PATIENT SAFETY CULTURE: PERCEPTIONS AND ATTITUDES OF SURGICAL CENTER WORKERS

Cultura de segurança do paciente: percepções e atitudes dos trabalhadores de centro cirúrgico

Cultura de seguridad del paciente: percepciones y actitudes de los trabajadores del centro quirúrgico

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ABSTRACT: Objective: To evaluate safety culture based on the perceptions and attitudes of professionals who work in the surgical center of a teaching hospital. **Method:** This is an exploratory descriptive cross-sectional study, with a quantitative approach, developed with 110 professionals who work in the surgical center, using the Safety Attitudes Questionnaire. **Results:** The general mean scores showed an incipient safety culture. When evaluating the culture by domains, job satisfaction and stress recognition were assessed as positive, and teamwork climate, safety climate, perceptions of unit/hospital management, and working conditions, as negative. **Conclusion:** The level of safety culture found is below that recommended in the literature. Management actions and working conditions were considered the main factors that contributed to the fragility of this culture. However, the professionals were satisfied with their work unit.
Keywords: Culture. Patient safety. Surgicenters. Health personnel. Health services research.

RESUMEN: Objetivo: evaluar la cultura de seguridad, a través de las percepciones y actitudes de los profesionales que trabajan en el centro quirúrgico de un hospital universitario. **Método:** Estudio exploratorio, descriptivo y transversal, con enfoque cuantitativo, desarrollado con 110 profesionales que trabajan en quirófano, aplicando el Cuestionario de Actitudes de Seguridad (*Safety Attitudes Questionnaire*). **Resultados:** El promedio de la puntuación general mostró una incipiente cultura de seguridad. Al evaluar la cultura por dominios, la "satisfacción laboral" y la "percepción del estrés" se evaluaron como positivas, y el "clima de trabajo en equipo", el "clima de seguridad", la "percepción de gestión de la unidad/hospital" y las "condiciones de trabajo" como negativas. **Conclusión:** El nivel de cultura de seguridad encontrado es inferior al recomendado en la literatura. Las acciones de gestión y las condiciones de trabajo se consideraron los principales factores que contribuyeron a la fragilidad de esta cultura. Sin embargo, los profesionales estaban satisfechos con la unidad de trabajo.
Palabras clave: Cultura. Seguridad del paciente. Centros quirúrgicos. Personal de salud. Investigación sobre servicios de salud.

RESUMO: Objetivo: Avaliar a cultura de segurança por meio das percepções e atitudes dos profissionais que atuam no centro cirúrgico de um hospital de ensino. **Método:** Trata-se de um estudo exploratório, descritivo e transversal, com abordagem quantitativa, desenvolvido com 110 profissionais que atuam no centro cirúrgico, utilizando o Safety Attitudes Questionnaire. **Resultados:** A média geral dos escores evidenciou uma cultura de segurança incipiente. Ao avaliar a cultura por domínios, satisfação do trabalho e percepção do estresse foram avaliados como positivos, e clima de trabalho em equipe, clima de segurança, percepção da gerência da unidade/hospital e condições de trabalho, como negativos. **Conclusão:** O nível de cultura de segurança encontrado está abaixo do preconizado na literatura. As ações gerenciais e as condições de trabalho foram consideradas os principais fatores que contribuíram para a fragilidade dessa cultura, entretanto os profissionais demonstraram-se satisfeitos com a unidade de trabalho.
Palavras-chave: Cultura. Segurança do paciente. Centros cirúrgicos. Pessoal de saúde. Pesquisa sobre serviços de saúde.

INTRODUCTION

Since 2004, patient safety has become a globally discussed topic, intending to improve the quality of health care by reducing incidents caused by health care that result in damage to the patient[1]. This theme became paramount with the creation of the World Alliance for Patient Safety by the World Health Organization (WHO). It instituted a set of measures, through campaigns, aimed at good care practices called Global Patient Safety Challenge to reinforce safety practices and promote better communication and work among the multidisciplinary team[2].

In Brazil, safety culture was considered one of the principles of risk management targeted at quality and patient safety only in 2013, with the creation of the National Patient Safety Program (*Programa Nacional de Segurança do Paciente* – PNSP) and the publication of the Collegiate Board Resolution (*Resolução da Diretoria Colegiada* – RDC) No. 36. Among the goals discussed in this program, the safety of surgical patients stands out as a priority in health services[3].

