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INTEGRATIVE REVIEW ARTICLE

CULTURE OF PATIENT SAFETY IN THE HOSPITAL SETTING: AN INTEGRATIVE REVIEW

CULTURA DE SEGURANÇA DO PACIENTE NO CENÁRIO HOSPITALAR: REVISÃO INTEGRATIVA

CULTURA DE LA SEGURIDAD DEL PACIENTE EN EL MEDIO HOSPITALARIO: UNA REVISIÓN INTEGRADORA

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ABSTRACT

Objective: to identify productions related to patient safety and organizational culture, which used as data collection instrument the Safety Attitudes Questionnaire. ***Method:*** an integrative review, in the databases LILACS, MEDLINE/PubMed, Scopus and Web of Science, with patient safety descriptors, organizational culture, climate, attitude of health personnel and the keyword *safety attitudes questionnaire*, with articles published online, in full, by the year 2013. ***Results:*** we obtained 16 publications for analysis and discussion, presented in two categories. The studies used as subjects health professionals. The inclusion of other professionals was not sufficiently covered, but represents an important role in creating safe work environments. An association of organizational culture with safety environment for the professionals was verified. ***Conclusion:*** it is believed that this study will bring contributions to the health team, especially to nursing, regarding the implementation of improvement actions in health institutions. ***Descriptors:*** Nursing; Patient Safety; Organizational Culture; Attitude of Health Personnel; Review.

RESUMO

Objetivo: identificar produções relativas à segurança do paciente e cultura organizacional, que utilizaram como instrumento de coleta de dados o *Safety Attitudes Questionnaire*. ***Método:*** uma revisão integrativa, nas bases de dados LILACS, MEDLINE/PubMed, SCOPUS e Web of Science, com os descritores *patient safety*, *organizational culture*, *climate*, *attitude of health personnel* e a palavra-chave *safety attitudes questionnaire*, com artigos publicados *online*, na íntegra, até o ano 2013. ***Resultados:*** obtiveram-se 16 publicações para análise e discussão, apresentadas em duas categorias. Os estudos utilizaram como sujeitos profissionais da saúde. A inserção dos demais profissionais não foi suficientemente contemplada, porém representam um papel relevante na criação de ambientes de trabalho seguros. Verificou-se associação da cultura organizacional com o clima de segurança dos profissionais nas instituições. ***Conclusão:*** acredita-se que este estudo trará contribuições à equipe de saúde, em especial à enfermagem, no que tange a implementação de ações de melhoria nas instituições de saúde. ***Descritores:*** Enfermagem; Segurança do Paciente; Cultura Organizacional; Atitude do Pessoal de Saúde; Revisão.

RESUMEN

Objetivo: identificar las producciones relacionadas con la seguridad del paciente y la cultura de la organización, que utiliza como un instrumento de recolección de datos del Cuestionario de Actitudes de Seguridad. ***Método:*** una revisión integradora, en las bases de datos LILACS, MEDLINE/PubMed, Scopus y Web of Science, con los descriptores de seguridad de los pacientes, la cultura organizacional, el clima, la actitud del personal de salud y el cuestionario de actitudes de palabras clave de seguridad, con artículos publicados en línea, en su totalidad, para el año 2013. ***Resultados:*** se obtuvieron 16 publicaciones para el análisis y la discusión, presentadas en dos categorías. Siendo utilizados como sujetos del estudio los profesionales de la salud. La inclusión de otros profesionales no estaba suficientemente cubierta, sino que representan un papel importante en la creación de ambientes de trabajo seguros. Una asociación de cultura de la organización con el entorno de la seguridad al profesional en las instituciones fue observada. ***Conclusión:*** se cree que este estudio aportará contribuciones al equipo de salud, sobre todo a la enfermería, en cuanto a la implementación de acciones de mejora en las instituciones de salud. ***Descriptores:*** Enfermería; Seguridad del Paciente; Cultura Organizacional; Actitud del Personal de Salud; Revisión.

