PATIENT SAFETY CULTURE IN INTENSIVE CARE: NURSING CONTRIBUTIONS[1]

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[1] This study presents partial results of the dissertation - *Cultura de segurança do paciente em Unidade de Terapia Intensiva: perspectiva da enfermagem*, presented to the Nursing Graduate Program (PEN) of the Federal University of Santa Catarina (UFSC), 2011.

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ABSTRACT: The aim of this quantitative, comparative, cross-sectional, survey study was to systematize nursing recommendations regarding patient safety in two adult intensive care units in Florianópolis-SC, Brazil, in 2011. It resulted from the answer to a qualitative question from the Hospital Survey on Patient Safety Culture, applied to 97 nurses, with a response rate of 93.8%, corresponding to 91 professionals. The survey obtained 267 recommendations, categorized according to the dimensions of the instrument utilized. There was a greater number of recommendations for the dimensions: organizational learning and continuous improvement, with suggestions involving qualification and training; staff in relation to quantitative matter; and overall perception of safety, indicating an improvement in procedures and processes and the support from the hospital management, with emphasis on the improvement of material resources and equipment. Also highlighted by other studies, these recommendations are essential to improve patient safety in the intensive care units studied.

DESCRIPTORS: Patient safety. Culture. Intensive care units. Nursing.

CULTURA DE SEGURANÇA DO PACIENTE EM TERAPIA INTENSIVA: RECOMENDAÇÕES DA ENFERMAGEM

RESUMO: Estudo quantitativo, tipo *survey*, transversal e comparativo, que teve por objetivo sistematizar as recomendações dos profissionais de enfermagem acerca da segurança do paciente em duas Unidades de Terapia Intensiva adulto na Grande Florianópolis-SC, Brasil, em 2011. Resultou da resposta a uma pergunta qualitativa aplicada com o *Hospital Survey on Patient Safety Culture* a 97 profissionais de enfermagem, com uma taxa de resposta de 93,8%, correspondendo a 91 profissionais, sendo obtidas 267 recomendações, categorizadas conforme as dimensões do instrumento utilizado. Houve maior número de recomendações para as dimensões aprendizado organizacional e melhoria contínua, com sugestões envolvendo capacitação e treinamento; pessoal em relação ao quantitativo; e percepção geral de segurança do paciente, indicando melhoria dos procedimentos e processos e apoio da gestão hospitalar, com ênfase na melhoria dos recursos materiais e equipamentos. Destacadas por outros estudos, estas recomendações são essenciais para a promoção da segurança do paciente nas Unidades de Terapia Intensiva estudadas.

DESCRITORES: Segurança do paciente. Cultura. Unidades de terapia intensiva. Enfermagem.

CULTURA DE LA SEGURIDAD DEL PACIENTE EN TERAPIA INTENSIVA: RECOMENDACIONES DE ENFERMERÍA

RESUMEN: Estudio cuantitativo, de tipo investigativo, transversal y comparativo que tuvo por objeto sistematizar las recomendaciones de enfermería sobre la seguridad del paciente en dos Unidades de Terapia Intensiva adulta de la Grande Florianópolis-SC, Brasil, en 2011. Resultó de la respuesta a una pregunta cualitativa aplicada con el *Hospital Survey on Patient Safety Culture* para 97 profesionales, con una tasa de respuesta del 93,8% correspondiente a 91 profesionales, y obtuvo 267 recomendaciones, clasificadas de acuerdo con las dimensiones del instrumento utilizado. Hubo un mayor número de recomendaciones para las dimensiones: aprendizaje organizacional y la mejora continua, con sugerencias envolviendo a la capacitación y al entrenamiento; personal en relación con la cuestión cuantitativa; y la percepción general de la seguridad, indicándose la mejoría de los procedimientos, los procesos y el apoyo de la gestión hospitalaria, dando énfasis a la mejoría de los recursos materiales y equipamientos. Destacadas por otros estudios, estas recomendaciones son esenciales para la promoción de la seguridad del paciente en las Unidades de Terapia Intensiva estudiadas.

