EVALUATING PATIENT SAFETY CULTURE IN A PHILANTHROPIC HOSPITAL

AVALIAÇÃO DA CULTURA DE SEGURANÇA DO PACIENTE EM UM HOSPITAL FILANTRÓPICO

EVALUACIÓN DE LA CULTURA SOBRE SEGURIDAD DEL PACIENTE DE UN HOSPITAL FILANTRÓPICO

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ABSTRACT

Objective: to evaluate patient safety culture on the part of the multidisciplinary team in a Brazilian philanthropic hospital. **Method:** this is a quantitative cross-sectional study carried out with 209 professionals in 12 hospital sectors. For the data collection, the Hospital Survey On Patient Safety Culture, developed by the Agency for Health Research and Quality, was used, translated and validated for the Portuguese language. The reliability of the instrument was verified by the Cronbach's Alpha coefficient. Data analysis was accomplished by descriptive statistics. **Results:** the dimensions with the highest percentages of positive responses were: expectations and actions to promote patient safety by the supervisor/chief; organizational learning and continuous improvement; team work within the units. On the other hand, the dimensions with lower percentages of positive responses were: non-punitive responses to errors; professional and general perception on patient safety. **Conclusion:** these findings revealed that all dimensions of the patient safety culture should be worked out with the healthcare professionals, since that none of the dimensions exceeded 75% of positive responses.
Keywords: Patient Safety; Quality of Health Care; Organizational Culture; Patient Care Team.

RESUMO

Objetivo: avaliar a cultura de segurança do paciente da equipe multidisciplinar em um hospital filantrópico brasileiro. *Método:* trata-se de estudo quantitativo, transversal, realizado com 209 profissionais, em 12 setores do hospital. Para a coleta de dados, utilizou-se o Hospital Survey On Patient Safety Culture, desenvolvido pela Agency for Health Research and Quality, traduzido e validado para a língua portuguesa. A confiabilidade do instrumento foi verificada pelo coeficiente Alfa de Cronbach. A análise de dados se deu por estatística descritiva. *Resultados:* as dimensões com maiores percentuais de respostas positivas foram: expectativas e ações de promoção da segurança do paciente pelo supervisor/chefe; aprendizado organizacional e melhoria contínua; trabalho em equipe no âmbito das unidades. Por outro lado, as dimensões com menores percentuais de respostas positivas foram: respostas não punitivas aos erros; profissionais e percepção geral de segurança do paciente. *Conclusão:* esses achados revelaram que todas as dimensões da cultura de segurança do paciente devem ser trabalhadas com os profissionais da equipe de saúde, uma vez que nenhuma das dimensões superou 75% de respostas positivas.
Palavras-chave: Segurança do Paciente; Qualidade da Assistência à Saúde; Cultura Organizacional; Equipe de Assistência ao Paciente.

RESUMEN

Objetivo: evaluar la cultura sobre seguridad del paciente del equipo multidisciplinario de un hospital filantrópico de Brasil. *Método:* estudio cuantitativo transversal llevado a cabo con 209 profesionales en 12 sectores del hospital. La recogida de datos se efectuó mediante el cuestionario Hospital Survey On Patient Safety Culture, desarrollado por la Agency for Health Research and Quality, traducido y adaptado al idioma portugés. La confiabilidad del instrumento se verificó con el coeficiente Alfa de Cronbach. El análisis de datos se efectuó por estadística descriptiva. *Resultados: las dimensiones*

con mayor porcentaje de respuestas positivas fueron: expectativas y acciones de promoción de la seguridad del paciente por parte del supervisor/jefe; aprendizaje organizacional y mejora continua; trabajo en equipo en el ámbito de las unidades. Las dimensiones con menor porcentajes de respuestas positivas fueron: respuestas no punitivas a los errores; profesionales y percepción general de seguridad del paciente. **Conclusión:** los hallazgos indican que todas las dimensiones de la cultura de seguridad del paciente deben ser trabajadas con los profesionales del equipo de salud ya que ninguna de ellas superó el 75% de las respuestas positivas.

