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PROBLEMS IN THE PATIENT SAFETY CULTURE IN AN EMERGENCY CARE UNIT: CAUSAL ANALYSIS

PROBLEMAS NA CULTURA DE SEGURANÇA DO PACIENTE EM UMA UNIDADE DE PRONTO ATENDIMENTO: ANÁLISE CAUSAL

PROBLEMAS EN LA CULTURA DE SEGURIDAD DEL PACIENTE EN UNA UNIDAD DE EMERGENCIA: ANÁLISIS DE LA CADENA CAUSAL

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Objective: to develop an analysis matrix to identify problems related to the patient safety culture in an emergency care unit in southern Brazil. Method: the first stage, with a descriptive cross-sectional design, occurred from July to August 2018, with nurses, through the self-application of the instrument "*Safety Attitudes Questionaire - SAQ Short Form 2006"*. In the second stage, with a descriptive exploratory design, the SAQ questions underwent an interpretative analysis, carried out by nurses dedicated to the study of the subject, in April 2021. Results: the problems in the patient safety culture in the emergency care unit were related to the structure, management processes and clinical processes, mainly of an organizational nature. Conclusion: the use of causal chain analysis allowed the construction of an analysis matrix, facilitating the identification of the main problems related to the patient safety culture in the emergency care unit.

Descriptors: Patient Safety. Culture. Emergency Nursing. Emergency Medical Services. Quality Improvement.

Objetivo: construir uma matriz de análise para identificação dos problemas relacionados à cultura de segurança do paciente em uma unidade de pronto atendimento no sul do Brasil. Método: a primeira etapa, com delineamento transversal descritivo, ocorreu de julho a agosto de 2018, com enfermeiros, por meio da autoaplicação do instrumento "Safety Attitudes Questionaire – SAQ Short Form 2006". Na segunda etapa, com delineamento exploratório descritivo, as questões do SAQ passaram por análise interpretativa, realizada por enfermeiras dedicadas ao estudo da temática, em abril de 2021. Resultados: os problemas na cultura de segurança do paciente na unidade de pronto atendimento

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relacionaram-se à estrutura, processos de gestão e processos clínicos, principalmente de caráter organizacional. Conclusão: a utilização da análise de cadeia causal permitiu a construção de uma matriz de análise, facilitando a identificação dos principais problemas relacionados à cultura de segurança do paciente na unidade de pronto atendimento.

Descritores: Segurança do Paciente. Cultura. Enfermagem em Emergência. Serviços Médicos de Emergência. Melhoria de Qualidade.

Objetivo: construir una matriz de análisis para identificar problemas relacionados con la cultura de seguridad del paciente en una unidad de atención de emergencia en el sur de Brasil. Método: la primera etapa, con diseño transversal descriptivo, se llevó a cabo de julio a agosto de 2018, con enfermeros, mediante la autoaplicación del instrumento "Safety Attitudes Questionaire – SAQ Short Form 2006". En la segunda etapa, con un diseño exploratorio descriptivo, las preguntas del SAQ pasaron por un análisis interpretativo, realizado por enfermeras dedicadas al estudio del tema, en abril de 2021. Resultados: los problemas en la cultura de seguridad del paciente en la unidad de atención de emergencia fueron relacionados con la estructura, los procesos de gestión y los procesos clínicos, principalmente de carácter organizacional. Conclusión: el uso del análisis de la cadena causal permitió la construcción de una matriz de análisis y facilitó la identificación de los principales problemas vinculados a la cultura de seguridad del paciente en la unidad de atención de emergencia.

Descriptores: Seguridad del Paciente. Cultura. Enfermería de Urgencia. Servicios Médicos de Urgencia. Mejoramiento de la Calidad.

Introduction

Patient safety is an important component for the quality of care in health services[1], and its purpose is to minimize the risks arising from care, and to achieve this it is necessary to develop patient safety culture (PSC)[2].

PSC is defined as the combination of actions and behaviors that allow professionals to learn from mistakes in order to improve the quality of health care provided. Therefore, it leads to a change in the punitive thinking of health practices, allowing spaces for discussion to optimize care[2].

In addition, in 2019 The World Health Organization (WHO) proposed targeting strategies for all health stakeholders, which was consolidated in a document involving actions to improve patient safety. This document had strategies for directing these actions and promoted a framework for all countries to develop their own action plans for patient safety[3].

