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PATIENT SAFETY CULTURE FROM THE PERSPECTIVE OF THE MULTIPROFESSIONAL TEAM: AN INTEGRATIVE REVIEW

Cultura de segurança do paciente na perspectiva da equipe multiprofissional: uma revisão integrativa

Cultura de seguridad del paciente em la perspectiva del equipo multiprofesional: uma revision integrativa

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ABSTRACT

Objective: To identify the scientific production on patient safety culture in a hospital setting from the perspective of the multiprofessional team. **Method:** review of the literature, in the LILACS, PubMed, WoS and Scopus databases, in Portuguese, English and Spanish. **Results:** twelve publications were found, which were concentrated between the years 2004 and 2016. The analysis of the studies allowed to identify that the security climate is still fragile in most of the evaluated institutions. Among the strategies to generate improvements in safety culture, training programs, open communication in the work environment, notification of adverse events and non-punitive response to the error were highlighted. The organizational learning dimensions for continuous improvement and teamwork within the units were evidenced as potentialities. **Conclusion:** incipient scientific production was observed. Few studies have included all professionals to perform the analysis of patient safety culture in the hospital setting, despite their relevance to the promotion of safe care.

Descriptors: Organizational culture, Hospital, Patient safety, Multiprofessional team.

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RESUMO

Objetivo: Identificar a produção científica sobre cultura de segurança do paciente em âmbito hospitalar na perspectiva da equipe multiprofissional. **Método:** revisão integrativa, realizada nas bases de dados LILACS, PubMed, WoS e Scopus, em português, inglês e espanhol. **Resultados:** foram localizadas 12 publicações, que concentraram-se entre os anos de 2004 e 2016. A análise dos estudos permitiu identificar que o clima de segurança ainda é fragil na maioria das instituições avaliadas. Dentre as estratégias para gerar melhorias na cultura de segurança, destacaram-se os programas de treinamento, comunicação aberta no ambiente de trabalho, notificação de eventos adversos e resposta não punitiva ao erro. Evidenciaram-se como potencialidades as dimensões aprendizado organizacional para a melhoria contínua e trabalho em equipe dentro das unidades. **Conclusão:** poucos estudos incluíram todos os profissionais para realizar a análise da cultura de segurança do paciente em âmbito hospitalar, apesar da sua relevância para a promoção do cuidado seguro.

Descritores: Cultura organizacional, Hospital, Segurança do paciente, Equipe multiprofissional.

RESUMEN

Objetivo: Identificar la producción científica sobre cultura de seguridad del paciente en ámbito hospitalario en la perspectiva del equipo multiprofesional. **Método:** revisión integradora, llevado a cabo en las bases de datos LILACS, PubMed, Scopus y WoS en portugués, Inglés y Español. **Resultados:** se localizaron 12 publicaciones, que se concentraron entre los años 2004 y 2016. El análisis de los estudios permitió identificar que el clima de seguridad aún es fragil en la mayoría de las instituciones evaluadas. Entre las estrategias para generar mejoras en la cultura de seguridad, se destacaron los programas de entrenamiento, comunicación abierta en el ambiente de trabajo, notificación de eventos adversos y respuesta no punitiva al error. Se evidenció como potencialidades las dimensiones aprendizaje organizacional para la mejora continua y trabajo en equipo dentro de las unidades. **Conclusión**: pocos estudios incluyeron a todos los profesionales para realizar el análisis de la cultura de seguridad del paciente en el ámbito hospitalario, a pesar de su relevancia para la promoción del cuidado seguro.

Descriptores: Cultura organizacional, El hospital, Seguridad del paciente, Equipo multiprofesional.

