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PATIENT SAFETY CULTURE IN INTENSIVE CARE UNITS

CULTURA DE SEGURANÇA EM UNIDADES DE TERAPIA INTENSIVA

CULTURA DE SEGURIDAD DEL PACIENTE EN UNIDADES DE TERAPIA INTENSIVA

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ABSTRACT

Objective: To evaluate the safety culture of the patient from the perspective of the professionals of the health team. **Methods:** A cross-sectional study with 113 professionals from Adult, Coronary and Neonatal Intensive Care Units. The instrument Safety Attitudes Questionnaire (SAQ), validated for Portuguese, was used. Student t test, ANOVA and Sperman were used for analysis. **Results:** Of the 113 professionals interviewed, 86.7% were women, 85.84% of the nursing team; 37.20% worked in Neonatal Unit and 33.60% worked between 5 and 10 years. The average score obtained by the SAQ was 62.38 points. The domains that presented lower scores were Perception of Management and Working Conditions. The highest score obtained was in the field Satisfaction at Work. There were no differences in the scores between the evaluated units and in relation to gender, unit and time of performance. The medical team presented worse perception in the domain perception of stress (p = 0.001) and better score in the working conditions domain (p = 0.02). **Conclusion:** The safety culture of the evaluated units presented scores lower than those recommended in the literature.

Descriptors: Patient Safety; Patient care team; Intensive Care Units, Health Management.

RESUMO

Objetivo: Avaliar a cultura de segurança do paciente na perspectiva dos profissionais da equipe de saúde. **Métodos:** Estudo transversal, realizado com 113 profissionais de Unidades de Terapia Intensiva Adulto, Coronariana e Neonatal. Foi utilizado o instrumento *Safety Attitudes Questionnaire* (SAQ), validado para o Português. Para análises foram utilizados teste t de *Student*, ANOVA e *Sperman*. **Resultados:** Dos 113 profissionais entrevistados, 86,7% eram mulheres, 85,84% da equipe de enfermagem; 37,20% atuavam em Unidade Neonatal e 33,60% trabalhavam entre 5 a 10 anos. A pontuação média obtida pelo SAQ foi 62,38 pontos. Os domínios que apresentaram menor pontuação foram Percepção da Gerência e Condições de Trabalho. A maior pontuação obtida foi no domínio Satisfação no Trabalho. Não houve diferenças dos escores entre as unidades avaliadas e em relação ao sexo, unidade e tempo de atuação.

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A equipe médica apresentou pior percepção no domínio percepção do estresse (*p*=0,001) e melhor escore no domínio condições de trabalho (*p*=0,02). **Conclusão:** A cultura de segurança das unidades avaliadas apresentaram escores abaixo do recomendado pela literatura.
Descritores: Segurança do paciente; Equipe de assistência ao paciente; Unidades de terapia intensiva; Gestão em saúde.

RESUMEN
Objetivo: Evaluar la cultura de seguridad del paciente en la perspectiva de los profesionales del equipo de salud. **Métodos:** Estudio transversal, realizado con 113 profesionales de Unidades de Terapia Intensiva Adulto, Coronaria y Neonatal. Se utilizó el instrumento Safety Attitudes Questionnaire (SAQ), validado para el portugués. Para análisis se utilizaron pruebas t de Student, ANOVA y Sperman. **Resultados:** De los 113 profesionales entrevistados, 86,7% eran mujeres, 85,84% del equipo de enfermería; El 37,20% actuaba en Unidad Neonatal y el 33,60% trabajaba entre 5 a 10 años. La puntuación media obtenida por el SAQ fue de 62,38 puntos. Los dominios que presentaron menor puntuación fueron Percepción de la Gerencia y Condiciones de trabajo. La mayor puntuación obtenida fue en el dominio Satisfacción en el Trabajo. No hubo diferencias de los escores entre las unidades evaluadas y en relación al sexo, unidad y tiempo de actuación. El equipo médico presentó peor percepción en el dominio de la percepción del estrés (p = 0,001) y mejor puntuación en el dominio condiciones de trabajo (p = 0,02). **Conclusión:** La cultura de seguridad de las unidades evaluadas presentó escores por debajo de lo recomendado por la literatura.
Descriptores: Seguridad del Paciente; Grupo de atención al paciente; Unidades de Cuidados Intensivos; Gestión en Salud.