Among the health care scenarios, the Emergency Care Units (UCE) were created in 2008 as health facilities of intermediate for urgent care and emergencies[4]. Considered dynamically complex, there are few research studies on patient safety in emergency services[5], with only two studies carried out in the UCE[6] being highlighted in a recent review, indicating the need to expand studies on the subject in these places, given the existing complexity and particularities[7].

It is understood that one of the possible ways to promote advances in health services is the evaluation of the PSC evaluation results, from the perspective of the theoretical model of causal chain[8]. This is an efficient method for organizing information as it presents the causal relationships that potentiate the problems[9].

The analysis of problems related to patient safety in the light of the theoretical model of the causal chain permits investigation into different care scenarios, using different instruments, proving to be an important technique in proposing change strategies that strengthen patient safety[10].

This model uses two interrelated ideas: the causal chain, which allows the identification of how an intervention can impact an organization or a process; and the need to carry out an assessment prior to the implementation of the intervention[8].

Based on the concepts defined by Donabedian and Reason, which converge on the idea that a health organization is inserted in a larger system and, thus, the causal chain begins with the structure within which a service is delivered, "exogenous factors", that is, those that cannot be completely determined by the local manager, such as national directives[10].

The causal chain continues through processes – "endogenous factors" – that can be determined by local control, which are divided into management processes (human resource policies, supply management, etc.) and clinical or front-end processes. The intervening and behavioral variables are related to the culture of safety, morals and attitude[10].

Thus, the model suggests that interventions proposed to improve patient safety may focus on management or clinical processes. Interventions carried out in management processes (generic interventions) generally affect patient safety through their effect on intervening variables and on staff behaviours/attitudes, such as morale and culture. In clinical processes (direct or specific interventions), they directly impact care, such as an engineering solution to avoid the wrong connection of anesthetic tubes[10].

In view of the above, the aim of this study was to construct an analysis matrix to identify problems related to PSC in a UCE in southern Brazil.

Method

The research was carried out in two stages: the first, with a descriptive cross-sectional design, with the self-application of the "Safety Attitudes Questionaire – SAQ Short Form 2006" questionnaire to UCE nurses in a city in southern Brazil.

The study site is in a municipality in the south of Brazil, which has one UCE, qualified as size III. It serves adult and pediatric patients exclusively through the Unified Health System, operating 24 hours a day.

It predominantly cares for patients with illnesses of clinical origin, however, victims of trauma or those with surgical conditions are also treated. These cases are treated at the UCE first and are referred to the hospital service. It has 22 observation beds for adults, five for pediatrics and four for emergencies. The multidisciplinary team is composed of nurses, technicians and nursing assistants, doctors, psychologists, social workers, pharmacists, radiology technicians, administrative agents, security guards, and cleaning staff.

Professionals working at the study site who worked for more than six months were included in the data collection at this stage, and those who were on leave due to vacation, health or maternity leave during the collection period were excluded. The unit had 24 nurses, however, due to exclusion due to maternity leave, the final sample consisted of 23 nurses.

Participant recruitment was carried out by the leadresearcher, who personally and individually invited each nurse at their workplace to participate in the research. The researcher explained the purpose of the research to each participant, as well as the SAQ questionnaire and, after acceptance, the free and informed consent form was handed over for the participant to sign.

Data collection for the first stage took place in July and August 2018. The questionnaire was self-administered in a place defined by the participants during their working hours, with an average completion time of 10 minutes. The main researcher, accompanied by a Scientific Initiation student, remained available to clarify any doubts.

The data obtained were organized in an Excel® spreadsheet by double typing, to identify any inconsistencies, which were corrected by checking the questionnaires to compose the database for analysis. No data from the questionnaires was lost.

The SAQ - Short Form has 41 questions, the first five of which are about whether the professional had already answered the SAQ before, about gender, position held, area of expertise (adult, pediatrics or both) and length of experience in the specialty. 36 questions focused on safety culture, covering six domains:

teamwork climate, safety climate, job satisfaction, perception of unit and hospital management, working conditions and stress recognition. Questions 14 and 33 to 36 have no domain[11].