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INTRODUCTION

The safety culture has been identified as a major impact on improving the quality of health care and it is related to adverse events and mortality rates.[1] Thus, the improvement of initiatives in health care have been implemented, both in the sphere of Basic Attention, the hospital focused on professional and cultural change, with a view to the promotion of a safe care.

The leadership and commitment of management are considered important, as well as the actions and attitudes are thought to influence the perceptions, attitudes and behavior of employees in organizations.[2] Thus, action plans must be constructed, reflecting the development of a working environment motivator for professionals and the quality of services provided to patients.

The evaluation of safety culture results from the climate surrounding the organizational environment and how it is perceived by the professionals. The safe climate, measurable component of culture, shows the behavior of management, security systems and professional safety perceptions.[3] Currently, there is awareness that the errors are related to organizational, managerial and human factors.[3] So, analyze the error and/or almost error in the institutions, and stimulate its notification, promotes understanding of faults occurred, provides organizational learning and assists in the implementation of changes in the work process.

Organizational culture can be analyzed by different levels interconnected.[4] The main levels are divided into three categories: artifacts, which are constituted by the visible organizational structures, such as architecture, technology and products, and organizational work processes. The second category is related to basic fundamental assumptions, which are not accessible for measurement because they are thoughts and feelings present unconsciously. The third refers to the beliefs and values assumed, consisting of a set of strategies, objectives and philosophy. The basic assumptions, which are shared and accepted as true, determine the values and beliefs of professional and manifest at the level of the artifacts.[4] Organizational culture results from the beliefs and values that guide management decisions at all levels and which guide the way forward on the various alternatives for action.[5]

When the safety culture is measured in hospitals, the dimensions that need to be improved will be revealed, in order to contribute to a targeted improvement plan. Research instruments, such as the Safety Attitudes Questionnaire (SAQ), can reveal these dimensions. The SAQ is an important indicator of safety culture and allows us to evaluate and reflect on working atmosphere in the team; security climate; job satisfaction; perception of hospital management and the unit; working conditions and perceived stress.[6] In Brazil the validation and cross-cultural adaptation of the SAQ were held in 2011.[7] The use of the SAQ as a research tool is justified by present good psychometric properties and can be adapted to different health units, with small adjustments in the preparation of issues.[6]

Nursing, as an effective participant in all care and management actions, plays an essential role in the development of strategies and promotion of a culture favorable to patient safety environment, and their actions have repercussions in the attitudes of other workers team. Concerning this, for safe nursing care there must be a link between professionals and managers.[8] Thus, proactive attitudes on improving work processes, change of culture as opposed error, with the notification of events and evaluation of possible causes, cause one-way actions of other professionals involved in the care, with the focus centered on improving the quality of care provided to patients in health institutions.

Given the above, the main question of this study was: “What has been produced on the subject patient safety and organizational culture in hospitals?” To answer this question aimed to analyze national and international productions related to patient safety and organizational culture developed in hospital environments using the SAQ.

METHOD

It is an integrative review (RI), developed in five phases, which are: formulation and problem identification, data collection, assessment, analysis and interpretation of data collected and their presentation.[9]

In the first phase we carried out a theoretical study about the subject patient safety and organizational culture, delimiting the guiding question presented above. In the second phase, there was the literature, in November 2014, with the search for abstracts available in the following databases: Latin American and Caribbean Health Sciences (LILACS), MEDLINE/PubMed (via National Library of Medicine), Scopus (Elsevier) and Web of Science-Main Collection (Thomson

Reuters Scientific). They used the patient safety descriptors, organizational culture, climate, attitude of health personnel and the safety keyword attitudes questionnaire. Even at this stage, they defined inclusion and exclusion criteria for selection of material.

Inclusion criteria were: full research articles that used the SAQ as a data collection tool, available online in full, published by the year 2013. Exclusion criteria were publications that had no relation to the purpose of the study; possess incomplete or not available summaries; and studies in non-hospital environments.