It should be noted that the surgical center (SC) is a place that offers complex care through multidisciplinary teams and high technological density, but with a great risk of damage to the patient[4]. The probability of damage may be associated with professional stress, ineffective communication, high workload, and/or dual employment. Therefore, surgical patient safety requires the participation of the multidisciplinary team and organizational actors concerning patient safety culture[5].

Safety culture is defined as a product of values, attitudes, skills, and patterns of individual and collective behaviors that determine the commitment, style, and proficiency of the management of a safe organization. Several instruments in different languages can be used to understand and evaluate safety culture[6].

In Brazil, the Safety Culture Survey and the Safety Attitudes Questionnaire (SAQ) are the most used instruments in hospitals[7]. We chose to develop this study using the Portuguese version of SAQ, as this tool is reliable and sensitive in assessing individual attitudes and perceptions related to safety[8].

National studies on patient safety culture carried out in the South and Northeast regions with multidisciplinary teams from different hospital sectors and primary health care concluded that safety culture could be influenced by the professional's position, the workload, the hospital management, and stress. We emphasize that such studies were performed in intensive care units and inpatient care, demonstrating the clear need for safety culture to be better explained in SC units, considering its high-risk nature.

OBJECTIVE

To evaluate patient safety culture based on the perceptions and attitudes of professionals who work in the SC of a teaching hospital in Northeastern Brazil.

METHODS

This is an exploratory descriptive cross-sectional study, with a quantitative approach, developed at the SC of a public teaching hospital in Aracaju, Sergipe, Brazil.

A total of 110 professionals participated in the study, covering the categories: surgical doctors, anesthesiologists, medical residents, nurses, nursing technicians, nursing assistants, health assistants (stretcher-bearers, clinic secretary), and pharmacy technician.

The investigation included professionals who were directly or indirectly involved with care and had worked in the sector for at least one month, with a minimum workload of 20 hours per week. The study did not include professionals who, for whatever reason, were away during the data collection period – those on leave, vacation, or having a day off. During the collection period, no professional was away from their work activities.

The translated and validated version of the Safety Attitudes Questionnaire (SAQ) — Short Form 2006 — for Brazilian Portuguese was used for data collection. SAQ is an instrument that measures the safety climate perceived by professionals and is divided into two parts. The first part consists of variables that characterize the subject (position, gender, specialty, experience in the specialty). The second part has 41 questions, covering the domains: teamwork climate, job satisfaction, perceptions of hospital and unit management, working conditions, and stress recognition. The answers to each of these questions follow a 5-point Likert scale:
- A: strongly disagree;
- B: slightly disagree;
- C: neutral;
- D: slightly agree;

- E: strongly agree;
- X: not applicable[9].

In this part, we added the variables: age, schooling, working time in the sector (in years), work shift, employment relationships, patient care (direct or indirect).

Data collection was carried out from May to July 2016, by three researchers. The professionals who agreed to participate in the study signed the Informed Consent Form and received explanations about the purposes of the study. The questionnaire was delivered to each participant in a closed envelope. After completion, the participants placed it in a folder left on-site to maintain their confidentiality. All folders were collected at the end of each work shift.

Data were organized and analyzed using the Epi info® software, version 7, with independent double-entry. Demographic and quantitative labor variables were described by measures of central tendency and dispersion, and qualitative categorical variables by simple descriptive statistics.

We analyzed the SAQ by evaluating its 41 questions through a score ranging from 0 and 100 points, with 0 representing the worst perception of the safety climate and 100 representing the best. Questions 2, 11, and 41 have a reverse score. Namely, in these cases, 0 is the best perception of the safety climate, and 100 is the worst. Each question received the following score:

- strongly disagree (A): 0 points;
- slightly disagree (B): 25 points;
- neutral (C): 50 points;
- slightly agree (D): 75 points;
- strongly agree (E): 100 points;
- not applicable (X): no score.

Scores ≥75 were considered positive.

This study complied with Resolution No. 466/2012 on research involving human beings and was approved by the Research Ethics Committee of Universidade Federal de Sergipe (Certificate of Presentation for Ethical Consideration 50133315.8.0000.5546).