Palabras clave: *Seguridad del Paciente; Calidad de la Atención de Salud; Cultura Organizacional; Grupo de Atención al Paciente.*

INTRODUCTION

Currently, healthcare is being influenced by several changes, with one of them in the technological scope. This has generated several concerns and questions on the benefits and risks for using these technologies as essential instruments for healthcare. Care quality is the balance between the best care and the lowest cost. One can add elements to care quality that go beyond the performance of health professionals, such as: the care received by the patient and the community; limitation or extension of the concept of health, as well as their responsibility.[1]

In this context, evaluating healthcare quality is based on three components, namely: structure, process and result. Structure includes the physical infrastructure, human resources, equipment and needed supplies. The process refers to patient care, based on protocols and interventions that are performed within the system. The result is the effect of care on the patient health status. Therefore, it is necessary to establish the relationship between structure, process and result for evaluating care healthcare quality.[1]

The publication of the report "To err is human" by the Institute of Medicine (IOM) alerted on one dimension related to quality, which is patient safety, and also the need to strengthen a safety-related organizational level culture in the American hospitals.[2]

In this sense, it is noticed that the unsafe practices in care cause that the adverse events become a problem in public health, emphasizing the necessity for developing strategies for monitoring errors and establishing quality improvements for the patient safety.[3]

Thus, one of the ways to improve the safety of health care is to improve the system where patient care is embedded, developing a safety culture. However, the first step for the organizations is to disclose their organizational structure and strategic planning, which includes mission, vision, values and goals. For this to occur, clear and horizontal communication with all members is required, influencing attitudes and behaviors for reaching the goals and the objectives.[4]

In this way, it can be observed that, within the organizations, there is a division between the formal elements, which are the physical, operational and organizational structure, and the informal ones, that are habits, practices and customs. It can be considered that every organization has a culture of its own, shared with all professionals, through which the concept of a safety culture arises, a guiding principle for safe practices in health services.[4]

Given the above, patient safety culture is the set of individual or group values, attitudes, perceptions and competencies that determine commitment to patient safety issues in a health institution, being a fundamental factor in developing a system aimed at safe health practices.[5]

Considering that the discussion on the patient safety culture is recent in Brazil, it is necessary to know the patient safety culture in the health institution to direct actions aimed towards a safe and quality care. This study aimed to evaluate the patient safety culture on the part of the multidisciplinary team in a philanthropic hospital.

METHOD

This is a quantitative, cross-sectional study, performed in a medium-size general hospital, with a philanthropic and private nature, that develops teaching activities.

Data was collected from February to July 2015, through the application of questionnaire Hospital Survey On Patient Safety Culture (HSOPSC), by the Agency Healthcare Research and Quality (AHRQ), translated and validated for the Portuguese language by Reis[6]. The researcher consulted the health professionals on the interest to take part in the study. And after signing the Free and Informed Consent Term (FICT), data collect was accomplished. The HSOPSC questionnaire[6] was made available in Google Docs® and forwarded to the participant e-mail address.

The inclusion criteria were established by the researchers and consist of: health professionals performing a care function, with a weekly workload of at least 20 hours in the hospital, present and available during the period of data collection.

Questionnaires that had less than 50% of the items filled out, a section with less than 50% completed and questionnaires with the same answer in all items were excluded.

All the health professionals (N = 250) in the institution were invited, but 22 did not participate in the study because they did not meet the inclusion criteria and four refused to participate. Thus, the study population consisted of 224 professionals, of whom 12 were excluded because they did not return the completed questionnaire and three questionnaires were excluded because they had less than 50% of the items completed.

The HSOPSC covers nine sessions with 42 items structured in 12 dimensions of the patient safety culture. The sessions are arranged from letter A to I, namely: A – your area/

work unit; B – your supervisor/chief; C – communication; D – frequency of reported events; E – patient safety note; F – your hospital; G – number of reported events; H – general Information I – your comments.[6]

The safety culture dimensions are set out in the instrument that evaluates them at the individual, unit and hospital level. For methodological purposes of the study, they are arranged from D1 to D12. The seven initial dimensions address aspects of the patient safety culture in hospital units: D1 – teamwork in the unit; D2 – expectations and actions to promote patient safety by the supervisor/chief; D3 – organizational learning, continuous improvement; D4 – feedback and communication about errors; D5 – opening for communications; D6 – professionals; D7 – non-punitive responses to errors. The following three dimensions address issues within the hospital organization: D8 – hospital management support for patient safety; D9 – teamwork among hospital units; D10 – internal transfers and duty passages. The last two dimensions are of result: D11 – general perception on patient safety; D12 – frequency for reported events.[6]

Each of the 12 dimensions has three to four items, totaling 42 questions. These items are evaluated from a scale of the Likert type with five points. The AHRQ defines the strengths and weaknesses in the patient safety culture based on the sum of positive responses on items or dimensions of the instrument. The dimensions of the patient safety culture are considered to be strong areas of those dimensions whose mean score for positively written items obtained 75% of positive responses (I fully agree or I agree) or those whose mean score of negatively written items obtained 75% of negative responses (I fully disagree or I disagree). Similarly, fragile areas of the patient safety culture and in need of improvement are considered those dimensions that obtained 50% or less of positive responses.[6]

To test the reliability of the questionnaire as to its internal consistency, the Cronbach's Alpha coefficient was applied. The reliability of the dimensions was compared with the results of the original HSRSC from the AHRQ, which defined as acceptable a Cronbach's Alpha ≥ 0.60.