When performing a search in the LILACS database, using the descriptor 'patient safety', met 90 studies. By adding the descriptor organizational culture six productions were located, and to the descriptor climate include, productions were not found. In SCOPUS, the terms in the title, abstract and keywords were employed in advanced search, as follows: ("safety patient" AND "organizational culture" AND "climate" AND "attitude of health personnel" AND "safety attitudes questionnaire"), being found 18 publications. To the inclusion and exclusion criteria there were applied, it was excluded from a production not to be appropriate to the timeline, another for not being Article and two for not using the SAQ in hospital. Thus, the sample completed with 14 productions.

Web of Science search was conducted with the strategy: Topic = (safety patient and organizational culture and climate and attitude of health personnel and safety attitudes questionnaire), recovering four studies. When applying to the inclusion and exclusion criteria, it was found that two studies did not fit the timeline and another was present in more than one database, being excluded. After the critical reading of the summary there was observed that a study had not used the SAQ as a research tool, and it is eliminated to meet the exclusion criteria, not leaving, so productions.

In the MEDLINE/PubMed search was performed using the same descriptors, as follows: ("safety patient" AND "organizational culture" AND "climate" AND "attitude of health personnel" AND "safety attitudes questionnaire"). The search was built with the delimiter "all fields" in the advanced function. They have found 12 studies and after the inclusion and exclusion criteria were applied, nine publications were excluded because they are present in the SCOPUS, and one not to be article. Thus, two studies were considered to be added to the analysis and discussion, and came to the end of second phase with a total of 16 publications to be evaluated.

In the third phase, the publications found were evaluated for the quality of data and its relation to the research problem, from reading the full text of selected articles. For this, we carried out a mapping of the same, highlighting the main categories. The fourth phase comprised the reduction steps, visualization and comparison of data, and check and draft conclusion.[9] For this, we built a summary table containing the following divisions: author, area of operation, year of publication, the research site, the study objectives, method or type of study, subject, data collection strategy, data processing, main results, conclusions, limitations and level of scientific evidence of the study.

The articles were evaluated relative to the level of evidence[10] by two independent researchers and, then, comparing the obtained data individually. Disagreements were reviewed and the results were included in the study discussion.

Finally, the last phase presented the conclusions of the integrative review carried out, demonstrating its preparation along with impressions and reflections of the authors. Evidence-based practice focuses evidence grading systems. Usually these systems are characterized hierarchically, and are conditioned by the methodological approach adopted for the development of the study.[11]

The classification adopted[11] is the most used by nurses, considering not only the studies that employ a quantitative approach, but the studies developed with qualitative approach, widely used in nursing.

With the careful reading of the articles, and understanding that patient safety and organizational culture include several factors, the analysis of the data was organized under the following categories: patient safety culture assessment through the SAQ dimensions, and Safety patient and organizational culture: associated factors.

RESULTS

Articles selected for analysis, which met the selection criteria established; they are presented in Figure 1.