RESULTS

Among the 110 professionals who participated in the study, the median age was 35 years old. The median workload was 36 weekly hours. As for the working time in the sector, the median was 18.5 months. Most participants were female (61/55.5%). The professional categories with the largest number of subjects were surgeons and anesthesiologists, as well as medical residents with 32 subjects (29.1%), followed by nursing assistants and nursing technicians (27/24.5%), nurses (9/8.2%), health assistants, and pharmacy technicians (10/9.1%). Regarding schooling, 86 (78.2%) had completed higher education, and 64 (58.2%) had a specialization.

When analyzing domains, stress recognition (77.5%) had the highest mean, while perceptions of hospital management obtained the lowest mean (55.1%). The overall mean was 69.1% (Figure 1).
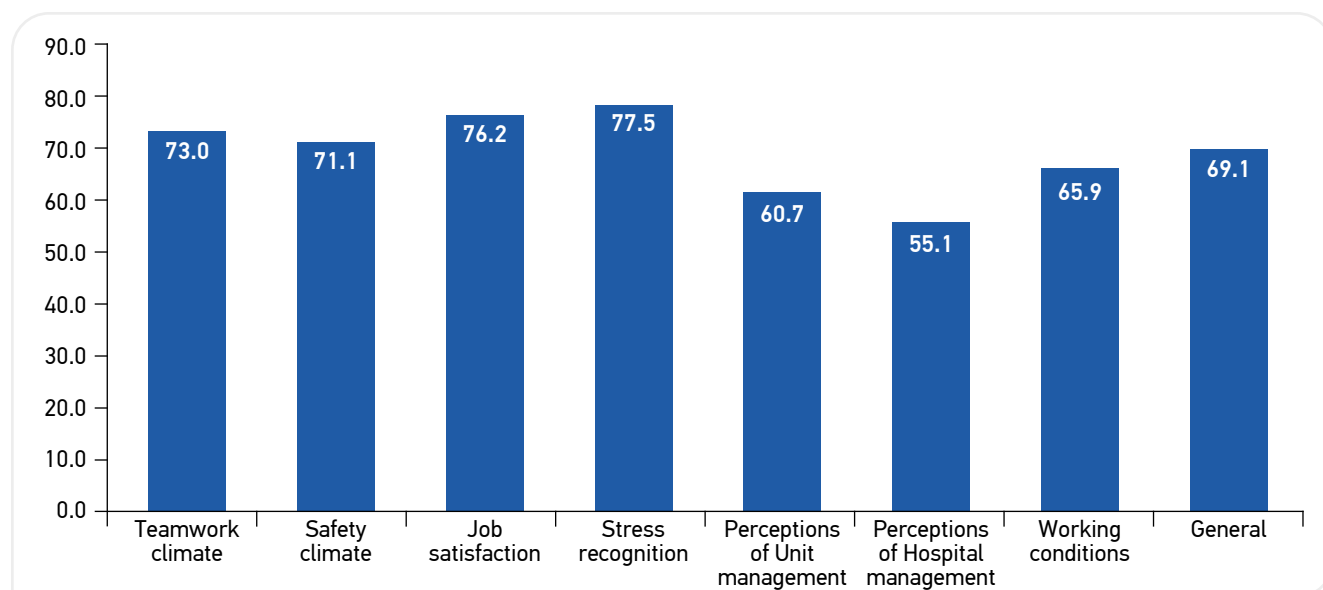

Figure 1. Mean scores obtained by the evaluation of health professionals who work in the surgical center, according to the domains of the Safety Attitudes Questionnaire.

In the teamwork climate domain, 90 (82%) professionals agreed with the item "I have the support I need from other personnel to care for patients." However, only 27 (25%) participants agreed with the item "In this sector, it is difficult to speak up if I perceive a problem with patient care."

Regarding the safety climate domain, 23 (21%) respondents disagreed with the following statement: "Medical errors are handled appropriately in this sector," while 41 (37%) agreed with: "In this sector, it is difficult to discuss errors."

In the job satisfaction domain, the item with the highest score was: "I like my job," with 100 (91%) agreements. A total of 87 (79%) participants agreed with the item "This hospital is a good place to work" (Table 1).