Socio-demographic variables were analyzed based on descriptive analysis with frequency and percentage distribution. For this analysis, we used the *Stata*® program, version 13.

The study followed the guidelines of Resolution 466/12 and was approved by the Ethics and Research Committee, through CAAE 36510114.3.0000.5098.

RESULTS

Twenty-nine health professionals took part in the study, 82.8% of the nursing team, according to Table 1

Table 1 - Professional category of study participants. *Diamantina – MG, 2015*

Profession	N	%
Nursing technician	139	66.5
Nurse	29	13.9
Radiology technician	8	3.8
Surgical assistant nurse	6	2.9
Doctor	6	2.9
Physiotherapist	5	2.4
Nursing assistant	5	2.4
Nutritionist	3	1.4
Psychologist	3	1.4
Pharmacist	2	1.0
Social Worker	2	1.0
Speech-language pathologist	1	0.4
	209	100

Among the participants, there was a predominance of females, with 167 (79.90%). Age ranged from 20 to 62 years old, with a mean of 34 years old. Regarding the working time in the hospital, there was a predominance of one to five years of work – 71 (33.97%). As for the weekly workload, 180 (86.12%) participants reported working between 40 and 59 hours per week. Regarding contact with the patient, 199 (95.22%) reported having direct contact. The study participants worked in several units of the hospital, namely: Intensive Care Center, Material and Sterilization Center, Surgical Center, Emergency Medicine, Hemodialysis, Hospitalization Units, Nutrition, Pharmacy, Rehabilitation, Radiology, Social Work and administrative area.

The Cronbach's Alpha coefficient showed a variation of 0.41 to 0.84 among the 12 dimensions that make up the instrument (Table 2).

Table 2 - Distribution of the results obtained in the application of Cronbach's Alpha coefficient to each of the patient safety dimensions. *Diamantina – MG, 2015*

Dimensions	Cronbach's Alpha
Safety culture in the scope of the working units	
D1– Teamwork in the unit	0.62
D2 – Expectations and actions to promote patient safety by the supervisor/chief	0.73
D3 – Organizational learning, continuous improvement	0.56
D4 – Feedback and communication about errors	0.66
D5 – Opening for communications	0.57
D6 – Professionals	0.41
D7 – Non-punitive responses to errors	0.42

... continued

Table 2 - Distribution of the results obtained in the application of Cronbach's Alpha coefficient to each of the patient safety dimensions. *Diamantina – MG, 2015*

Dimensions	Cronbach's Alpha
Safety culture within the hospital organization scope	
D8 – Hospital management support for patient safety	0.67
D9 – Teamwork among hospital units	0.53
D10 – Internal transfers and duty passages	0.55
Result variables	
D11 – General perception of patient safety	0.41
D12 – Frequency of reported events	0.84

From the 12 dimensions, from the patient safety culture and from the questionnaire, four dimensions were considered fragile in need for improvement, obtaining a percentage below 50% (D6, D7, D10, D11). There was no dimension that reached a percentage equal to or greater than 75% (Figure 1).

The three dimensions with the highest percentage of positive responses are submitted, although the average of the items did not reach 75%, highlighting the respective items of greater concordance.

The "teamwork in the unit" (D1), in the item when there is a lot of work to be done quickly, the majority (77.03%) agreed that they work together to complete it. It is observed that when there is overloading of tasks to be executed quickly, there is union and interaction among the team members for the completion, according to Table 3.

In the dimension "expectations and actions of the supervisor/chief to promote patient safety" (D2), the most evaluated item was "my supervisor/chief does not import on the patient safety problems occurring repeatedly", being that 69.86% of the professionals disagreed on this statement, as shown in Table 3.