Year	Authors	Title	Journal
2013	Lyu H, Wick EC, Housman M, Freischlag JA, Makary MA[12]	Patient satisfaction as a possible indicator of quality surgical care	*JAMA Surgery*
2013	Raftopoulos V, Pavlakis A[13]	Safety climate in 5 intensive care units: a nationwide hospital survey using the Greek-Cypriot version of the safety attitudes questionnaire	*Journal of Critical Care*
2013	Li AT[14]	Teamwork climate and patient safety attitudes: associations among nurses and comparison with physicians in Taiwan	*Journal of Nursing Care Quality*
2013	Schwendimann R, Zimmermann N, Küng K, Ausserhofer D, Sexton B[15]	Variation in safety culture dimensions within and between US and Swiss Hospital Units: an exploratory study	*BMJ Quality and Safety*
2012	Gallego B, Westbrook MT, Dunn AG, Braithwaite J[16]	Investigating patient safety culture across a health system: Multilevel modeling of differences associated with service types and staff demographics.	*International Journal for Quality in Health Care*
2012	Devriendt E, Van den Heede K, Coussement J, Dejaeger E, Surmont K, Heylen D, et al[17]	Content validity and internal consistency of the Dutch translation of the Safety Attitudes Questionnaire: an observational study	*International Journal of Nursing Studies*
2012	Profit J, Etchegaray J, Petersen LA, Sexton JB, Hysong SJ, Mei M, et al[18]	Neonatal intensive care unit safety culture varies widely	*Archives of Disease in Childhood: Fetal and Neonatal Edition*
2011	Shie H-G, Lee W-C, Hsiao H-F, Lin H-L, Yang L-L, Jung F[19]	Patient safety attitudes among respiratory therapists in Taiwan	*Respiratory Care*
2011	Poley MJ, Van Der Starre C, Van Den Bos A, Van Dijk M, Tibboel D [20]	Patient safety culture in a Dutch pediatric surgical intensive care unit: An evaluation using the Safety Attitudes Questionnaire	*Pediatric Critical Care Medicine*
2011	Allard J, Bleakley A, Hobbs A, Coombes L[21]	Pre-surgery briefings and safety climate in the operating theatre	*BMJ Quality and Safety*
2011	Vigorito MC, McNicoll L, Adams L, Sexton B[22]	Improving safety culture results in Rhode Island ICUs: lessons learned from the development of action-oriented plans	*Joint Commission Journal on Quality and Patient Safety*
2010	Speroff T, Nwosu S, Greevy R, Weinger MB, Talbot TR, Wall RJ, et al[23]	Organizational culture: Variation across hospitals and connection to patient safety climate	*Quality and Safety in Health Care*
2010	Carney BT, West P, Neily J, Mills PD, Bagian JP[24]	The Effect of Facility Complexity on Perceptions of Safety Climate in the Operating Room: Size Matters	*American Journal of Medical Quality*
2009	Parry G, Horowitz L, Goldmann D[25]	Patient safety attitudes of pediatric trainee physicians	*Quality and Safety in Health Care*
2007	Huang DT, Clermont G, Sexton JB, Karlo CA, Weissfeld LA Miller RG, et al[26]	Perceptions of safety culture vary across the intensive care units of a single institution	*Critical Care Medicine*
2006	Sexton JB, Helmreich RL, Neilands TB, Rowan K, Vella K, Boyden J,et al[6]	The Safety Attitudes Questionnaire: psychometric properties, benchmarking data, and emerging research	*BMC Health Services Research*

Figure 1. Description of articles selected for analysis.

The sample of this review consisted of 16 studies, two produced in the nursing area[14,7] and the others in the medical field. In the year 2013 we found four productions[12-5], three in 2012[16-8], four in 2011[19-22], two in 2010[23-4] and one in 2009[25], 2007[26] and 2006.[6] For countries where the studies were conducted, there was a predominance of the United States of America (USA) with nine studies [6,12,15,18,22-6], two from Japan[14,19] and two UK[6,21], and other countries with each publication: New Zealand[6], Greece[13], Switzerland[15], Australia[16], Belgium[17] and the Netherlands.[20] In respect to the approach of the studies, all used the quantitative one.

Regarding the type of study we found a cohort of 12, a survey of 19 studies, two prospective longitudinal[20-1] and another non-randomized clinical trial.[22] The other productions (12) had cross designs.[6,13-8,23-6] Of the studies analyzed, one had evidence level 3[22], another, level 4[12], and the others were classified with level 6 of evidence.

With regard to the study setting, six were produced in Intensive Care Units (ICU)[13,18,20,22-3,26], two in medicine and surgery[12,15], two in surgical block[20-1] and seven in hospital.[6,14,16-7,19,24-5] All studies had as subjects of health professionals research, with minor variations groups. Two studies were conducted with health professionals[17-18]; eight in all sector

staff/hospital[6,12,16,20-3,26]; two involving medical[24-5]; two involving doctors and nurses[14-5]; with nurses[13]; and another with physiotherapists.[19] We must consider that the teams of the sectors considered in the study were similar and involved generally pharmacy workers, nutrition, welfare, secretaries units and professional administrative framework.

