (9,1%)	10 (90,9%)	
F11			
Positive	10 (33,3%)	20 (66,7%)	1,00
Negative	1 (25,0%)	3 (75,0%)	
Dimension 6			
Fragile	2 (8,7%)	21 (91,3%)	0,00
Not fragile	3,6 (81,8%)	2 (18,2%)	
Dimension 12			
Fragile	5 (18,5%)	22 (81,5%)	0,00
Not fragile	6 (85,7%)	1 (14,3%)	

Source: survey data.

DISCUSSION

In the present study, there was a predominance of nursing technicians (79%), women (70%), with 11 to 15 years of work at the hospital (62%) and higher education, including undergraduate and graduate degrees (59%). The mean age was 43.27 (SD± 7.9) and the mean length of profession was 18.06 (SD± 6.4). In other studies, the predominance of female professionals is also observed. However, it is common to observe the time of work in the institution between 1 and 5 years and schooling at the high school level [17].

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Regarding the evaluation of the items that made up the 12 dimensions of the questionnaire, 3 obtained a percentage of positive responses above 75%, being "in this unit, people support each other (82.4%)"; "in this unit, people treat each other with respect (91.2%)" and "we are actively doing things to improve patient safety (88.2%)". Despite this, no dimension was classified as strong. It is worth mentioning that the dimensions "teamwork in the unit/service (73.5%) and "organizational learning/continuous improvement (62.7%)" were presented as areas of culture with potential for improvement.

In comparison with other investigations with surgical teams, a study conducted in Piauí also observed the absence of strengthened dimensions, pointing to areas of opportunity for improvement, such as "organizational learning-continuous improvement" and "general perception of patient safety" [18]. In investigations conducted in European countries, the main dimension considered strong in the safety culture of professionals was "Teamwork in the unit/service"[19]. In the general evaluation of the safety culture, carried out at the national level with 311 hospitals, "organizational learning/continuous improvement" was the dimension that presented the highest percentage of positive responses [20].

Among aspects that negatively influence teamwork, attention is paid to the low collaboration and cooperativeness in service, as well as the management model adopted, closely related to the management of interprofessional conflicts. Such factors interfere in the construction of a safety climate favorable to the prevention of the occurrence of events to the patient21. In turn, organizational learning refers to changes made based on the knowledge acquired through the occurrence of errors. Thus, the development of spaces for continuous learning is important with regard to improving the safety culture20,22.

It was observed that 31 items of the questionnaire obtained a percentage of positive responses below 50%. It is listed that the item "we have enough personnel to handle the workload (2.9%)" reached the lowest score. Staffing is a critical challenge experienced by organizations and hospital managers, surrounded by the costs required of human resources. It is known that the lack of adequate professionals for care, together with overcrowding and lack of resources, lead to greater work overload and risks of damage16.

In addition, eight dimensions were classified as weak points of culture, with emphasis on the dimensions "non-punitive responses to errors (25.5%)" and "feedback and communication about errors (35.3%)". Similar to other studies and with the national evaluation of safety culture, the dimension "non-punitive responses to errors" presented the lowest percentage of positive responses [17,20].

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In the present study, most participants (61.8%) classified patient safety in their unit as "Regular". This result is similar to those obtained by other surveys. It is noteworthy that the critical perception of professionals regarding the safety of the unit in which they work is important for the process of identifying weaknesses and consequent improvement of patient safety [17,18].

Most professionals stated that they had not filled out any event notifications in the last 12 months. Similarly, another study published revealed high percentages for the absence of notifications carried out in the last year by nursing professionals17.

The fragile culture was significantly associated with the negative perception of the items "professionals consider that their mistakes can be used against them" (p=0.00); "when an event is notified, it seems that the focus falls on the person and not on the problem" (p=0.03); "we work in a crisis situation, trying to do a lot and very fast" (p=0.01); "professionals are concerned that their errors are recorded in their functional records" (p=0.03); "our procedures and systems are adequate to prevent the occurrence of errors" (p=0.03); "Professionals feel free to question the decisions or actions of their superiors" (p=0.01). In addition, an association was found between the weakening of the professionals' safety culture and the negative perception of the dimensions "feedback and communication about errors" (p=0.00) and "non-punitive responses to errors" (p=0.00).