The answers to each item of the questionnaire follow the Likert-type scale (totally disagree (A)= 0 points; partially disagree (B)= 25 points; neutral (C)= 50 points; partially agree (D)= 75 points; totally agree (E)= 100 points, and not applicable (X)= does not score), with the final score of the instrument ranging from 0 to 100, where zero represents the worst perception of the safety climate and 100 the best perception. A positive result is considered when the total score is greater than or equal to 75[11]. In this research, it was considered that the ".h" refers to the municipal health department and the ".u" to the coordination of the UCE, in questions 24 to 28.

Regarding the counting of points, first, the reverse items (questions 2, 11 and 36) were recoded, so the answers "totally agree" became "totally disagree" and in the same way, analogously, for the other items.

After organizing the data and obtaining the absolute and relative frequencies for each SAQ question, it was possible to analyze those that obtained the worst evaluations by the majority of participants, that is, negative percentages above 50%. The obtained results were analyzed using descriptive statistics, with the characterization of the nurses; description of the absolute number; percentage of each response for each item.

The second stage was carried out in April 2021, with the participation of four nurses recruited for convenience who were personally invited for dedicating themselves to the study of patient safety and knowing the causal analysis model in advance. The meeting was scheduled at a defined date and time by the participants.

The lead researcher coordinated the virtual meeting with the nurses through the Microsoft Teams® platform, in which the data obtained in the first stage were discussed, with their qualitative interpretation, in order to build an analysis matrix to identify problems based on the Brown[8] model (Figure 2). This meeting lasted two hours, it was not audio recorded, as there was no need to keep records for later data analysis.

Figure 1 - Matrix of the SAQ instrument based on Brown's proposal[8]. Curitiba, Paraná, Brazil - 2021.

ESTRUTURA	PROCESSOS		RESULTADOS
	PROCESSOS DE GESTÃO	PROCESSOS CLÍNICOS	

Source: by authors

The lead researcher started the meeting by explaining the objective of the stage. Each SAQ question was read by the lead researcher and after that, each participant interpreted the question, defining it as a problem and relating it to the dimensions that make up the causal chain (structure, management process, clinical process or result), justifying the reason for the choice; when there was a difference of opinion, the issue was discussed until a consensus was reached.

This research received the Certificate of Presentation for Ethical Appreciation number 66939717.3.3003.0100 and was approved by the Research Ethics Committee under number 2.573.420. The participants signed the Informed Consent Form.

Results

The analysis of the participant characterization data from the first stage of the research revealed that the majority of nurses had not previously answered the questionnaire (n=19; 82.61%), had a position as a nurse (n=19; 82.61%) and were

female (n=18; 78.26%). The majority reported the care of adult patients as their main duties (n=11; 47.83%), followed by pediatrics and adults (n=9; 39.13%). Regarding the time in the specialty, most nurses had 5 to 10 years of experience (n=10, 43.48%), followed by 11 to 20 years (n=7, 30.43%).

A Table 1 shows the absolute and relative frequency for each question of the SAQ answered by the participants.

Table 1 - Absolute and relative frequency (%) of questions 1 to 36 of the SAQ. Curitiba, Paraná, Brazil - 2018. (N=36)

(continued)