Concerning the stress recognition domain, 92 (84%) professionals agreed with the following statement: "I am less effective at work when fatigued." Eighty-two (75%) individuals agreed with the item "When my workload becomes excessive, my performance is impaired;" 79 (72%) of them agreed with "I am more likely to make errors in tense and hostile situations," and 68 (72.0%) interviewees agreed with "Fatigue impairs my performance during emergency situations" (Table 2).

Regarding the perceptions of unit/hospital management domain, 27 (25%) participants disagreed, and 27 (25%) were neutral about the item "Unit administration supports my daily efforts." Only 32 (29%) individuals agreed with the following statement: "Unit management constructively deals with problem physicians and employees;" 42 (38%) agreed with the item: "I am provided with adequate, timely information about events in the hospital that might affect my work;" and 67 (61%) agreed with the item: "Unit management does a good job" (Table 2).

Regarding the working condition domain, 75 (68%) individuals agreed with the following statement: "The levels of staffing in this clinical area are sufficient to handle the number of patients." A total of 39 (35%) respondents disagreed with the statement "All the necessary information for diagnostic and therapeutic decisions is routinely available to me" (Table 2).

The three domains with the highest mean scores were: stress recognition, job satisfaction, and teamwork climate, respectively. Only the stress recognition and job satisfaction domains obtained mean scores higher than 75. The worst evaluated domain was perceptions of hospital management[10].

Table 1. Responses related to teamwork climate, safety climate, and job satisfaction in the surgical center.

Domain	Disagree* N (%)	Neutral N (%)	Agree* N (%)	NA N (%)
Teamwork climate				
In this sector, it is difficult to speak up if I perceive a problem with patient care.	73 (66)	5 (5)	27 (25)	5 (5)
I have the support I need from other personnel to care for patients.	13 (12)	0 (0)	90 (82)	7 (6)
Safety climate				
Medical errors are handled appropriately in this sector.	23 (21)	18 (16)	64 (58)	5 (5)
In this sector, it is difficult to discuss errors.	51 (46)	13 (12)	41 (37)	5 (5)
Job satisfaction				
I like my job.	2 (2)	2 (2)	100 (91)	6 (5)
This hospital is a good place to work.	10 (9)	6 (5)	87 (79)	7 (6)

*Slightly or strongly; NA: not applicable.

Table 2. Responses related to stress recognition, perceptions of management, and working conditions in the surgical center.

Domain	Disagree* N (%)	Neutral N (%)	Agree* N (%)	NA N (%)
Stress recognition				
When my workload becomes excessive, my performance is impaired.	14 (13)	7 (6)	82 (75)	7 (6)
I am less effective at work when fatigued.	10 (9)	3 (3)	92 (84)	5 (5)
I am more likely to make errors in tense or hostile situations.	18 (16)	8 (7)	79 (72)	5 (5)
Fatigue impairs my performance during emergency situations.	26 (24)	8 (7)	68 (62)	8 (7)
Perceptions of unit/hospital management				
Unit administration supports my daily efforts.	27 (25)	27 (25)	47 (43)	9 (8)
Unit management does a good job.	16 (15)	18 (16)	67 (61)	9 (8)
Unit management constructively deals with problem physicians and employees.	32 (29)	33 (30)	32 (29)	13 (12)
I am provided with adequate, timely information about events in the hospital that might affect my work.	36 (33)	20 (18)	42 (38)	12 (11)
Working conditions				
The levels of staffing in this clinical area are sufficient to handle the number of patients.	20 (18)	5 (5)	75 (68)	10 (9)
All the necessary information for diagnostic and therapeutic decisions is routinely available to me.	39 (35)	9 (8)	51 (46)	11 (10)

*Slightly or strongly; NA: not applicable.

DISCUSSION

Study results showed that relevant aspects of patient safety culture in the SC need to be improved since the mean score evaluation confirms that only two out of six domains obtained values higher than 75, considered the minimum value for a positive safety culture.

The stress recognition domain, which corresponds to the professionals' perception of stressful elements in the performance of their work, achieved the highest score in the study and requires attention. It is noteworthy that the research participants had a high perception of stressful situations in the work environment. This result is consistent with that of a study conducted with professionals in the Federal District to evaluate the safety culture in a public hospital, which also demonstrated, through a positive score, that employees notice when stressors interfere with their work performance[6].