INTRODUCTION

Patient safety has increased its importance in the field of healthcare and is becoming more of a priority as demonstrated by the growing efforts to promote it. In Brazil, the organizations responsible for the public healthcare system quality, such as the Ministry of Health and the Brazilian Health Regulatory Agency (Anvisa), encourage in their official documents that models of safety culture be adopted, with the introduction of protocols and objectives to be achieved.

The occurrence of adverse events (AEs) implicates negative consequences such as an increase in length of hospital stay, the generation of social expenditures and economic expenses, besides contributing to an increase in mortality and harming the patient physically, ethically and traumatically. It is considered a public health problem that indicates the need to develop new strategies to monitor errors and improvements related to patient safety.

Inside hospital organizations, Intensive Care Units (ICUs) are considered a complex sector with highly technological equipment where critic and hemodynamically unstable patients are treated and which requires the permanent

and specialized care of a multiprofessional staff.

It is noted that the incidence of AEs in ICUs is higher than in other inpatient care units. The systematic analysis and monitoring of AEs, associated with team management and communication, are essential to promote patient safety.

In this context, this study aims to assess patient safety culture from the perspective of the healthcare staff working in ICUs at a teaching hospital by using the Safety Attitudes Questionnarie (SAQ), to compare the scores obtained considering the variables unit of practice, sex, category and length of professional practice, and to identify factors that contribute or are prejudicial to the introduction of safety culture in these units.

MATERIALS AND METHODS

An observational, cross-sectional, non-experimental study with a quantitative approach. The research was carried out at Adult (general and coronary) and Neonatal ICUs at a large teaching hospital in Southeastern Brazil. It is a highly complex public general teaching hospital which provides care to clinical and surgical specialties. It has 290 beds, of which 20 are in the pediatric ICU ward, 10 are in the adult ICU ward and 10 are in the coronary ICU ward.

Took place in the study the healthcare professional staff (nurses, doctors, physiotherapists, psychologists and speech-language pathologist) that cared for patients in the ICUs. The subjects of the study accepted to take part in it and met the following inclusion criteria: they had to have been working in the unit for over a month and for a minimum of 20 hours per week. The exclusion criteria involved the healthcare professionals that were on leave for any reasons (including those with medical certificates for a sick leave for a period longer than three months) or that did not answer the questionnaire after being approached thrice.

At the moment of data collection, 209 professionals worked in the units. 96 professionals were excluded, of which 20 were excluded for having worked less than a month in the unit, or working less than 20 hours per week. Besides, 76 professionals were excluded for being on leave or for not having answered the questionnaire after being approached thrice by the researches. The final sample included 113 subjects as shown in Figure 01.

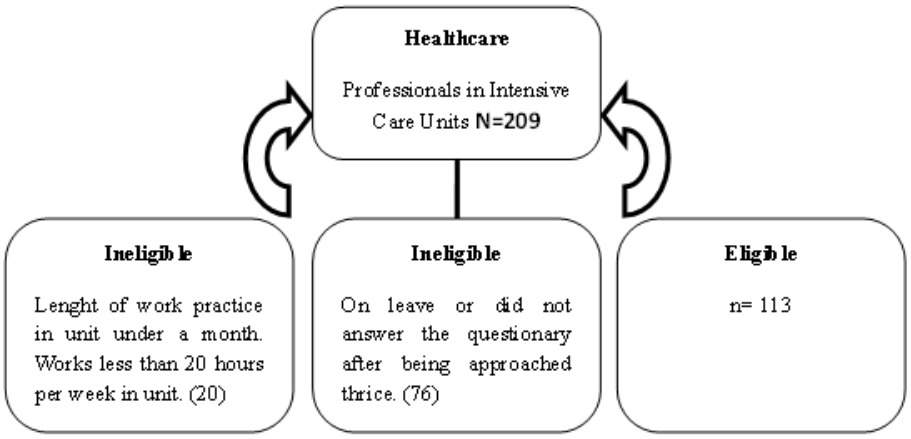

Figure 01: Flowchart of the sample used in the study. Minas Gerais, Brazil, 2013.