Table 3 - Distribution for the dimensions of the patient safety culture with higher positive percentages per item. *Diamantina – MG, 2015 (n=209)*

Dimensions	Positive %	Negative %	Neutral %
D1 – Teamwork in the unit.			
In this unit, people support each other.	62.67	14.35	22.00
When there is a lot of work to do quickly, we work together as a team to complete it properly.	77.03	8.61	14.35
In this unit, people treat each other with respect.	73.20	9.57	16.75
When an area of this unit becomes over-loaded, other professionals in this unit help.	45.93	41.62	11.96
General mean value D1	64.71	18.54	16.27
D2 – Expectations and actions to promote patient safety by the supervisor/chief.			
My supervisor/chief praises when he sees work performed in accordance with established patient safety procedures.	51.60	27.27	20.57
My supervisor/chief really takes into consideration the suggestions of the professionals for improving patient safety.	65.50	15.31	19.14
Whenever the pressure increases, my supervisor/chief wants us to work faster, even if that means "skipping steps". *R	66.90	22.48	10.50
My supervisor/chief boss does not care about patient safety issues that happen repeatedly. *R	69.80	13.39	16.75
General mean value D2	63.52	19.62	16.75
D3 – Organizational learning and continuous improvement.			
We are actively doing things to improve patient safety.	76.08	11.48	11.96
Errors have led to positive changes around here.	52.63	15.31	29.18
After we implement changes to improve patient safety, we evaluate effectiveness.	52.63	16.26	30.14
General mean value D3	60.27	14.35	23.76

*R: Question posed negatively, where the positive percentage is based on the answers "totally disagree, disagree, rarely and never".
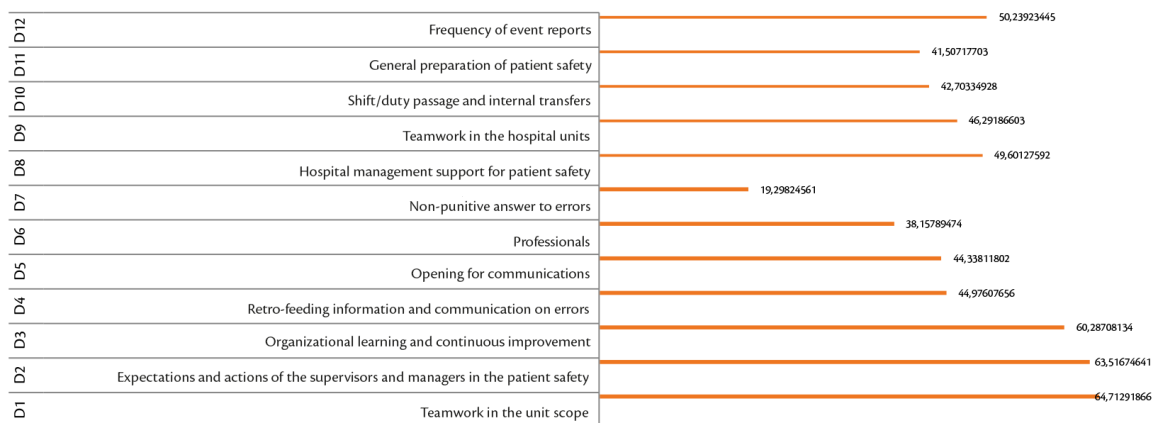

Figure 1 - Percentage of positive responses gathered for each dimension of the patient safety culture.

D12	Frequency of event reports	50,23923445
D11	General preparation of patient safety	41,50717703
D10	Shift/duty passage and internal transfers	42,70334928
D9	Teamwork in the hospital units	46,29186603
D8	Hospital management support for patient safety	49,60127592
D7	Non-punitive answer to errors	19,29824561
D6	Professionals	38,15789474
D5	Opening for communications	44,33811802
D4	Retro-feeding information and communication on errors	44,97607656
D3	Organizational learning and continuous improvement	60,28708134
D2	Expectations and actions of the supervisors and managers in the patient safety	63,51674641
D1	Teamwork in the unit scope	64,71291866

In the dimension "organizational learning and continuous improvement" (D3), the item "we are actively doing things to improve patient safety" showed 76% agreement among the professionals, as can be seen in Table 3.

On the other hand, the dimensions with lower percentages of positive responses were: D6 – professionals (38.16%); D7 – non-punitive responses to errors (19.30%) and D11 – general perception on patient safety (41.51%) (Figure 1).

In the "professionals" dimension (D6), the most evaluated item was "we used more temporary/outsourced professionals than it would be desirable for patient care", with 72.25% of the professionals disagreeing (Table 4).