DESCRIPTORES: Seguridad del paciente. Cultura. Unidades de terapia intensiva. Enfermería.

INTRODUCTION

In the last decades, there has been a growing concern in providing patients with safe health care. Although scientific progress in the health sector currently promotes treatment for many diseases, evidence demonstrates that patients are subjected to risks while clients of health services.[1]

Among many studies emphasizing these risks, the release of 'To err is human: building a safer health care system' published by the Institute of Medicine (IOM),[2] stands out and is considered a landmark in patient safety.

Adverse event risks in healthcare occur within the different environments where care is provided. Within these different environments, the Intensive Care Unit (ICU) stands out, as, due to its particularities, it is considered a high-risk healthcare scenario. The unit presents intensive care as a particularity, in other words, it must be provided rapidly, involving many procedures, producing a high volume of information. Furthermore, intensive care is performed by a large and varied number of professionals who, due to patients' severe condition, work under a great amount of stress, dealing directly with life-and-death situations where decisions must be made rapidly.[3-4]

Professional practice in these facilities carries the implicit need for professional education and improvement, based mainly on developing technical skills. However, although common sense considers mistakes, solely and exclusively, attached to professional competence, studies have demonstrated that some aspects in the organizational culture have deep effects on patient safety.[5-6] In health organizations, the safety culture results from individual and team values, attitudes, perceptions, competences, and behavior patterns that set commitment, safety management competence and healthcare organization.[7] In a brief and intuitive way, organizational culture might also be understood as "[...] the way things are done here".[8:112]

Currently, there is a growing trend to promote the involvement of all levels of the organization, from management to professionals in the front-line, which stimulates acknowledging risk circumstances in the organization.[9] Nursing has a fundamental role in such an acknowledgement, both due to its number of professionals and its constant and uninterrupted proximity to patient care, making them able to identify these risks and offering valuable suggestions for improvements. Hence, studies have been performed on nursing professionals in order to evaluate which aspects in their work environment culture might benefit or not benefit patient safety.[6,10]

Many instruments[11] for patient safety culture evaluation are frequently comprised by theme questions. Those questions are useful to measure organizational conditions that might lead to adverse events and harm patients in health institutions. They provide a metric by which implicit understandings about the way the work is performed become visible and available.[6]

In this present study, the Hospital Survey on Patient Safety Culture (HSOPSC) was employed on nursing professionals from both ICUs, complemented by the following open question: "mention three recommendations you suggest to improve patient safety in your unit". Therefore, the objective of the present study was to systematize the recommendations of nursing professionals based on their answers to this question.

METHOD

This is a cross-sectional and comparative survey with a quantitative approach. The sample was composed by 97 professionals. The qualitative question on the instrument was answered by 91 professionals, originating an answer rate of 93.8%.

The research was carried out in two adult ICUs in public hospitals in the Greater Florianópolis, Santa Catarina, Brazil. The research was performed between April and June of 2011, after the approval of the Research and Ethics Committees from both institutions, according to protocols 59/10 of 10/25/2010 and 1113 of 11/29/2010. Convenience sample was adopted, and the inclusion criterion used was professionals work experience of a minimum of six months in the ICUs where the study was performed.

Data collection was composed by the employment of Portuguese version of the HSOPSC[12] instrument, created by the United Sates Agency for Healthcare Research and Quality (AHRQ).[6] This is an instrument that has been available since 2004 for public research and broadly used to evaluate patient safety culture, due to its favorable psychometric properties, in other words, it presents attributes as reliability and validity, which allow for accurately and faithfully measuring the studied phenomenon.