To calculate the test's power it was considered a positive Pearson correlative coefficient - r = 0.4 - between training time and the total patient safety score, for a significance level of 0.05 and a type II error of 0.1, which resulted in a a priori power of 90%. Using the Power Analysis Software (PASS) 2002 application, it is verified that the minimum required sample size of n = 61.

The data collection tool used in this research, the Safety Attitudes Questionnaire (SAQ), validated for Brazil, is made of two parts. The first part includes 41 items and covers six domains (D1, D2, D3, D4, D5, D6) which are divided as follows: D1. Teamwork Atmosphere; D2. Safety Climate; D3. Work Satisfaction; D4. Stress Perception; D5. Perception of Management; D6. Work Conditions.

Besides the questions regarding the domains, the SAQ includes five other questions, which are: Would my suggestions about safety be acted upon if I expressed them to management? Do I experience good collaboration with nurses in this area? Do I experience good collaboration with staff physicians in this area? Do I experience good collaboration with pharmacists in this area? Are communication breakdowns that lead to delays in delivery of care common? These questions are part of the original tool but are analyzed in isolation using percentage frequencies.

The answer to each item, in the domains as well as the five isolated questions, uses the five-point Likert scale: strongly disagree (A), disagree (B), neither agree nor disagree (C), agree (D), strongly agree (E) and do not apply. The final scale score ranges from zero (0) to 100, where zero is the lowest safety climate perception and 100 is the best perception. Scores

above 75 points are considered positive. The second part of the questionnaire aimed to collect personal data of the professionals (sex, professional category, length of professional practice and unit of practice).

Before data collection, the researcher had a meeting with the person responsible (supervisor) for every ICU in order to present the project and objectives of the study as well as the procedures to carry out the research. The data was collected from February through May 2013. The professionals were approached in the workplace, informed of the objectives of the research and received the questionnaire and the Informed Consent Form to be filled out. The data collection tool was given to the healthcare professionals to be filled out and was given back afterwards on a scheduled return date.

The SAQ analysis was carried out using the mean of the answers to the items after the inversion of the reverse items and with the calculation of the professionals' answers to the 41 items. The calculation was made to obtain the score for each domain, based on the formula (m-1) x 25, where m is the mean of the items of the domain in question, varying in the range of [0-100]. To determine the total score of the tool, the formula used was (m(q.1,q.2,q.3,q.4,q.5,q.6,q.7,q.8,q.9,q.10, q.11r,q.12,q.13...q.36r))-1) x 25.

The data were inserted in a spreadsheet made using the program Excel® for Windows® validated through double entry and exported to the program Statistical Package for the Social Sciences (SPSS), version 19 for Windows®, for processing and analysis. The qualitative variables were analyzed using descriptive statistics through the distribution of the percentual and absolute frequencies, while the quantitative variables were analyzed using the descriptive measures of central tendencies (mean) and of dispersion (standard deviation, minimum value and maximum value).

To check if patient safety perception by the professionals vary according to gender, the t-test was used and, to compare groups with more than one category (professional category and researched unit), the analysis of variance (ANOVA) was used. Spearman correlation test was used to compare the length of professional practice to the SAQ domains.

This study is part of a research project titled "A cultura de segurança do paciente em hospitais de uma região de Minas Gerais" (Patient safety culture in hospitals in a region of Minas Gerais) and received financial support from the Fundação de Amparo à Pesquisa de Minas Gerais (FAPEMIG). The project was submitted to the ethics committee of the university (Comitê de Ética em Pesquisa

da Universidade Federal do Triângulo Mineiro) and was approved (Technical Report no. 2306/2012), according to Resolution no. 366/2012 of the Brazilian Health Ministry.

RESULTS

Of the 113 professionals that participated in the study, 98 (86.7%) were women, 70 (61.9%) worked in Adult ICUs, 40 (35.4%) on Neonatal ICUs and three (2.7%) worked in both Adult and Neonatal Units as needed.

Regarding area of practice, most participants, 97 (85.84%), were part of the nursing team, followed by the phisyioterapists, 8 (7.1%). Pertaining to unit of practice, there were more professionals working in Neonatal ICUs, 42 (37.2%), followed by Coronary ICUs, 39 (34.5%), as can be seen in Table 1 below.