The data analysis was organized under the following categories: patient safety culture assessment through the SAQ dimensions, and safety of the patient and organizational culture: associated factors presented below.

• Evaluation of patient safety culture through the dimensions of the SAQ

In this category there are presented the results of the assessment of patient safety culture according to the SAQ dimensions related to different hospitals and health team professionals, and finally present some psychometric properties of the SAQ found in the analyzed studies.

The SAQ was employed to evaluate the units of safety culture or all hospital areas. It was used as the only tool[6,13,15-7,19,24] or combined with quantitative or qualitative questionnaires[12,14,18,20,23] or further[21,25-6] analysis of the safety culture. It used also the SAQ, in the pre- and post-deployment improvements plans[22] to analyze the relationship of culture of safety and adverse events, patient length of stay, among others.

Regarding the evaluated studies, considering the SAQ dimensions, it was observed that the questionnaire assessment domains with positive scores were related to safety climate[14,18], job satisfaction and working[14,18] conditions and teamwork.[14] Some studies showed low to moderate scores in all areas.[13,19,26] Domains with lower scores were related to perception management[12,18-9,23,26] and perception of stress.[12,15-6,19,26] Other studies have had conflicting results regarding the perception of and two management were associated with age and professional service time.[13,16] There were also identified negative results in the fields working environment team[16,19,26, 12,19,26] job satisfaction and working conditions.[22]

In order to assess whether the safety culture is dependent variation of the type of service and demographic characteristics, there were found divergent results. A study[16] that evaluated 14,054 valid questionnaires in 18 types of services, with professionals from all units, did not find significant results between the evaluated services. The scores were higher in relation to the perception management, and lower for working climate in teams, with more obvious demographic differences in older employees working in the clinic, and managers.

Already, in another study, 12 identified significant variations among the 31 hospitals in 10 States evaluated, where the overall average for the safety culture was of 52.3%, ranging from positive ratings between 33.1% and 74.9%. The perception of the unity of management and the climate of teamwork were the main areas of showed variation among hospitals, with positive scores between 24.2% and 86.7%.[12] The perception of stress showed less variation, remaining between 25.9% and 71.0%.[12]

Similarly, a study that sought to assess the safety culture of nurses in ICU in five public hospitals, found negative scores for all domains except job satisfaction, with different results among all evaluated ICUs.[13] Another publication[15], which sought to explore the variability in the dimensions of safety culture within and between the Swiss and American medical-surgical units, found relevant data. The values of the average scores were different for three of the six SAQ dimensions between American institutions and Swiss, respectively, perceived stress (57.3; 31.4); perception management unit (60.1; 41.5) and safety climate (68.7, 58.4). The perception of health professionals differ significantly for US hospitals and Swiss. They identified differences in the dimensions of the SAQ country level, hospitals and units with variability in terms of clinical field, in general, and clinical area within each country.

In research[25] conducted with 295 medical residents, satisfaction dimensions at work, safety climate, working conditions and perception management obtained more positive responses in areas associated with self-care, with an average score: 77.5; 76.1; 75.6 and 70.4, respectively. The working environment team and the perception of stress had lower scores in areas associated with interdependent care, with results of 64.6 and 59.1 respectively.

Regarding SAQ dimensions associated with professional categories, it was possible to verify that the nursing staff had a higher instrument response rate than doctors.[14-5,17,22,26] ICU doctors had a higher response rate than the non-critical care or[26] there were excluded due to the low percentage of respondents.[13] It was observed; however, that the rates response of physicians increased after implementation of improvement plans.[22]

We evaluated the medical staff[14,18,20], it tends to more positive safety culture,

compared to nurses.[16] Others; however, found no significant results when assessing professional categories compared to reference data[20] or statistical[14] significance when analyzed the SAQ combined with another instrument.