HSOPSC is consists of 42 questions related to patient safety culture, grouped into 12 dimen-

sions: team work within hospital units; supervisor/manager expectations and actions promoting patient safety; organizational learning, continuous improvement; feedback and communication about error; communication openness; staffing; nonpunitive response to error; hospital management support for patient safety; team work across hospital units; hospital handoffs and transitions; overall perception of safety; and the frequency of event reported. The first seven dimensions measure safety culture at the unit/department level, the following three, measure safety culture at the hospital level, and the last two are outcome measures.[6]

HSOPSC 12 dimensions include items evaluated based on a five-point Likert scale, with agreement degree answer categories (nine dimensions), or a frequency scale (three dimensions). The evaluation of each dimension is estimated based on the percentage of positive responses, obtained by calculating the combination of the two categories with the highest scored answers in each dimension. Highest percentage values indicate positive attitudes regarding patient safety culture.[6]

The HSOPSC was employed to the professionals who agreed to participate in the research and signed the Free and Informed Consent Form. Participants were informed about the study objectives and how to fill out the questionnaire. Also, an envelope with a separate sheet of paper was given to professionals with a qualitative open question, not included in the original questionnaire, with the following requirement: mention three recommendations you suggest to improve patient safety in your unit. Instruments were separately deposited, except HSOPSC demographic data, in a ballot box available in the unit so that secrecy was preserved.

Recommendations were then analyzed, after they were categorized, according to the 12 HSOPSC dimensions. For all categories computed and presented in a table, a descriptive analysis of the data was performed based on frequency data computing, both in absolute terms and percentages of each institution. Comparative analysis of results was also performed with HSOPSC employment results, expressed in safety culture positivity percentages, in the same table.

Recommendations were grouped by similarity to avoid unnecessary repetition, and presented in three charts, according to the dimensions proposed by the instrument, namely: in the unit/department level, hospital level and outcome measures.

RESULTS

Table 1 presents the participants' socio-demographic characteristics. The sample was composed by 69 nursing technicians (71.1%), 21 nurses (21.7%) and seven nursing assistants (7.2%). Regarding work experience, most (60.8%) have between six and 15 years of experience and one to five years in ICU (59.8%), working 30 to 40hrs per week (79.3%).

Table 1 - Nursing professionals' socio-demographic characteristics from two ICUs in Greater Florianópolis-SC, Brazil, 2011

Characteristics	Nurses n(%)	Nursing technicians n(%)	Nursing assistants n(%)	Total n(%)
Working experience in the hospital				
From 0 to 5 years	8 (38.1)	32(46.4)	1(14.3)	41(42.3)
From 6 to 10 years	7(33.3)	18(26.1)	1(14.3)	26(26.8)
From 11 to 15 years	2(9.5)	6(8.7)		8(8.2)
From 16 to 20 years		7(10.2)	1(14.3)	8(8.2)
21 years or more	3(14.3)	5(7.2)	4(57.1)	12(12.4)
No answers	1(4.8)	1(1.4)		2(2.1)
ICU working experience				
From 1 to 5 years	11(52.4)	45(65.3)	2(28.6)	58(59.8)
From 6 to 10 years	6(28.5)	13(18.8)		19(19.6)
From 11 to 15 years		4(5.8)		4(4.1)
From 16 to 20 years	1(4.8)	4(5.8)	2(28.6)	7(7.2)
21 years or more	2(9.5)	3(4.3)	3(42.8)	8(8.2)
No answers	1(4.8)			1(1.1)

Weekly working hours				
< 30 hrs/week	1(4.8)	6(8.7)		7(7.2)
From 30-40 hrs/week	18(85.6)	55(79.7)	4(57.1)	77(79.3)
From 40-60 hrs/week	1(4.8)	8(11.6)	2(28.6)	11(11.3)
< 60 hrs/week			1(14.3)	1(1.1)
No answers	1(4.8)			1(1.1)
Working experience in the profession				
From 1 to 5 years	3(14.3)	9(13)		12(12.4)
From 6 to 10 years	8(38.1)	22(31.9)		30(30.9)
From 11 to 15 years	5(23.8)	23(33.3)	1(14.3)	29(29.9)
From 16 to 20 years		7(10.2)	1(14.3)	8(8.2)
21 years or more	4(19)	8(11.6)	5(71.4)	17(17.5)
No answers	1(4.8)			1(1.1)

Nursing professionals produced 267 recommendations to improve patient safety in the ICUs, which are presented in table 2. Most (66.1%) recommendations regard organizational learning, continuous improvement (19%), personnel (16.5%), overall perception of patient safety (16%), and hospital management support on patient safety (14.6%). For the other dimensions there were fewer recommendations.