Of the professionals evaluated, 38 (33.6%), had been working in the unit for a period between 5 and 10 years, while 31 (27.4%) had been working for 11 to 20 years, (Table 1).

Table 1 - Profile of the professionals of a school hospital who took part in this study. Minas Gerais, Brazil, 2013. n=113

Variables		**N**	**%**
Sex	Male	15	13.3
	Female	98	86.7
Area of practice	Adult	70	61.9
	Paediatric	40	35.4
	Both	3	2.7
Unit of practice	Adult ICU	32	28.3
	Coronary ICU	39	34.5
	Neonatal ICU	42	37.2
Professional category	Nursing team	97	85.8
	Doctors	6	5.3
	Physioterapists	8	7.1
	Psychologist	1	0.9
	Speech-language pathologist	1	0.9
Time of practice	6 to 11 months	6	5.3
	1 to 2 years	15	13.3
	3 to 4 years	13	11.5
	5 to 10 years	38	33.6

11 to 20 years	31	27.4
21 years or more	10	8.8

The total score of the SAQ varied from 21.25 to 90.24, with a mean score of 62.38 (±12.54), a median of 64.02, which indicates a negative perception regarding safety climate in the ICUs studied.

Regarding the scores obtained in the study by domains. It was observed that the first domain, related to Teamwork Atmosphere, had a mean score of 60.93 (±14.81) and median of 60.71. It is important to emphasize that 77% of the professionals obtained a score lower than 75, which indicates a negative perception regarding teamwork.

Referring to the domain of Safety Climate, the mean was 62.80 (±17,92) and the median was 64.28. Besides, 73.5% of the professionals obtained a score lower than 75 points.

The highest score obtained in the study was in the domain of Work Satisfaction, which had a mean score of 81.65% (±15,87) and a median of 85. It was observed a positive perception regarding this domain, which corresponds to 76.1% of the professionals studied.

The fourth domain, related to Stress Perception, obtained a mean of 68.19 (±25,05) and a median of 75. It stands out that 53.6% of the professionals studied recognized the stress factors which influence work performance.

Regarding the Perception of Management of the Unit and the Hospital, another determinant factor to patient safety, it was observed a mean score of 51.01 (± 20,05) and median of 52.27. In this domain, 85.8% of the professionals had a negative perception regarding perception of management.

The last domain evaluated by the SAQ, related to Work Conditions, had a mean of 51.21 (± 29,96) and a median of 50. It stands out that 69.9% of the professionals had a negative perception of work conditions.

Besides the SAQ, five more questions were posed, which were not part of the domains of the instrument.

Of the 113 professionals interviewed, 42.5% agreed they experience good collaboration with the nurses of the unit, 33.3% remained neutral about the coexistence with the pharmaceutics and 42.7% partially agreed they experience good collaboration with the doctors of the unit.

In table 2 below, it can be noted that the male professionals have a better score regarding the domains of work satisfaction, perception of management of the unit and of the hospital, and work conditions. However, the statistical analysis showed there was no statistically

significant differences between the domains and the sexes (male and female).

Regarding unit of practice, the adult ICU had better mean scores in the domains of safety climate, work satisfaction, stress perception and perception of management of the unit and the hospital. No significant difference between the domains and units studied was observed, though (Table 2).

Concerning professional category, there was a statistically significant difference between doctors and the other professional categories, wherein the medical staff presented the worse perception in the domain of stress perception (p=0.001) and the best score in the domain of work conditions (p=0.02) (Table 2).

Table 2 – Comparison between the means and the standard deviation and variables: sex, inpatient unit and position at the teaching hospital. Minas Gerais, Brazil, 2013.