Table 4 - Distribution for the dimensions of the patient safety culture with lower positive percentages by items. *Diamantina* – MG, 2015 (n=209)

Dimensions	Positive %	Negative %	Neutral %
D6 – Professionals			
We have enough staff to handle the workload.	23.45	59.33	17.22
The professionals in this unit work longer hours than it would be the best for patient care. *R	28.71	55.50	13.40
We use more temporary/outsourced professionals than it would be desirable for patient care. *R	72.25	4.78	20.57
We work in "crisis situation", trying to do a lot and very fast. *R	28.23	41.63	28.23
General mean value D6	38.16	40.31	19.86
D7 – Non-punitive responses to errors			
Professionals consider that their mistakes can be used against them. *R	16.75	68.90	11.96
When an event is notified, it seems that the focus is on the person, not on the problem. *R	25.36	56.46	16.75
The professionals are concerned that their errors may be registered in their functional records. *R	15.79	61.72	20.57
General mean value D7	19.30	62.36	16.43
D11 – General perception of patient safety			
It is just by chance that more severe mistakes do not happen here. *R	60.28	15.79	21.05
Patient safety is never compromised in function of larger amount of work to be concluded.	37.32	44.50	16.27
In this unit, we have problems related to patient safety. *R	23.44	55.50	19.14
Our procedures and systems are adequate to prevent the occurrence of errors.	44.98	26.32	27.75
General mean value D 11	41.51	35.53	21.05

*R: Question posed negatively, where the positive percentage is based on the answers "totally disagree, disagree, rarely and never"

In the "non-punitive responses to errors" (D7) dimension, the most evaluated item was "professionals consider that their errors can be used against them", with 68.90% agreeing (Table 4).

In the "general perception of patient safety" (D11) dimension, the most evaluated item was "it is just by chance that more serious errors do not happen here", 60.28% disagreed that it is by chance (Table 4).

Participants in the study attributed a concept to patient safety in their working unit, with 50.24% of those surveyed considering patient safety in their as regular; 42.58%, very good; 5,26%, excellent; and just 1.91%, bad.

In relation to the number of adverse events that were reported in the last 12 months, 77.90% of the participants answered that they had not reported Adverse Events in the last 12 months; 13.88%, one or two events; 4.78%, three to five; 2.39%, six to 10; and 0.96%, more than 21.

DISCUSSION

Among the study participants, there was predominance of nursing professionals, being female and with a mean age of 34 years old. It is known that the nursing team constitutes the largest work force in the hospital environment. In addition, for cultural reasons, it is a profession represented by women. Other studies evaluating the patient safety culture have identified similar results.[7-10]

The working time in the hospital-related service varied, being 33% between one and five years.

Similar studies have found results ranging from one to 15 years, however, it is considered that the longer is the work duration in the institution, the greater is the adherence to the safety measures.[9-11] The weekly workload ranged from 40 to 59 hours. A similar study found a workload being less than 40 hours per week.[8] It should be emphasized that the work day can become exhaustive and can cause wear and suffering to the professional, leading to unsafe care.

Concerning the Cronbach's Alpha coefficient, acceptable results ranged from 0.62 to 0.84. It is recommended that studies evaluating the safety culture dimensions of the patient by the HSOPC instrument should test different samples to confirm the validity and reliability of the instrument.[6]

The best results of this study, for evaluating the dimensions of the patient safety culture, obtained values lower than 75% and indicate the existence of areas with potential for improvement in aspects related to the patient safety culture with regard to teamwork in the unit; expectations and actions of supervisors; organizational learning; and continuous improvement.

It is noteworthy to emphasize that several studies were developed in Brazil and that while they evaluated the safety culture, this shows similar results with values below 75%, that is, the highest results do not reflect a good safety culture.[8,12,13]

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In the teamwork dimension, the positive response to the item is emphasized, and it reveals that the professionals are united and help each other to complete tasks that demand speed, but the mean value for the dimension was 64.7%. A study accomplished in hospitals in Rio Grande do Sul identified the teamwork climate as satisfactory and the authors affirm that the good relationship among the members of a work team is essential and contributes to problem solution.[11] Therefore, teamwork should be encouraged so that there is mutual help and respect among professionals in order to provide quality assured care.[14]

It was observed that the professionals' perception regarding the expectations and actions of the supervisor and manager is one of the most evaluated dimensions, although it has not reached a value greater than 75%. It is believed that it is important for the leader to praise the team when it performs its activities with excellence and to listen to its demands. It is important to emphasize that the leader's commitment is of paramount importance for influencing and inspiring the team to develop strategies, organize resources and empower people. Other studies that used the same instrument obtained positive responses to this dimension.[12,15-17]