Thus, in the present investigation, the classification of the safety culture was related to aspects related to non-punitive response, event notifications, professional adequacy, openness to communication and general perception of safety. In another investigation, among the dimensions evaluated, professional adequacy, managerial support, and continuous learning were predictors of safety culture23.

It was also identified that the fragile crop was associated with the absence of notifications in the last 12 months (p=0.02). It is observed that the notification of events is an essential management tool for the construction of learning opportunities and improvement of processes. It allows the identification of the events that occurred and, based on the analysis, establishes barriers to prevent their recurrence24.

In turn, the absence of notifications was associated with longer time in the profession (p=0.01). In another study, participants with greater professional experience had an improvement in cultural perception25.

In this sense, the management model has a significant impact on adherence and improvement of event communication. It is believed that professionals with greater

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experience, because they have greater security, are predisposed to identify risks more effectively and feel more confident to share their perceptions18. The punitive culture and the fear of shredding is a determining factor for the lower frequency of notifications. In addition, it is noteworthy that the feedback obtained by employees is also a predictive factor, since the absence of mobilization, changes and positive feedback from managers in the face of the notified event leads to less motivation to make future notifications21.

It is possible to develop the improvement of the safety culture from behavioral changes of professionals and staff, without necessarily a major remodeling of the institutional infrastructure. This aspect draws attention to the efforts made by health services in the planning of interventions and improvement strategies26 .

Therefore, the health actions and strategies developed contribute significantly to the improvement of the safety culture. In a published study, the authors describe the "*Good Catch*" campaign, a strategy used in an American university hospital to improve the notification process, consisting of mobilizing professionals to identify "near misses" understood by the circumstances that could cause harm to the patient. The success of the campaign was confirmed by the improvement in the positive percentage of responses during the reassessment of the safety culture27.

It is known that the care process for surgical patients, whether in hospitalization units or surgical centers, is marked by accelerated routines, invasive and complex procedures, making professionals vulnerable to error. A study demonstrated the impacts of a positive culture on the care process of surgical patients, observing lower morbidity during the postoperative phase. Thus, it is evident that cultural influence is sensitive to the security environment established for the provision of care26.

The scientific literature points to the importance of critical construction and cultural development in the process of professional training, with the incorporation of the theme in the curricular domain and in continuing education strategies. In addition, it is recommended to use tools that help establish efficient communication, with openness to dialogue and construction of learning [28].

The recommendation for the evaluation of the hospital safety culture is widespread worldwide [16,30-31]. However, in some countries, such as Brazil, the topic is still little discussed [12]. It is expected that the Unified Health System (SUS), encompassing health services, will use the strategy to increase the planning of measures and achieve the improvement of the supply of health care in the country. In this process, it is essential to

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consider the organizational characteristics and particularities of each service. It should be noted that the main focus is not only on evaluating, but on making positive changes developed from the direction made possible by cultural analysis [17,20].

CONCLUSION

The evaluation of the safety culture of nursing professionals involved in the care of surgical patients evidenced the absence of fortified areas of the safety culture. It was observed that the dimensions "Teamwork in the unit/service" and "Organizational learning/continuous improvement" presented potential for improvement. Among the dimensions with the lowest performance, "Non-punitive responses to errors" and "Feedback and communication about errors" stand out, which were also associated with the weakening of the general culture. In addition, the absence of event notifications in the last 12 months was related to the weak classification of the crop. The entire data collection process was facilitated through the use of an instrument validated in Brazil, the HSOPSC.

This study is limited in terms of its census character, considering the population size and the particularities of the health organization in which it was carried out, and it is not possible to make generalizations. In addition, the possibility of response bias occurring when using a self-administered instrument is not excluded. However, it is noteworthy that all procedures aimed at reducing the limitation were carried out, such as clarifying the instrument to the participant and ensuring anonymity.

CONTRIBUTIONS TO THE DISCIPLINE

It is hoped that the results obtained in the present study can guide the definition of priorities and assist in the planning of interventions that seek to achieve a positive culture, offering patient safety in the surgical patient care process. In addition, it is expected that further investigations can be carried out, in order to deepen the knowledge of the safety culture encompassed in all phases of the surgical process.

CONFLICT OF INTEREST

There is no conflict of interest.

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