Question	DT	DP	N	PA	TA	CI
1) The suggestions of the Nurse are well received in this area	0; (0)	8; (34.8)	1; (4.4)	9; (39.1)	5; (21.7)	0; (0)
2) In this area, it is difficult to speak openly if I notice a problem with patient care	3; (13)	7; (30.4)	1; (4.4)	**6; (26.1)**	**6; (26.1)**	0; (0)
3) In this area, disagreements are resolved appropriately (e.g. not who is right, but what is best for the patient)	3; (13)	6; (26.1)	2; (8.7)	9; (39.1)	3; (13.1)	0; (0)
4) I have the support I need from other team members to take care of the patient	0; (0)	7; (30.4)	2; (8.7)	7; (30.4)	7; (30.5)	0; (0)
5) It is easy for professionals working in this area to ask questions when there is something they do not understand	1; (4.4)	4; (17.4)	0; (0)	9; (39.1)	9; (39.1)	0; (0)
6) Doctors and nurses here work as a well-coordinated team	2; (8.7)	8; (34.8)	1; (4.3)	12; (52.2)	0; (0)	0; (0)
7) I would feel safe if I was treated here as a patient	3; (13)	6; (26.1)	4; (17.4)	7; (30.4)	3; (13.1)	0; (0)
8) Errors are handled appropriately in this area	**1; (4.3)**	**11; (47.8)**	1; (4.4)	8; (34.8)	2; (8.7)	0; (0)
9) I know the appropriate means to refer patient safety issues in this area	3; (13.1)	2; (8.7)	0; (0)	13; (56.5)	5; (21.7)	0; (0)
10) I get proper feedback on my performance	**8; (34.8)**	**9; (39.1)**	0; (0)	2; (8.7)	3; (13)	1; (4.4)
11) In this area, it is difficult to argue about errors	6; (26.1)	5; (21.7)	1; (4.4)	7; (30.4)	4; (17.4)	0; (0)
12) I am encouraged by my colleagues to report any concerns I may have regarding patient safety	**5; (21.7)**	**8; (34.8)**	1; (4.4)	4; (17.4)	5; (21.7)	0; (0)
13) The culture in this area makes it easy to learn from the mistake of others	3; (13)	2; (8.7)	2; (8.7)	14; (60.9)	2; (8.7)	0; (0)
14) My safety suggestions would be put into action if I expressed them to the administration	**5; (21.8)**	**7; (30.4)**	2; (8.7)	9; (39.1)	0; (0)	0; (0)
15) I like my work	0; (0)	2; (8.7)	0; (0)	6; (26.1)	15; (65.2)	0; (0)
16) Working here is like being part of a big family	4; (17.4)	4; (17.4)	2; (8.7)	9; (39.1)	4; (17.4)	0; (0)
17) This is a good place to work	6; (26.1)	5; (21.7)	2; (8.7)	6; (26.1)	4; (17.4)	0; (0)
18) I am proud to work in this area	0; (0)	4; (17.4)	1; (4.4)	7; (30.4)	11; (47.8)	0; (0)
19) Morale in this area is high	**2; (8.7)**	**10; (43.5)**	3; (13)	5; (21.7)	3; (13.1)	0; (0)
20) When my workload is excessive, my performance is impaired	3; (13)	0; (0)	1; (4.4)	0; (0)	19; (82.6)	0; (0%)
21) I'm less efficient at work when I'm tired	1; (4.4)	0; (0)	2; (8.7)	3; (13)	17; (73.9)	0; (0)

Table 1 - Absolute and relative frequency (%) of questions 1 to 36 of the SAQ. Curitiba, Paraná, Brazil - 2018. (N=36)

(conclusion)

Question	DT	DP	N	PA	TA	CI
22) I am more likely to make mistakes in tense or hostile situations	2; (8.7)	1; (4.3)	2; (8.7)	6; (26.1)	11; (47.8)	1; (4.4)
23) Tiredness impairs my performance during emergency situations (e.g., cardiorespiratory resuscitation, seizures)	2; (8.7)	3; (13)	1; (4.4)	8; (34.8)	9; (39.1)	0; (0)
24.u) The administration supports my daily efforts	**8; (34.8)**	**8; (34.8)**	1; (4.3)	2; (8.7)	4; (17.4)	0; (0)
25.u) Administration does not knowingly compromise patient safety	4; (17.4)	6; (26.1)	5; (21.7)	7; (30.4)	1; (4.4)	0; (0)
26.u) The administration is doing a good job	4; (17.4)	7; (30.4)	2; (8.7)	7; (30.4)	3; (13.1)	0; (0)
27.u) Troubled professionals are treated constructively by our	**11; (47.8)**	**7; (30.4)**	3; (13.1)	2; (8.7)	0; (0)	0; (0)
28.u) I receive appropriate and timely information about events that may affect my work from the	**8; (34.8)**	**6; (26.1)**	2; (8.7)	4; (17.4)	3; (13)	0; (0)
24.h) The administration supports my daily efforts	**13; (56.5)**	**5; (21.7)**	0; (0)	1; (4.4)	4; (17.4)	0; (0)
25.h) Administration does not consciously compromise patient safety	3; (13)	8; (34.8)	4; (17.4)	7; (30.4)	1; (4.4)	0; (0)
26.h) The administration is doing a good job	**6; (26.1)**	**7; (30.4)**	2; (8.7)	6; (26.1)	2; (8.7)	0; (0)
27.h) Troubled professionals are treated constructively by our	**11; (47.8)**	**6; (26.1)**	3; (13)	3; (13.1)	0; (0)	0; (0)
28.h) I receive appropriate and timely information about events that may affect my work from the	**9; (39.1)**	**6; (26.1)**	2; (8.7)	4; (17.4)	1; (4.3)	1; (4.4)
29) In this area, the number and qualification of professionals are sufficient to deal with the number of patients	**15; (65.2)**	**4; (17.4)**	0; (0)	4; (17.4)	0; (0)	0; (0)
30) This hospital does a good job in training new team members	**16; (69.6)**	**3; (13)**	0; (0)	2; (8.7)	1; (4.3)	1; (4.4)
31) All information for diagnostic and therapeutic decisions is routinely available to me	**4; (17.4)**	**11; (47.8)**	0; (0)	5; (21.7)	3; (13.1)	0; (0)
32) Interns in my profession are adequately supervised	**6; (26.1)**	**7; (30.4)**	1; (4.4)	5; (21.7)	2; (8.7)	2; (8.7)
33) I experience good collaboration with nurses in this area	0; (0)	2; (8.7)	2; (8.7)	14; (60.9)	5; (21.7)	0; (0)
34) I experience good collaboration with the team of physicians in this area	1; (4.4)	3; (13)	2; (8.7)	14; (60.9)	3; (13)	0; (0)
35) I experience good collaboration with pharmacists in this area	0; (0)	4; (17.4)	5; (21.7)	6; (26.1)	8; (34.8)	0; (0)
36) Communication failures that lead to delays in service are common	12; (52.2)	6; (26.1)	2; (8.7)	1; (4.3)	2; (8.7)	0; (0)