Variables	D1	p	D2	p	D3	p	D4	p	D5	p	D6	p
Sex												
Male	58.70 ±19.10	0.53	82.90 ±21.90	0.74	53.60 ±23.80	0.59	56.30 ±22.60	0.13	55.00 ±29.30	0.64	67.00 ±25.00	0.85
Female	61.30 ±14.10		81.50 ±14.90		50.60 ±19.50		63.80 ±17.00		50.60 ±30.20		68.40 ±25.20	
Unit												
A-ICU*	59.70 ±16.20	0.67	86.00 ±17.70	0.08	78.70 ±22.40	0.75	65.70 ±16.20	0.53	51.40 ±28.90	0.57	70.80 ±22.80	0.45
C-ICU*	62.60 ±14.40		82.20 ±14.90		52.00 ±19.30		62.20 ±18.80		54.80 ±32.00		64.10 ±25.30	
NEO-ICU*	60.30 ±14.30		77.80 ±14.70		51.80 ±19.10		61.10 ±18.50		47.70 ±29.00		70.00 ±26.40	
Position												
Doctors	49.00 ±23.10	0.11	73.30 ±25.20	0.40	46.60 ±26.20	0.85	36.90 ±19.80	0.001	44.40 ±32.30	0.76	81.20 ±12.50	0.02
Nursing Team	61.80 ±13.80		82.00 ±15.20		51.20 ±20.00		64.50 ±16.30		51.10 ±30.60		69.20 ±24.20	
Other Professionals	59.60 ±17.20		83.50 ±16.30		52.10 ±18.10		61.40 ±21.40		55.80 ±22.90		50.20 ±31.10	

*A-ICU: Adult Intensive Care Unit; C-ICU: Coronary Intensive Care Unit; NEO-ICU: Neonatal Intensive Care Unit.

Regarding time of practice, it was not observed a statistically significant correlation in relation to the six domains of the questionnaire (Table 3).

Table 3 – Comparison between the means and the standard deviation of the domains and the variable time of practice of the healthcare professionals in a teaching school. Minas Gerais, Brazil, 2013.

Time of Practice	D1	D2	D3	D4	D5	D6
6 to 11 months	67.3 ±12.7	89.2 ±12.8	59.8 ±9.0	61.2 ±14.4	79.9 ±19.8	67.4 ±21.8
1 to 2 years	58.3 ±16.7	76.6 ±15.6	45.6 ±20.6	58.6 ±17.9	45.8 ±27.5	72.5 ±15.9
3 to 4 years	67.6 ±14.6	88.0 ±11.6	55.0 ±18.5	70.9 ±14.9	59.3 ±30.7	62.5 ±32.5
5 to 10 years	60.7 ±14.3	80.8 ±16.2	52.4 ±18.4	66.6 ±13.5	50.3 ±29.7	65.5 ±26.4
11 to 20 years	57.5 ±14.2	77.7 ±17.3	45.0 ±21.4	54.7 ±22.0	41.0 ±27.7	72.4 ±25.2
21 years or more	63.9 ±15.9	92.0 ±9.5	61.9 ±23.3	70.0 ±15.7	66.7 ±31.7	65.5 ±23.5
r_{s*}	-0.10	0.02	-0.00	0.00	-0.09	0.06
p	0.28	0.89	0.95	1.08	0.30	0.59

*Spearman Correlation Coefficient; p: Value of p for the test.

DISCUSSION

In the present study, there were more females. Other researches corroborate this finding, of which it it is worth mentioning studies that used SAQ to evaluate safety climate in an oncology hospital in Minas Gerais (69.7%)[8] and in a teaching hospital in the state of São Paulo[9], besides foreign studies which evaluated patient safety culture.[10, 11, 12]

Regarding professional category, the nursing team was the most prevalent. Other studies also noted a larger amount of nurses.[11, 12, 13] A research that evaluated safety culture in a large-sized private hospital suggests the lower participation of other professional categories may be related to a higher prevalence of the patient safety issue in the nursing team curriculum.[14]

The doctors, as in the present study, were the professional category with the lowest participation in the research due to an alleged lack of time to fill in the questionnaire.[8, 13, 14]

Concerning the time of practice of the professional in the unit, it was observed that most respondents had been working for a time between 5 and 10 years. A research conducted with 1,113 healthcare professionals in Spanish public hospitals showed that more than 70% of the professionals had been working in the unit for more than 5 years or had more than 20 years of experience working in the specialty area..[12]

According to results from this study, the domain teamwork atmosphere had a mean of 60.93 and most professionals had a negative perception. The findings corroborate a study carried out in a large-sized private hospital in Minas Gerais, which had a mean of 63.66 points.[14]