When recommendations presented by participants from ICUs 1 and 2 were compared (Table 2), a few differences were identified. In the feedback and communications about error dimension more suggestions of improvements in safety by professionals from ICU 2 (10 more) were made. However, the dimensions staffing and teamwork within the units were contemplated in a larger amount of suggestions by professionals in ICU 1 (12 and seven, respectively, more).

When safety culture evaluation results made by HSOPSC[15] were confronted with the professionals' recommendations (Table 2), the dimensions teamwork within hospital units and supervisor/manager expectations and actions promoting safety were identified under the best evaluations of safety culture (62 and 51% respectively), and by relation, they had the lowest number in recommendations (4.8 and 8.6%). On the other hand, dimensions with low rates of a positive safety culture, such as hospital management support on patient safety (13%) and patient's overall perception of safety (27%), received a larger number of recommendations.

Table 2 - Nursing professionals' recommendations to improve patient safety and patient safety culture evaluation = scores according to HSOPSC dimensions from two ICUs in Greater Florianópolis-SC, Brazil, 2011

Recommendations	ICU 1 n(%)	ICU 2 n(%)	Total n(%)	Evaluation HSOPSC%
Unit level				
1. Teamwork within hospital units	10 (7.6)	3(2.3)	13(4.8)	62
2. Supervisor/manager expectations and actions promoting safety	8(5.9)	15 (11.4)	23(8.6)	51
3. Organizational learning — continuous improvement	28(20.7)	23 (17.4)	51(19)	45
4. Feedback and communications about error	02(1.5)	12(9.1)	14 (5.2)	28
5. Communication openness	10(7.4)	09 (6.8)	19 (7.1)	31
6. Staffing	28(20.7)	16 (12.1)	44(16.5)	44
7. Nonpunitive response to error	1(0.7)	5(3.8)	6(2.2)	18
Hospital level				
8. Hospital management support for patient safety	19(14.1)	20(15.2)	39(14.6)	13
9. Teamwork across hospital units	1(0.7)	1(0.7)	2(0.7)	27

10. Hospital handoffs and transitions	3(2.2)	1(0.7)	4(1.9)	34
Outcome measures				
11. Overall perception of safety	22(16.3)	21(15.9)	43(16)	27
12. Frequency of event reporting	3(2.2)	06(4.6)	09(3.4)	38
Total	**135(50.4)**	**132(49.6)**	**267(100)**	

Table 3 presents recommendations for patient safety within the unit's level. Those regarding organizational learning and continuous improvement stand out with the indication for professional training and courses and recommendations regarding staff size, working hours and better salary conditions.

Table 3 - Recommendations to improve patient safety within the unit's scope presented by nursing professionals from two ICUs in Greater Florianópolis-SC, Brazil, 2011