Source: by authors

Note: CI - cancelled information; TA - totally agree; PA - partially agree; N - neutral, DP - partially disagree; DT - I totally disagree; u - administration of the unit; h - hospital administration

It is possible to verify that among the 36 Questions of the SAQ answered by the participants, 14 obtained negative answers. They were: Q2 (n=12; 52%); Q8 (n=12; 52%);

Q10 (n=17; 74%); Q12 (n=8; 56%); Q14 (n=12; 52%); Q19 (n=12; 52%); Q24.u/Q24.h (n=16; 70%/ n=18%); Q26.h (n=13; 56%); Q27.u/Q27.h (n=18; 78%/n=17%); Q28.u/Q28.h (n=14; 61%/n=15%); Q29 (n=19; 83%); Q30 (n=19; 83%); Q31 (n=15; 65%); Q32 (n=13; 56%).

The second stage was developed by the discussion with the *nurses*, which allowed the construction of the analysis matrix (Chart 1).

Table 1 - Matrix of the SAQ instrument based on Brown's proposal[8]. Curitiba, Paraná, Brazil – 2021.

STRUCTURE	PROCESSES		RESULTS
	MANAGEMENT PROCESSES	CLINICAL PROCESSES	
Inadequate working environment (Q22) Insufficient number of professionals (Q29) Inadequate infrastructure (Q31)	Feeling of professional devaluation/ problems with hierarchy (Q1) Failed work process (Q9) Lack of feedback (Q10) Feeling of professional devaluation (Q14, Q24) Work overload (Q20, Q21, Q23) Inadequate working environment (Q22) Discontent with management work (Q25, Q26) Inadequate people management policy (Q27) Inadequate professional qualification (Q29) Lack of training in the admission of new professionals (Q30) Lack of supervision of trainees (Q32)	Feeling of professional devalution/Punitive culture (Q2) Impaired Interpersonal Relationship (Q3, Q5) Lack of teamwork (Q4) Lack of teamwork (Q6) Fragile credibility (Q7) Just culture/punitive culture (Q8, Q13) Punitive culture (Q11) Just Culture (Q12) Job dissatisfaction (Q15, Q16, Q17, Q18, Q19) Communication failure (Q28, Q31, Q36) Impaired interpersonal relationship (Q33, Q34, Q35)	There are no questions