A research carried out in Switzerland and the United States, which evaluated patient safety climate with the use of the SAQ, obtained means of 71.2 and 70.9 points, respectively, in the teamwork atmosphere domain. [15] A study carried out in Intensive Care Units in Saudi Arabia reported this domain had scores lower than the ideal recommended by the literature.[16]

Regarding the second domain, safety climate, the mean obtained was 62.8 and there was a prevalence of a negative perception about it. Some authors, however, found higher means (73.19), in which the safety climate was more favorable.[17] For this domain, a study carried out with the objective of verifying the performance of 12 neonatal ICUs in Texas, USA, obtained means varying from 66.7 to 85.7.[13] The safety climate is a reflection of the safe care of patients. Thus, the healthcare organizations have a strong and active duty to ensure such safety.

Work satisfaction, represented in the third domain evaluated by the SAQ, had a mean of 81.65, and most professionals reported a positive perception. Corroborating this result, studies that applied the SAQ in national and international hospitals had higher scores than recommended by the literature, varying from 77.6 to 86.74 points.[8, 14-16]

Work satisfaction may indicate improvement in the quality of assistance provided and patient safety[8], as satisfied professionals tend to perform their functions better.[18]

Regarding the fourth domain of the SAQ, stress perception, the mean obtained was 68.19, which indicates that most professionals acknowledge the stressing aspects that influence work performance. A study that aimed to explore the factors that affect safety attitudes and teamwork atmosphere in Intensive Care Units obtained a lower score in this domain, with a mean of 30.69.[17]

Concerning Perception of Management of the Unit and the Hospital, another determining factor in patient safety, it was observed a mean of 51.01 among the respondents. In this domain, there was a higher proportion of professionals with a negative perception regarding management of the unit and the hospital. A similar mean

was observed (52.22) in a research carried out in five Intensive Care Units in the Republic of Cyprus, in the Middle East.[17]

The work conditions domain, the last to one evaluated by the SAQ, had a mean of 51.21 and the majority of the professionals had a negative perception of it, this result corroborate a study carried out in a private hospital in Minas Gerais.[14]

A research conducted in a university hospital in Florianópolis, Santa Catarina, obtained a mean of 32 points in the domain work conditions in one of its inpatient care units, thus being the part of the SAQ with the lowest score.[18]

Similar researches found higher scores, with the means varying from 60.7 to 67.23 points[8,15,17.] They did not achieve the score recommended by the literature, however, which indicates a negative perception regarding work conditions.

Regarding the professionals' perception of collaboration among the nursing team, staff physicians and pharmaceutics of the unit, the relationship among the professionals is deemed unsatisfactory as most respondents disagreed or remained neutral when opining about the collaboration among them.

A research carried out in an oncology hospital obtained mostly positive responses regarding collaboration among professionals. Besides those results, the percentage of workers who remained neutral or disagreed was higher than of those who totally agreed.[8]

The aspects related to mistake prevention include an appropriate number of personnel, the reduction of work overload, a good relationship among the multi-professional staff, and adequate leadership and nursing supervision.

Concerning the comparison of scores in the SAQ between unit of practice, sex, professional category and time of practice, only the variable professional category had statistical difference in some domains.

The physicians had the worst perception in the domain stress perception and the best in the work conditions when compared to the other professional categories. A study carried out with the objective to explore the aspects that affect attitudes of safety climate noted the stress perception was lower among the nursing team (28.43). However, 91.9% of the nurses said they would feel safe being treated in the ICU they work at, which is viewed as a positive perception regarding the safety climate by the professionals.[17]

The current research did not find statistical differences between the SAQ scores related to the sex of the

respondents. A study carried out in some hospitals in Jordan observed that males had better perception than females.[20]

In the current study, the time of practice of the professional in the institution did not interfere in the perception of safety climate, which corroborates a study carried out in an oncology center. A research which aimed to explore the aspects that affect the safety attitudes and the teamwork atmosphere in ICUs also did not find any differences in the scores related to the time of practice of the professionals in the institutions.[17]

On the other hand, results from a study carried out in a private hospital found out an inverse correlation between the time of practice and the domains teamwork atmosphere, safety climate, stress perception and work conditions.[14]

An investigation carried out with 381 nurses who worked in hospitals in Jordan found out that nurses with 10 or more years or practice had better perceptions of teamwork than those with one or two years of experience.[20]

CONCLUSION AND CONTRIBUTIONS

The safety culture in the ICUs observed had a lower score than recommended by the literature. The domains with the lowest scores were perception of management of the unit and the hospital and work conditions. Only the domain professional satisfaction had safety culture scores considered ideal.