It was noticed that job satisfaction was the domain that showed positive values considered for the assessed subjects, from different positions in the team, such as: nurses, doctors, nursing staff and physiotherapists.[13,18,25] Concerning the perception of the hospital management, it presented lower scores, indicating the distance between the nursing staff and superiors.[15,18-9,23,26]

As regards the variation of results among professional teams in climate areas of teamwork, safety climate, perceived stress, medical professionals had better outcomes than nurses.[18,20] These professionals also showed higher scores in safety culture in relation to nurses and nursing assistants.[18] While in perception management and working conditions met divergent data. A study[20] showed the highest average score with nurses, and another[26] showed lower average among nurses compared to doctors, to working conditions (p = 0.019), job satisfaction (p = 0.025) and management perceptions (p = 0.001).

The age[13] was strongly correlated with the sample teamwork (P = 0.02) between older and more experienced[22] and their management perceptions nurses were better compared to inexperienced nurses.[13] A study with physiotherapists[19] linked in three distinct levels of hospital, found poor results of positive attitudes to all areas, ranging between 37 and 21%, and lowest among older physiotherapists. Professionals working in medical centers had higher scores, positive attitude to the perception of stress, but lower scores for the five other security domains. The results varied according to the type of institution, education, experience and age.

In a study[22] conducted in 23 ICUs, in order to assess the impact of an action plan called the Safety Attitudes Questionnaire Action Plan (SAQAP), with the results of the SAQ, and associate the rates of flow infections associated with central catheter and associated pneumonia (VAP), had the collaboration of nine units, with professionals who completed the plan (39%). These units have shown higher rates in all areas of the SAQ, except working conditions, with results close to statistical significance (p = 0.07), for the areas climate of teamwork and job satisfaction. The same showed a decrease in the overall rate of infection at 10.2%, while the units that have not joined the plan, showed a decrease of 2.2% (p = 0.59). The VAP rates had decreased from 15.2% in units that joined the plan, compared to others, which increased rates by 4.8% (p = 0.39). It was identified improvement of safety culture in the units, which resulted in better results for patients.[22]

Finally, in relation to the psychometric characteristics of the SAQ assessed in these studies, we observed issues related to instrument validation. Seven studies evaluated the results of the SAQ internal consistency, considering the dimensions of the safety culture, and obtained satisfactory results.[6,13,17,19,23,25-6]

The analyzed studies considered that the scale had good psychometric properties, with the value of up to 0.90 for the Cronbach's alpha coefficient. In study[17] with 144 Belgian professionals who found alpha of 0.90, it was not possible to validate the constructs of the SAQ by insufficient sample size, low overall response rate (52%), mainly medical staff (23%), and the significant number of instruments to fill gaps. Unlike another research[13] developed in Cyprus where the internal consistency of the version with 30 items of SAQ-ICU showed Cronbach's alpha of 0.85 and was represented by 76.7% of all nurses working in the public sector researched.

Another production[19], which obtained response rate of 60%, found the highest values for the alpha of the evaluated studies: working environment team (0.80); security climate (0.79); job satisfaction (0.90); perception of stress (0.83) perception management (0.88) and working conditions (0.75).

In another publication[23], the value of Cronbach's alpha for the SAQ and its sub-scales was greater than 0.70, with substantial correlation between the scale item. Except for the perception of stress, the SAQ subscales showed positive correlations ranging from 0.67 to 0.81. The same developed the survey in 110 of 41 private hospitals ICUs, in order to gather information on: quality improvement, organizational characteristics, as well as perceptions of safety climate through SAQ dimensions. Another[25] production, which evaluated the attitudes of resident pediatricians, found alpha range between 0.61 and 0.83.

Study[26] with 453 employees in four ICUs, aimed to analyze the safety culture varied

according to the ICUs of a single hospital, the nurses and doctors, and the perceptions of ICUs directors themselves equated to the attitudes of professionals in their teams, by the estimates of mean scores. The overall response rate was 70.2% (n = 318). The Cronbach's alpha for each factor varied from acceptable to good in the areas: work environment for staff (0.813); job satisfaction (0.811); perception management (0.715); working conditions (0.732); perception of stress (0.674) and safety climate (0.740). Overall, factor scores were low to moderate in all areas (range of ICUs: 43.4 to 74.9 in average scores, 8.6 to 69.4 percent positive) and were not uniform.[26]

The last analyzed study6 is the study of SAQ validation, which showed response rate of 67.0% (10,843 valid questionnaires), averaging 65.7% to 72.2% among the three countries. The reliability of the scale was 0.90, with good psychometric properties. The construct validity was deemed acceptable and reliable to assess the safety culture and perceptions of caregivers in health institutions.