Dimensions - Unit	Recommendations
1. Team work within hospital units	Promote good team relationship and cooperation among shifts and the immediate management and coordination; union; respect and motivation. Integrate on-call nurses with the working team.
2. Supervisor/manager expectations and actions promoting safety	Value management and the good employee; support and understand employees. Ensure management's presence in solving simple and immediate problems; larger performance (communication). Promote larger supervision, attendance and monitoring the working team by management and immediate management regarding the care, committing to the events taking place in the sector. New employees should be supervised and new residents and doctors by the medical team.
3. Organizational learning — continuous improvement	Performing research, courses, lectures and trainings or professional trainings within the working environment, extended to all professionals, with no distinction, about general subjects or specific themes, such as: patient safety, routines and patterns, techniques, unit specific subjects, antibiotics use, new technology and equipments and material handling. Promote training for new employees with no experience. Adopt a critical and constructive position, assuming errors and facing them as professional growth. Set up patient safety commissions. Perform evaluations for the growth and education of the team.
4. Feedback and communications about error	Inform professionals form all shifts about changes and justify them; more communication among teams. Create a notification system for adverse events, making professionals aware of its importance. Discuss probable errors in order to prevent them.
5. Communication openness	Perform periodic general or shift team meetings, with the entire nursing team, to identify the main problems affecting patient safety; establish barriers for safety and discuss issues as nursing processes and health care for severe patients. Provide teams with talking time to address errors and motivate communication. Promote a trustful and safe relationship with managers, more communication; the right to ask questions and make suggestions, more dialogue and interaction. Promote a clear and straightforward communication with respect to the provider; improving communication between nurses and technicians.

6. Staffing	Improve the number of professionals in all shifts and per patient. Reduce work overload; working in a calm and non-stressful environment. Improve working hours distribution, avoiding long working hours of more than 12 hours; create strategies to reduce absenteeism. Promote better salaries and exclusivity (one single contract).
7. Nonpunitive response to error	Punish employees in extreme cases, when talking was not enough. Perform non-punishing evaluations. Adopt strategies that will lead professionals to report errors and these errors should be corrected in a non-punishing manner. Keep professional secrecy; discuss the case (error), preserving the professional, when only the management must know his/her name.

Within the organizational scope, according to table 4, there were more recommendations mentioning hospital management support for patient safety, with suggestions to improve the amount, quality and maintenance of material and equipment and improve the physical structure of the work environment.

Table 4 - Recommendation to improve patient safety within the hospital organization scope presented by nursing professionals from two ICUs in Greater Florianópolis-SC, Brazil, 2011

Dimensions - Hospital level	Recommendations
1. Hospital Management support for patient safety	Ensure that hospital management and doctors who hold decision-making power help and be 'more' committed. Make materials and equipments available in good quantity and quality; with the possibility of constant maintenance and equipment reservation. Perform frequent inspection and maintenance on beds and rails, or purchase new totally automatic beds and mattresses. Improve devices for patients' physical restrictions. Purchase specific equipments for patients' transportation as stretchers or beds, oxymeter and transportation ventilators. Restructure the physical layout predicting patients' observation and circulation of personnel; appropriate accommodations. Improve the computerized system for internal control of events. Frequently revise the ICU electric and hydraulic networks, including the vacuum system. Purchase differentiated medication bottles regarding identification, color and readable letters. Promote a calm and pleasant work environment.
2.Team work across hospital units	Keep a good relationship between the institution units. Perform compound work with the pharmacy to decrease medication errors.
3. Hospital handoffs and transitions	More attention in shift changes. Transmit appropriate information about patients' events.

Among the dimensions evaluating safety culture results, the expressive number of recommendations regarding "Overall perception of safety" stands out, according to table 5. For better understanding, this dimension evaluates if procedures and systems are suitable to avoid errors and if there is a safety problem.[15] Suggestions mainly for the improvement of work procedures and processes were mentioned, some of them based on current patient safety principles as: protocols definition, risk barriers, patients' identification, single dose and double checking. Also, recommendations regarding professional conduct as dedication, commitment and work awareness; respect and care are emphasized.