There were no significant statistical differences between the safety climate and the unit of practice, the sex and the time of practice in the unit. There was a difference in the medical staff perception regarding stress perception and work conditions when compared to the other professionals.

One of the aspects that jeopardize the adoption of safety culture identified was the reduced collaboration between healthcare teams. A favorable aspect identified was the satisfaction of professionals regarding their workplace.

The findings in this research point to the importance of carrying out institutional diagnoses which aid in guiding the implementation of actions that encourage the establishment of a safety culture among professionals and, therefore, guide the safety attitudes.

The fact that this is a cross-sectional study is considered a limitation because it makes it harder to spot the progress in the temporal analysis of the variables investigated. The restrictions of the evaluated group regarding the sample dimension is also considered a limitation as the research was carried out in a single institution.

It is suggested that large-scale studies like these may be carried out with a multicentric focus, considering patient safety in the entire country.

REFERENCES

1. Oliveira RM, Leitão IMTA, Silva LMS, Figueiredo, SV, Sampaio, RL, Gondim MM. Estrategias para promover la seguridad del paciente: desde la identificación de riesgos hasta las prácticas basadas en evidencias. Esc Anna Nery Rev Enferm. [Internet]. 2014 [citado em 10 abr 2016]; 18(1):122-129. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1414-81452014000100122.
2. Dias, MAE, Martins M, Navarro N. Adverse outcome screening in hospitalizations of the Brazilian Unifi ed Health System. Rev Saúde Pública [Internet]. 2012 [citado em 10 abr 2016]; 46(4):719-29. Disponível em: http://www.scielo.br/pdf/rsp/v46n4/3604.pdf.
3. Nogueira LS, Sousa RMC, Padilha, KG, Koike KM. Clinical characteristics and severity of patients admitted to public and private icus. Text Context Nursing [Internet]. 2012 [citado em 10 abr 2016]; 21(1): 59-67. Disponível em: http://www.scielo.br/pdf/tce/v21n1/en_a07v21n1.pdf.
4. Silva RCL, Cunha JJSA, Moreira CLS. Adverse events in intensive care: what they know the nurses. Rev. Pesqui. Cuid. Fundam. [Internet]. 2011 [citado em 12 abr 2016]; 3(2):1848-55. Disponível em: http://www.seer.unirio.br/index.php/cuidadofundamental/article/view/1393/pdf_384.
5. Paiva, MCMS, Paiva SAR, Berti HW. Eventos adversos: análise de um instrumento de notificação utilizado no gerenciamento de enfermagem. Rev Esc Enferm USP. [Internet]. 2010 [citado em 12 abr 2016]; 44(2):287-94. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342010000200007.
6. Universidade Federal do Triângulo Mineiro. Hospital das clínicas. Sobre o HC- UFTM [Internet]. Uberaba, MG: HC-UFTM, [201-] [Citado em 26 abr 2016]. Disponível em: http://www.ebserh.gov.br/web/hc-uftm.
7. Sexton JB, Thomas EJ. The safety attitudes questionnaire (SAQ): guidelines for administration. Technical Report 03-02. Huston: The University of Texas Center of Excellence for Patient Safety Research and Practice, 2003.
8. Barbosa MA, Sousa EM, Felix MMS, Oliveira KF de, Barichello E. Patient safety climate in a hospital specialized in oncology. Rev Eletrônica Enferm. [Internet]. oct/dec 2015 [citado em 20 jun 2017]; 17(4):1-9. Disponível em: https://www.fen.ufg.br/revista/v17/n4/pdf/v17n4a17-en.pdf.
9. Rigobello, MCG, Rhanna EFL, Cassiani SHB, Galon T, Capucho HC, Deus NN. Clima de seguridade del paciente: percepción de los profesionales de enfermeira. Acta Paul Enferm. [Internet]. 2012 [citado em 12 abr 2016]; 25(5):728-35. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0103-21002012000500013.