- **Patient safety and organizational culture: associated factors**

In this category there are some factors associated with patient safety and organizational culture identified in the analyzed studies. It was noticed that they are closely related to the form of organization of work, including type of conduct on errors, level of complexity of the institution, type of management, communication in the workplace and length of service of professionals.

Considering an aspect of fragility associated with the theme, studies show predominance in the perception that failures in patient safety only result in punitive actions for professionals and collaboration across the error is non-existent or insufficient[18] or it is expressed indifference by managers in relation welfare professionals and patient safety.[15] A study found that about half of US hospitals and all assessed Swiss had low perception management, where two of the four drive management items reach statistical significance. The negative perception of the professionals may be indicative of actual managerial problems, which can affect employee morale and quality of performance against the patient.[15]

Regarding the differences of the hospital, it was noticed that the level of complexity of the institution has an influence on the perception of patient safety climate. A production analyzed[24] refers to significant results for the item Medical errors are properly treated in this hospital, since professionals of medium complexity had higher scores than high complexity (P = 0.0095). In contrast, with respect to item I know the means appropriate to refer issues related to patient safety in this area, professionals of high complexity units had significantly higher scores than those in medium complexity facilities (P = 0.0004).[24]

A study showed two general themes, namely, the perceived lack of support from hospital management as weakness; and concerns about aspects of communication, teamwork and collaboration regarding errors as potential. [18] In this perspective, another study shows differences in attitudes towards safety in institutions[22], where, after implementation of improvement plan regarding safety, workers demonstrated increased positive attitudes to the SAQ dimensions except working conditions, with decreasing general rates of infection and PAV.

Study[26] conducted in four ICUs with all professionals points divergent data in relation to the perception of professional and management. Nursing directors, to make an assessment of workers' projection, tended to expect too much of the factor scores, ranging up to 16%, as assessed domain. Domains job satisfaction and working conditions were the most significantly different between the ICUs. Overall, the scores were low to moderate. The four main recommendations suggested by the workers, covering 71% of the comments were: improve staff table (35%), improving education (12%), improve teamwork (12%), and improving the equipment (12%). Only 2.1% of the answers were related to increased remuneration.[26]

Concerning the organizational culture[23], it became clear that the hierarchical culture was negatively correlated with the SAQ, Safety Climate Scale (SCSC) and Information and Analysis (IA), while the group culture was positively correlated with the SAQ and its subscales (correlation coefficient r = 0.44 to 0.55, except perception of stress), SCSC (r = 0.47) and IA (r = 0.33). Among the 110 ICUs in 41 participating hospitals, 37.5% had a hierarchical culture; 37.5%, a group culture; and 25%, a balanced culture. It was noted that organizational culture varied as the hospital and the type of culture was related to the security climate in the institution.[23]

As examples of forms of service organization, it points to data from other studies in specific areas. [19,25] One study refers to the work environment, demonstrating that

professionals working in medical centers had higher scores, positive attitude to the perception of stress, but lower scores for the other five areas .[19] It was observed that personal experiences and resources of hospitals, added to regional factors may have influenced the responses.[19] Already, studied[25] medical residents, responses were more positive when professionals were acting independently, without interference from preceptors in supervisory areas clinical and support. Other factors were found, such as lack of infrastructure, type of institution, education, work experience and age.[19]

To class and to professionals time, the perception of climate varied depending on the areas of the SAQ, and one can learn that nurses with management positions and workers with longer service life showed better perception, while assistants and nursing technicians had low scores.[18-9] In this sense, another study also points out those older employees tended to have better scores, even considering that the number of employees, organizational multiplicity and complexity of the different services showed great variability.[16] There is also reference to positive attitudes to all security domains were lower among older physiotherapists.[19]