Table 5 - Recommendations to improve patient safety within the results scope presented by nursing professionals from two ICUs in Greater Florianópolis-SC, Brazil, 2011

Dimensions - Results	Recommendations
1. Overall perception of safety	Respect for patients by doctors, residents and in general. Work with effort, dedication, commitment and awareness. Perform procedures safely. Keep more balance between work shifts, with support and understanding regarding pending tasks. Maintain closer contact to patients. No performance of complex procedures in the ICU (e.g. tracheostomy). Create care protocols with well-designed routines, based on the unit routine (suggestions for pressure ulcer and hospital infections). Accomplish risk barriers as a schedule check and medication check. Attention on patients' identification. Institute single dose and double checking of medications, especially high risk drugs, such as potassium chloride, vasoactive and psychotropic drugs, and also hemoderivative drugs. Attention to medication care as validity date, prescription evaluation, dilution, labels, five rights and equipment validity. Work performance and care for the patient with care, as if from your family. Keep bed rails elevated and apply physical restriction only when recommended. Avoid equipments alarms when in inoperative mode. Organize work environment. Isolation, more control by the Hospital Infection Control Commission, suggesting they should be applied to all patients until exams (blood cultures) results arrive, avoiding contamination to other patients during this period. Perform hand disinfection. Ensure patients' exit to perform procedures outside the ICU only should occur followed by medical staff.
2. Frequency of reported reporting	Promote reporting errors and adverse events, creating a notification culture. Collect and register adverse/error events committed by professionals. Establish an adverse events and error notification center, officially reporting them.

DISCUSSION

Nursing professional practice is permeated by the daily experience and perception of risk situations that may lead to managing health care provision regarding patient safety. Therefore, the importance that recommendations presented by professionals in this study may have complemented or even elucidated the data obtained by the safety culture evaluation instruments.

Within the context of the present study, these recommendations resulted in the identification of the fragile aspects of the safety culture in these institutions where the study was developed. Professional development and training, improvement in work processes, including the creation of protocols, making a good amount of quality equipments and materials available, as well as the suitable amount of professionals were identified as evident needs in both ICUs among others which were included less frequently.

Making nursing care suitable to the safety era paradigm depends on professionals who search for scientific and technical excellence while performing care based on evidence. For this, it is necessary for the work to be developed in environments where the philosophy and resources promote and sustain continuous improvements.[16]

Health care is a constantly changing and improving field, and continuous education is inserted as an essential component for the education and development of human resources in institutions,[17] as it stimulates professionals in attaining the necessary knowledge to perform tasks attributed to them[18] and manage health care risks. Moreover, it endures quality to patient care and the survival of institutions in this changing and competitive

scenario[18] where basic knowledge is learnt and becomes rapidly obsolete.

Studies stress the importance of continued educational processes, especially in the intensive care unit, and they also point out that formal education and informal education are contributing factors for incidents,[19] evidencing nursing professionals need professional development and specific technical development.[17]

Although the educational process is a constant need throughout professional development, maybe there is a congruent education, provided by schools, with work demands. Such situation may implicate a higher need for evidence-based professional development. This situation represents a problem for health organizations, because in addition to ensuring professional updating, they must also be responsible for teaching basic principles of professional practice.

The young profile of professionals in this study regarding the profession and ICU working experience may suggest a higher need for learning since there is no diverse professional experience, justifying so many professional development recommendations.

The patient safety movement has been aggregating a series of initiatives to improve health care processes. In health organizations there are various situations that favor the occurrence of errors in the nursing work environment, as long working hours and fatigue, work load issues, work place and badly planned care processes, in addition to the lack for decision-making support systems and efficient communication among team members. Therefore, changes within these environments are required to reduce errors and increase patient safety.[20] Parting from the presumption that organizations must change in the sense of "make it easy to do the right thing, and hard to do the wrong thing".[21:11-12]

Among the recommendations attained in this study, them emerged suggestions included the creation of patient safety commissions, patient identification, protocols, medication single dose, double checking, stimulate reporting adverse events and errors. These activities have been constantly promoted by programs objecting patient safety, demonstrating awareness regarding their importance.