10. Patel S, Wu AW. Safety Culture in Indian Hospitals: A Cultural adaptation of the Safety Attitudes Questionnaire. J Patient Saf. [Internet]. 2016 Jun [citado em 20 jun 2017]; 12(2):75-81. Disponível em: https://www.ncbi.nlm.nih.gov/pubmed/24681421.
11. Etchegaray J, Thomas EJ. Comparing two safety culture surveys: safety attitudes questionnaire and hospital survey on patient safety. BMJ Qual Saf. [Internet]. 2012 [citado em 12 abr 2016]; 21(6):490-8. Disponível em: https://www.ncbi.nlm.nih.gov/pubmed/22495098.
12. Gama ZAS, Oliveira ACS, Hernández PJS. Cultura de seguridade del paciente y factores asociados em uma red de hospitales públicos españoles. Cad Saúde Pública [Internet]. 2013 [citado em 12 abr 2016]; 29(2):283-93. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0102-311X2013000200015.
13. Profit J, Etchegaray J, Petersen LA, Sexton JB, Hysong SJ, Mei M et al. The Safety Attitudes Questionnaire as a tool for benchmarking safety culture in the NICU. Arch Dis Child Fetal Neonatal [Internet]. 2012 [citado em 12 abr 2016]; 97(2):127-32. Disponível em: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4030665/.
14. Barbosa MH, Floriano DR, Oliveira KF de, Nascimento KG do, Ferreira LA. Patient safety climate at a private hospital. Texto & Contexto Enferm, [Internet]. 2016 [citado em 20 jun 2017]; 25(3):e1460015(1-8). Disponível em: http://www.scielo.br/pdf/tce/v25n3/0104-0707-tce-25-03-1460015.pdf.
15. Schwendimann R, Zimmermann N, Küng K, Ausserhofer D, Sexton B. Variation in safety culture dimensions within and between US and Swiss Hospital Units: an exploratory study. BMJ Quality & Safety [Internet]. 2013 Jan [citado em 20 jun 2017]; 22(1):32-41. Disponível em: https://www.ncbi.nlm.nih.gov/pubmed/22773888.
16. Alayed AS, Johansson HL. Saudi Arabian ICU safety culture and nurses' attitudes. Int J Health Care Qual Assur. [Internet] 2014 [citado em 20 jun 2017]; 27(7):581-93. Disponível em: http://www.emeraldinsight.com/doi/abs/10.1108/IJHCQA-04-2013-0042.
17. Raftopoulos, Vasilios; Pavlakis, Andreas. Safety climate in 5 intensive care units: a nationwide hospital survey using the Greek-Cypriot version of the Safety Attitudes Questionnaire. J Crit Care [Internet]. 2013 [citado em 20 jun 2017]; 28(1):51-61. Disponível em: https://www.ncbi.nlm.nih.gov/pubmed/22762933.
18. Marinho MM, Radünz V, Barbosa SFF. Avaliação da cultura de segurança pelas equipes de enfermagem de unidades cirúrgicas. Texto & Contexto Enferm. [Internet]. 2014 Jul-Set [citado em 20 jun 2017]; 23(3):581-90. Disponível em: http://www.scielo.br/pdf/tce/v23n3/pt_0104-0707-tce-23-03-00581.pdf.
19. Duarte SCM , Stipp MAC , Silva MM , Oliveira FT. Eventos adversos e segurança na assistência de enfermagem. Rev Bras Enferm. [Internet]. 2015 [citado em 20 jun 2017]; 68(1):144-54. Disponível em: http://www.scielo.br/pdf/reben/v68

n1/0034-7167-reben-68-01-0144.pdf.

20. Abualrub, Raeda F., Gharaibeh, Huda F., Bashayreh, Alaa Eddin. The relationships between safety climate, teamwork, and intent to stay at work among Jordanian hospital nurses. Nurs Forum [Internet]. 2012 [citado em 20 abr 2016]; 47(1):65-75. Disponível em: http://onlinelibrary.wiley.com/doi/10.1111/j.1744-6198.2011.00253.x/epdf.

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