The high perception of stressors in the work environment was also identified in international studies carried out in Norway and Hungary, which showed results similar to those of Brazilian studies, highlighting that professionals had a good perception of stressors in the work environment[6].

As stress is known to be a negative influence on any human activity, professionals must realize that, to provide care to the patient, they first need to take care of themselves, avoiding stress and distress that may predispose them to error[11].

Professionals are aware that excessive workload and fatigue impair their performance and increase the likelihood of errors in tense and hostile situations, thus compromising patient safety. Therefore, we can infer that most professionals recognize stressors, such as fatigue, insufficient human resources, emotional factors, and communication barriers, as something to be positively reversed[10].

Job satisfaction was the domain with the second highest mean score. A study carried out with nursing professionals in Rio Grande do Sul has similar results to that of the statement "I like my job," revealing that 91% of professionals declared liking the work they did, and 82% were proud to work in the area[11]. The satisfaction of health professionals is

considered a positive factor since it directly affects the quality of care provided[12].

Unhappy professionals have high turnover rates associated with adverse events, such as errors in drug administration and incidence of falls. In this sense, job satisfaction is correlated with increased productivity and patient safety, as satisfied professionals can make the workplace safer[13].

Teamwork is the combination of harmonious relationships, interaction, and collaboration between elements in the same physical environment. The study demonstrates the teamwork climate domain as satisfactory, a positive aspect of the institution studied.

The results obtained in the teamwork climate domain are similar to those of a study carried out in Ceará. The investigation indicated that the quality of care is favored in environments where participants can make suggestions, openly discuss a problem, assist one another, and doctors and nurses work in a coordinated way. A favorable work environment depends on how the team members interact. Harmony and respect for differences are the main factors that lead to the development of an environment considered pleasant, safe, and focused, above all, on patient safety[7].

Nonetheless, in the same domain, the participants pointed out that disagreements are not properly resolved and that it is difficult to speak up about a problem regarding patient care, a situation considered negative for safety since problem-solving is impaired, facilitating the occurrence of adverse events in patients[7].

The safety climate domain had a mean score below 75, which suggests that collective interaction and respect among professionals need to be strengthened. Also, 72% of professionals declared that they would feel safe if they needed to be treated in this SC as patients, corroborating the results of a study carried out in Southern Brazil. However, at the same time, they reported that it is difficult to discuss errors and that these errors are not handled properly in the sector[10].

We underline that the significantly low scores of both perceptions of unit management and perceptions of hospital management demonstrate the weakness of hospital administration.

Participants do not feel supported by hospital management, nor do they receive adequate information that might affect their work, which represents a weakness in communication between managers and healthcare professionals. A study carried out in Southern Brazil showed a similar result[13]. This issue requires much attention, as it directly reflects on the quality of care provided. These results point to the need for management to address these issues, as a safety culture will not be built if, primarily, the unit and hospital managers are not involved or sensitized[12].

The working conditions domain obtained a score of 65.9, confirming the need for continuing education and overcoming of difficulties for professionals[14]. This deficit in continuing health education contributes to the low score observed in the perceptions of management. Thus, managers must promote and support the implementation of safe practices based on scientific evidence and care protocols to encourage safe multidisciplinary care, reducing the chance of preventable adverse events.

CONCLUSION

The level of safety culture found at the institution hosting the research is below that recommended by the literature. The professionals involved identified managerial actions as the main contributing factor to the fragility of this culture. Nevertheless, they declared satisfaction with their work.

Data analysis allowed a situational diagnosis. It worked as a warning for the domains that need to be addressed and the strategies that should be developed and improved to strengthen safety culture in the SC. We suggest consistent interventions in the identified domains to promote a safe environment for professionals and patients.

These results can be useful for the managers of this hospital unit because, by identifying the level of safety culture, they can plan actions to promote patient safety, such as continuing education processes and the introduction of new tools, such as the surgical safety checklist, proposed by WHO.

Considering that the study focused on the SC, we recommended replicating this research in other hospital units to identify the weaknesses and potential of each work area, aiming at a change planning based on the evaluation of professionals who work daily in health care.

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