Finally, it was observed that the use of strategies to improve patient safety awareness and organizational culture resonate with positive results, but with little representation among professionals and the evaluated units, as to occur, needed a strong safety climate among all the professionals involved and the commitment of managers of health facilities .[21-2]

DISCUSSÃO

From the results presented according to the categories "Assessment of patient safety culture through the SAQ dimensions" and "Patient safety and organizational culture: associated factors", it was noticed that the patient safety culture and organizational culture, evaluated by the SAQ dimensions, relate mainly to the organization of work, involving different factors. These may be related to the type of management and the level of complexity of the institution, the conduct of managers and professionals in the face of errors, communication in the workplace and to length of service, age and professional categories.

Recognize the organizational environment to detect and analyze the intervening factors that lead, directly or not, the climate of security institutions. Formal and informal structures of the organizations should be identified to facilitate communication, planning and the development of more flexible actions that contribute to job satisfaction process.[5]

When considering the types of organizational culture as hierarchical culture and group, where the latter was positively associated with safety culture, it notes that the organizational culture varies according to each institution and is related to the security environment of its professionals.[27-8] Cultures of favorable changes are more sensitive and flexible to implement strategies to improve the climate of security.[29] The combination of the types of culture, especially the groups, it seems more appropriate to improve the security environment as these, measured separately, in the aspects of organizational culture, resulted in three times less data.[28]

As regards the assessment of the security climate between the SAQ dimensions and possible differences between occupational categories and work units, we can cite an editorial[27] that comes against the analyzed studies. In this study[27] considered appropriate for interventions in terms of units, since the culture is seen as local, and can be variations between work units and between institutions. The culture of evaluation in all work units directs to this course, since the variation in relation to culture can be related to sources, such as team characteristics, the hospital, or even their areas.[27] These sources of variation should be well understood, in order to accurately target the improvement initiatives in organizations.[27]

Regarding the recommendations suggested by the workers, it was observed that they directed their notes for improvement of working conditions and personal development and few respondents considered the increase in compensation as an important factor. These data come with the study that brings the realization that job satisfaction is subject to the resources provided by the institution, such as equipment and materials, adequate professional staff, decent salary, in addition to the relations established in the environment with the work team, added to the pleasure and recognition of work performed.[30]

CONCLUSION

When analyzing the studies in this review, it was noted the relevance of the thematic safety culture and its importance to the professionals who work against the patient, especially nursing. The studies evaluated not

only the perception of professional isolation but held associations with adverse events and found relevant evidence. There was also the relationship of organizational culture with the security climate in the institutions and that it varied according to the country, the institution, the type of organizational culture and demographics. The studies indicated negative associations related to the hierarchical culture and attitudes and safety climate among professionals. They also showed a positive association with improvement plans in institutions, even limited.

It is essential to professional nurses to act as administrators and / or managers in institutions, because they are inherent in this category awareness and promote environments that provide the safety culture to the patient. In the presence of an organizational culture not conducive to the promotion of quality improvement initiatives, it is up to this professional to use strategies that modify this scenario, bringing the altered management needs of the institution, as agents of change and reflection of transformation for other team members.

The limitations of the studies, the low response rates are highlighted, incomplete answers, small and not random samples of knowledge about the subject deficit, organizational complexity, implemented interventions non-uniformly and the small number of institutions or evaluated sectors. These limitations restrict the studies and the validity of the results. One should also consider that studies have highlighted essentially the point of view of health professionals, varying only as to the groups. Studies with other subjects were limited to those related to the units, such as secretaries, support services and management.

Research involving not only the health team but also other professionals in the hospital acting indirectly in patient care should be developed, as these complement the actions of other professionals and represent a key role in the quality of service provided to patients.

Due to the variability of the climate of safety between the work units, it is considered essential that strategies to improve the safety culture in the institutions being conducted in an integrated manner. They must be directed to the weaknesses identified by professionals and based on evidence from surveys conducted with validated and reliable instruments.

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