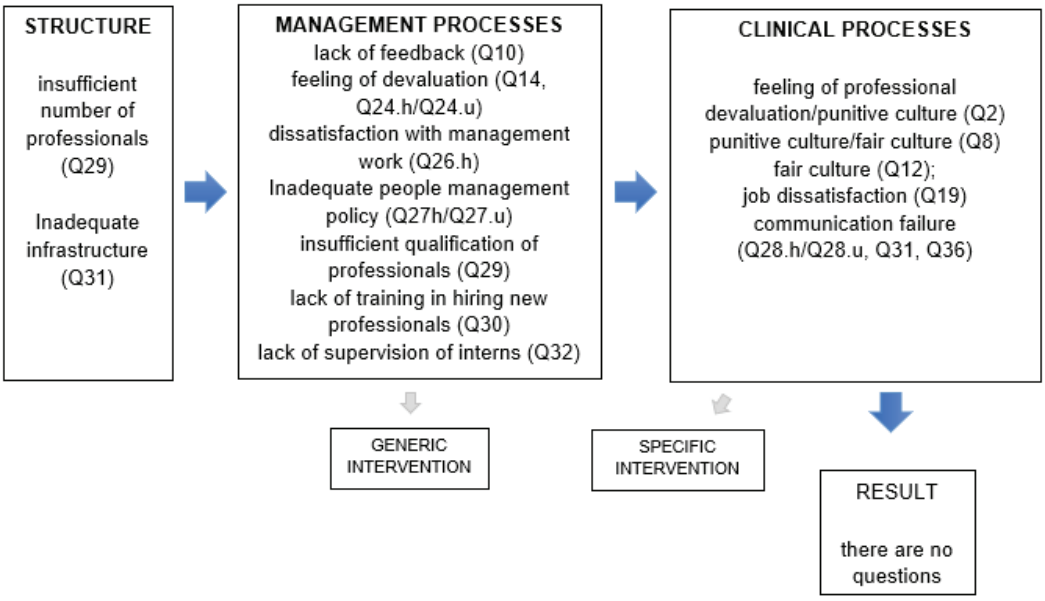
Source: by authors.

The analysis matrix made it possible to identify which SAQ questions were related to the dimensions of the causal chain model and also demonstrated the possibility of the same question belonging to more than one dimension, as for example, in question 26 whichsays: "The administration is doing a good job", identified in the structure and management processes dimension, as management work can be poorly evaluated due to external factors that are not part of its governance, such as Ministry of Health resolutions, or else due to inadequate internal policies.

It is verified that, among the 36 questions in the SAQ, 21 belong to the dimension of clinical processes, 15 to management processes and five to structure. Questions 22, 25, 26, 29 were considered to belong to both the dimensions of management processes and structure, and question 31 to the dimensions of clinical processes and structure.

From the constructed analysis matrix (Figure 1), it was possible to identify which dimension the worst questions evaluated in the SAQ belong to, helping to recognize the main problems related to the patient safety culture in the UCE, which enabled the construction of a model adapted from the causal chain (Figure 2).

Figure 2 - Model adapted from the causal chain. Curitiba, Paraná, Brazil - 2021.



Source: by authors

Note: Adapted from Brown[8].

Thus, according to the model adapted from causal chain, among the worst questions evaluated by the participants, eight belong to the dimension of management processes, seven to clinical processes and two were identified as belonging to more than one dimension.

Discussion

The analysis of the SAQ questions in the light of the causal chain model allowed the identification of the main problems in PSC in the researched UCE, pointing out weaknesses in the management, clinical and structural processes.

The causal chain theoretical model was previously used in another study, which evaluated PSC in primary health care (PHC), revealing problems in patient safety in PHC and enabling the elaboration of generic and specific strategies, corresponding to the structure and management process, namely: equipment maintenance; acquisition of materials and actions directed to the work process, which were validated by postgraduate nurses[10].

Next, for a better understanding and triggering of ideas, the obtained results obtained are presented according to the dimensions of Brown's causal chain analysis model[8].

Structure

Inadequate employee dimension was pointed out by participants in the question "In this area, the number and qualification of professionals are sufficient to deal with the number of patients" (Q29). The discrepancy between the number of human resources in nursing and the workload is identified as one of the main reasons related to the poor quality of nursing care[12].

A study carried out in a UCE pointed out the following action proposed by nurses to improve the nursing staff: implementation of a patient classification system using the Fugulin scale, as a tool to generate data that supports the calculation for employee dimensioning of the nursing team[13], emphasizing the importance of the professionals' participation, as well as the use of care management tools.