The evaluation on the safety culture, considering only dimensions related to leadership, was studied in a Brazilian university hospital. The authors identified a safety culture favorable to the immediate leadership in the expectations dimension of advocacy actions and unfavorable to senior management leadership in the hospital management dimension.[10]

The organizational learning and continuous improvement dimension achieved only 60% of positive responses; however, the most highly valued item was "we are actively doing things to improve the patient safety". Research developed in hospitals located in the southern region of Brazil obtained results, 46.1 and 59%, in this dimension.[8,13] The result of this study reveals that there is a concern on the part of the professionals in setting up measures to improve the patient safety, however, it is necessary to analyze the factors that lead to the occurrence of errors for promoting changes. It is considered important that leadership demonstrates its interest in improving processes to promote a safety culture among the professionals.[8]

Among the dimensions that were assessed as fragile in this study is the dimension "professionals". This relates to the dimensioning of personnel needed for the care, which must be carefully analyzed by the managers, since that a deficit situation puts the safety of the patient at risk. Other authors identified the dissatisfaction of professionals with working conditions due to overwork, exhaustion and pressure as a risk to patient safety.[18,19] Personnel dimensioning represents an indicator of patient safety, since that patients assisted by overworked nursing professionals had more than twice the risk for suffering from at least one adverse event.[20]

In this study, the non-punitive to error answer stood out as a fragile area. Other authors have found similar results when evaluating the safety culture. Only with results that awaken to the need for a non-punitive safety culture in which error notifications take place, one may discuss and devise effective actions to solve the system's problems.[9,13] The systemic view of errors considers that the individuals are subject to failure and that all hospital institutions, even those of excellence, may display adverse events. In this approach, it is wiser to propose changes to the system, making it safer for the users.[21]

The general perception of patient safety dimension has been highlighted as a fragile area for the safety culture, whose item "it is just by chance, that more serious errors do not happen" reflects the insecure environment where the professionals develop their activities. A study conducted in Switzerland also established this relationship between the work environment and the patient safety perception, by the professionals.[22]

It is important to emphasize that, in order to develop a patient safety culture, the individual approach to errors must be rethought, replacing it with a systemic approach, detecting system failures and devising corrective actions.[2] It can be noted, from the results of this study that the safety culture is configured as a punitive culture against errors, where the professionals are still afraid of retaliation against failure. Interventions are required to change this perception and, consequently, to strengthen the patient safety culture.

On the other hand, a multicentric study that evaluated the safety culture in Dutch hospitals found positive responses in three dimensions, namely: non-punitive response to error, hospital management support and event reporting.[23]

At the study institution, professionals attributed the concept "regular" to patient safety, emphasizing the need to implement improvements. Other Brazilian hospitals had similar results.[8,13]

Regarding the number of events that were reported by the professionals in the last 12 months, most responded none. In a survey conducted in two Brazilian public hospitals, the majority of the participants reported notifying, on average, one or two events per year. The authors consider low adherence to notifications and attribute it to the punitive culture.[8] Work developed with the multidisciplinary team at North American hospitals has shown that underreporting is a serious problem. The authors recommend developing systematized actions, feedback of the errors and organizational learning, which can be positively associated with adverse event reports.[24]

Underreporting the errors does not allow us to analyze the causes that led to their occurrence. When errors are reported, preventive measures can be taken to prevent further errors from occurring.

CONCLUSION

The results of this study allowed evaluating the patient safety culture in the hospital context on the part of the multi-disciplinary team.

Strong areas of the safety culture were not identified. However, three dimensions with a higher percentage of positive responses were detected, between 60 and 64%, namely: teamwork in the unit, expectations and actions of the supervisors and organizational learning and continuous improvement.

The patient safety culture dimensions that obtained lower percentages of positive responses, being considered as fragile areas with a potential for improvement, were: non-punitive responses to errors; professionals, referring to the hospital workforce; and general perception on patient safety on the part of the professionals.

It was concluded that all the patient safety culture dimensions should be worked with the professionals of the health team, since that none of the dimensions reached a value greater than 75%.

Some strategies can be considered by health service managers to enhance a patient safety culture, such as: awareness of the professionals through lifelong learning, as well as an event notification system that is simple and effective.

It should be mentioned that the study was performed in only one health institution, which can be considered a limitation, since that these results do not allow extrapolating to a more comprehensive reality

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