In addition to well-defined work processes, technology and care devices are also needed within all nursing work environments. In ICUs, such resources, including ventilators, monitors, infusion pumps among others, are essential for the care and treatment of patients. However, when these devices are not subjected to a rigid evaluation in order to make them suitable for the selection and acquisition processes, or when they are improperly used, they can harm patients.[22]

Associated with patient safety, standardizing equipments and technologies is an important strategy, and it has been stimulated in order to decrease errors by memory dependency and to help individuals in using devices and technologies safely and efficiently. Moreover, equipments and technologies must be evaluated under the eyes of patient safety before purchased or implemented, including the evaluation of all needed abilities to operate them, engineering concerns, infection control, among others. It is essential that they are tested before being used and that they have systems able to identify and anticipate and avoid errors.[22] These provisions should also extend to material consumption, which, due to its broad variety, must have an even more careful surveillance.

Recommendations regarding the quality and availability of material and equipment were frequently mentioned by both ICU teams in the present study. As these recommendations were analyzed, it is important to emphasize the concern regarding beds, rails and restrictions reported by ICU professionals, which most certainly reflect improvements regarding these care resources. However, it is important to consider that within our field, patient safety is not sufficiently studied, based on what was idealized in the last decade, which may lead to an understanding of patient safety by professionals that contemplates not all its dimensions.

Although the recommendations for patient safety improvement have been similar in both ICUs, some cases demonstrated differences regarding the number of recommendations, demonstrating specific needs. Nursing professionals from ICU 1 demonstrated the need for improvements mainly in the number of professionals; ICU 2 pointed out the need for interventions in improving communication regarding routine changes and the communication among teams.

Studies emphasize the importance of an appropriate nursing team measurement based on the severity of patients and their needs, as these aspects affect the quality of care as well as adverse events and errors.[23] Communication is considered fundamental for the team to work in an integrated way in the benefit of the patient. Lack of communica-

tion may generate professional dissatisfaction. The relevance of the nurses' role as care activity organizers and coordinators is emphasized in order to promote the appropriate communication process.[24]

In this present study, as professionals' recommendations were compared to safety culture evaluation scores, some relations were evidenced and reinforced the results found by the employment of HSOPSC. For instance, the dimensions teamwork within units and manager/supervisor's expectations and actions in promoting patient safety received higher score evaluations of positivity and generated less recommendations; on the other hand, hospital management support on patient safety and overall perception of patient safety reached lower positive evaluation scores, and received a larger number of recommendations.

The dimensions teamwork within hospital units and supervisor/manager expectations and actions promoting safety are dimensions of the unit level, and results suggest the nursing team feels supported in the work environment, and they tend to be more cooperative with their colleagues. Hospital management support for patient safety is a dimension in the hospital level, and it may indicate that the view that nursing professionals make of patient safety promotion is not perceived by hospital management, which was evidenced by the low score associated to a high number of recommendations. In addition, it is suggested that there are flaws in communicating safety, policies, and expectations of the unit organizational initiatives, as managers have less opportunities to identify safety risks that are commonly experienced within units. A more proactive attitude must be considered by managers to improve the coordination between units and management. Overall perception of patient safety is an outcome measure indicating there are processes and systems to prevent errors and problems in patient safety. Its low score and high number of recommendations demonstrate professionals perceived fragilities regarding patient safety in the institutions of this study, allowing for pointing out improvement alternatives.

CONCLUSION

The nursing professionals' recommendations obtained in this study enable us to identify how patient safety can be promoted within the studied intensive care units. Setting these recommendations into categories, according to the HSPSOC dimensions permitted to provide an objective view of the nursing professionals' perceptions, allowing for a systemized implementation of measures.

Within this study context, these recommendations revealed the safety culture fragile aspects in these institutions where the study was developed. The amount of actions suggested in the overall perception of safety and hospital management support on patient safety dimensions are emphasized. The implementation of these actions and the further analysis of different instrument dimensions, allow for measuring its impact, translating it into an important instrument in safety culture evaluation.

Similar studies point out the need for further investigations using this same instrument, especially in Brazil, so as to better evaluate if modifications are needed, considering it was created in the United States, and based on their culture, reality and specific needs.

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