Question 31 "All information for diagnostic and therapeutic decisions is routinely available to me" may also be related to a problem with inadequate infrastructure, such as unavailability of computerized systems or equipment.

The inefficiency of information systems, with lack or incomplete information about patients, such as important data on health and illness,

impairs the decision-making process[7], which may have a negative impact on care safety.

Problems in management processes

The lack of feedback is evidenced in the question "I receive appropriate feedback on my performance" (Q10). In this sense, professionals interviewed in a study[14:5] suggested holding multidisciplinary meetings "which allow openness to dialogue, performance evaluations and continuous feedback", as they made it possible to discuss day-to-day problems, proposing solutions and promoting effective communication.

The questions "Would my suggestions about safety be put into action if I expressed them to management" (Q14), "Morale in this area is high", (Q19) and "Management supports my daily efforts" (Q24.u/Q24. h) can be associated with the feeling of devaluation on the part of the participants, since they consider that they would not be "heard", that the morale in the UCE is low and that their effort is not supported.

Professional appreciation is a contributing factor to improving the safety culture, as the professional feels valued when he exposes his desires and contributions, with horizontal multidisciplinary discussions, with accountability for actions[14].

The question "The administration is doing a good job" (Q26.h), points to the dissatisfaction of the participants with the current management. The lack of management support for patient safety issues was pointed out by nurses as a challenge in the implementation of the Patient Safety Center (NSP) in a UCE, according to these professionals, the lack of involvement and financial investment are perceived as a lack of interest from the management[6].

Other studies also showed similar results, with low scores on this question[15,16]. This shows that management, in different health care settings, is perceived as a contributing factor to an unfavorable patient safety culture.

The inadequate people management policy has as its issue "Problematic professionals are treated constructively by our company" (Q27h/Q27.u). It is known that the attention of health systems is focused on People Management (PM). The WHO reports that human resource planning is essential to ensure that professionals are able to achieve the proposed objectives, in order to obtain the quality of care and the ideal number of collaborators[17].

To strengthen PM in the field of nursing, the WHO brought together leading nurses to discuss leadership and governance priorities, and among the subjects the formulation of a policy and a national plan for human resources was discussed[17].

The inadequate qualification of professionals pointed out in question 29 "In this area, the number and qualification of professionals are sufficient to deal with the number of patients" is a factor that can contribute to problems such as insufficient care, delay in discharge and increase in length of stay. waiting for the first evaluation[7], which emphasizes the importance of continuing education, a fact recognized by the poor evaluation in the question "This hospital does a good job in training new team members" (Q30).

Permanent education is an important strategy in the development of patient safety, as pointed out in a study in which there was a decrease in ventilator-associated pneumonia after educational activities[18]. The professional training in UCE was considered, in one study, as a facilitator of the implementation of the PSC, "as it leaves the professional open to new changes, norms and understanding of the importance of new actions"[6:8].

The last problem observed is "Interns of my profession are adequately supervised" (Q32). The presence of trainees in an emergency service is considered a risk factor for errors in care[7], which points to the extreme importance of monitoring these students by direct supervision. The last problem observed is "Trainees in my profession are adequately supervised" (Q32).

It is known that the challenge of the supervised internship is to promote the break with fragmented teaching and build relationships with different areas of knowledge, but it is

noted that there is a flaw in this process, since the workload, stress and high demand make it impossible for the nurse to properly supervise the intern[19].

Problems in clinical processes

The questions: "In this area, it is difficult to speak openly if I perceive a problem with patient care" (Q2), "Errors are handled appropriately in this area" (Q8), can be linked to the punitive culture and the lack of fair culture perceived in the negative answers to the question "I am encouraged by my colleagues to report any concerns I may have related to patient safety in this area" (Q12).

A study that evaluated the safety culture in several Iranian hospitals, highlighted that the dimensions of feedback and communication about errors, opening of personal communication and non-punitive response to the error, proved to be weaknesses[20], similar to this research.

It is necessary to modify the way errors are investigated and consider them as something beyond the individual consequence, but also as a result of weaknesses in the organizational system, promoting a fair culture to the detriment of a punitive culture, so that professionals feel safe in reporting who made a mistake[21].

Question 19 "Morale in this area is high" may be related to job dissatisfaction. A study carried out in several hospitals in Taiwan pointed out that job dissatisfaction on the part of nurses was related to the intention to leave the job, due to an inadequate nurse/patient ratio[22]. Another research, carried out with nurses in Slovenian hospitals, identified that the high level of stress and its factors were also related to j ob dissatisfaction[23].

It is necessary to encourage nurses to contribute to the formulation of improvement actions in the UCE, giving the idea of collective responsibility, leading these professionals to feel motivated in favor of changes and improvement in the work environment[6]. Participation in these formulations makes them feel valued, improving their commitment to work, indirectly impacting patient safety in the UCE[13].

Another problem highlighted by the participants was in communication, in the question "All the information necessary for diagnostic and therapeutic decisions is available to me" (Q31), in "I receive adequate and timely information about events that may affect my work" (Q28 .u/Q28h) and "Communication failures that lead to delays in service are common" (Q36).

Communication was considered a weakness factor in a systematic review carried out in Saudi Arabia, including poor communication between health professionals, between hospital departments and between health providers and patients[24]. Another study corroborates these findings, pointing out that failures in communication in the emergency service negatively contribute to failures in care, especially in transition stages [7].

Improving patient safety goes beyond financial investments that generate costs, such as the provision of adequate electronic equipment and systems for communication and information sharing, but mainly improvement in work and management processes, such as, for example, improving nurses' knowledge about patient safety, collaboration in the execution of tasks, reduction of workloads, regular feedback and standardization of care processes[21].

In this way, it is believed in the importance of recognizingthe weaknesses, according to the causal chain, that compromise patient safety. Such a survey allows the adequate direction of efforts and resources.

Therefore, when trying to modify the culture of the organization, through interventions in the management processes, one would be intervening in latent conditions and, thus, interfering in the occurrence of unsafe acts, through the planning of interventions, which should be based on understanding the causal chain of the error[8].

As limitations of the research, the following are presented; the local specificity, data collection only with nurses and the small sample size in the first stage. Therefore, the results are not generalizable and only serve the context in which the research was developed, however,

they can serve as a basis for application in other contexts, with greater scope and that allow analysis of management and clinical processes, as well as the respective interventions. necessary, whether generic or specific, qualifying and solidifying health planning.

In the second stage, the discussion was limited only to the analysis of the SAQ questions, since this is the objective of the study, not discussing and proposing improvement interventions, which is also a limitation.

Another limitation found was in relation to the SAQ instrument, which brings subjective questions related to the professional's attitude and, therefore, does not directly identify problems in patient safety, but it helps in this, perhaps another instrument would point out other problems.

The innovation of this research resides in the differentiated approach of analysis of the SAQ questions, since it was not restricted to the instrument's domains, but to the understanding of the processes of the causal chain.

It is also emphasized that the results obtained offer support to the management of the unit where the study was carried out, with a view to planning assertive interventions, based on the previous diagnosis obtained with the research.

Conclusion

This study achieved the proposed objective, through the construction of the analysis matrix, where the dimensions of the causal chain were identified to which the SAQ questions belonged.

In addition, after building the analysis matrix, problems related to patient safety were identified through the dimensions of the causal chain, being related to the structure dimension, management processes and clinical processes, which highlighted the organizational character involved in the patient safety issues in the UCE. Such findings are an important contribution to management, as they enable the planning of improvement actions.

Further research is suggested in other health services, including different professional categories, so that the assessment of the safety culture through the analysis of the causal chain is expanded and strengthened as a diagnostic strategy for identifying associated problems patient safety and the planning of strategic actions.

Collaborations

1 – design and project planning: Karla Crozeta Figueiredo, Sonia Maria Kalkmann de Macedo and Carolina Poite de Siqueira;

2 – analysis and interpretation of the data: Karla Crozeta Figueiredo and Carolina Poite de Siqueira;

3 – writing and/or critical review: Carolina Poite de Siqueira, Karla Crozeta Figueiredo, Thaiane Almeida Silva Pol, Rebeca Iwankiw Lessa Beltran and Sonia Maria Kalkmann de Macedo;

4 – approval of the final version: Carolina Poite de Siqueira, Karla Crozeta Figueiredo, Thaiane Almeida Silva Pol and Rebeca Iwankiw Lessa Beltran.

Conflicts of interest

There are no conflicts of interest.

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