INTRODUCTION

Patient safety (SP), defined as the set of actions and attitudes aimed at reducing the occurrence of damage and avoiding adverse events to the patient during medical-hospital care, is treated as a priority in matters related to quality of care. Providing the patient with risk-free multiprofessional care is synonymous with quality in hospital services and a highlight in discussions to improve health care.²

It is noteworthy that SP is related to interconnected areas and involves all professionals who make up the multidisciplinary teams of health organizations. Thus, it is important that teams that act directly or indirectly with the patient demonstrate a culture of patient safety, in which professionals share harm reduction practices and values, attitudes and behaviors that promote safe care.³

Safety culture is defined as the "product of individual and group values, attitudes, perceptions and competencies that determine the commitment, style and management proficiency of a healthy and safe organization" ⁴ and has been considered an important indicator for services. promoting safe care.⁵ These are components of a positive safety culture: leadership's commitment to safety, open communication based on trust, organizational learning, a non-punitive approach to event reporting adverse effects, teamwork, and shared belief in the importance of safety.⁶

Several studies have been published after the US Institute of Medicine (IOM) report emphasized the need to strengthen an organizational-level safety culture in the process of improving patient safety.⁷ However, these publications focus on evaluating the safety culture of specific categories. An integrative literature review showed that in 44.8% of the articles, the study sample consisted exclusively of nurses, 10.4% consisted of doctors and nurses and only 3.4% investigated the multiprofessional team.⁸ Although discussions in this direction are advancing, it is possible to infer that there is a gap in the literature regarding patient safety culture from the point of view of the multiprofessional team.

Given that SP is related to interconnected areas and involves all professionals in this process, this review aimed to identify in the literature the scientific productions on patient safety culture in the hospital environment from the perspective of the multiprofessional team.

METHODS

This is an integrative literature review, a relevant tool for evidence-based practice that gathers, evaluates and synthesizes research results on a given topic, and allows the identification of knowledge gaps for future research.⁹

The elaboration of the study included the following steps: formulation of the guiding question, identification of descriptors, searching the databases, establishment of inclusion and exclusion criteria, selection of studies, data extraction, critical evaluation and classification of evidence level and synthesis of knowledge.⁹

In the first stage, the guiding question was elaborated: "What is the scientific evidence available in the literature regarding the patient safety culture from the perspective of the multiprofessional team in the hospital?

The primary studies were searched in September 2017 in the following databases: Latin American and Caribbean Health Sciences Literature (LILACS), National Library of Medicine National Institutes of Health (PubMed), Web of Science (WoS) and Sci-Verse Scopus (Scopus). The descriptors and keywords used in the search were applied according to the particularities of each database and obtained by consulting the Health Descriptors in Health (DECS) and Medical Subject Headings (Mesh). **Table 1** shows the search strategies, summarizing how the search was performed in each information base.

Database Search Strategies			
Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS)			
"Segurança do Paciente"			
"Cultura Organizacional" OR "Cultura corporativa"			
"Equipe de Assistência ao Paciente" OR "Equipe de Cuidados de Saúde" OR "Equipe de			
Assistência Médica" OR "Equipe Interdisciplinar de Saúde" OR "Equipe Multiprofissional" OR			
"Equipe de Saúde" OR "Equipes de Saúde"			
"Hospitais" OR "Centro Hospitalar" OR "Centros Hospitalares" OR "Hospital" OR			
"Nosocômio" OR "Nosocômios"			
National Library of Medicine National Institutes of Health (PubMed)			
((("Patient Safety"[MeSH Terms] OR ("Patient Safety"[Title/Abstract])) AND ("Organizational			
Culture"[MeSH Terms] OR ("Organizational culture"[Title/Abstract]))) AND ("Patient Care			
Team"[MeSH Terms] OR "Health Care Team"[Title/Abstract] OR "Health Care			
Teams"[Title/Abstract]))) AND ("Hospitals"[MeSH Terms] OR ("Hospitals"[Title/Abstract] OR			
"Hospital Administration"[Title/Abstract]))			
Web of Science			
((Patient Safety OR Patient Safety)) AND ((Organizational Culture OR Organizational			
Culture)) AND ((Patient Care Team OR Health Care Team OR Health Care Teams)) AND			
((Hospitals OR Hospitals OR Hospital Administration))			
Sci-Verse Scopus (Scopus)			
("Patient Safety" OR "Patient Safety") AND TITLE-ABS-KEY ("Organizational Culture" OR			
"Organizational Culture") AND TITLE-ABS-KEY ("Patient Care Team" OR "Health Care			
Team" OR "Health Care Teams") AND TITLE-ABS-KEY ("Hospitals" OR "Hospitals" OR			
"Hospital Administration"))			

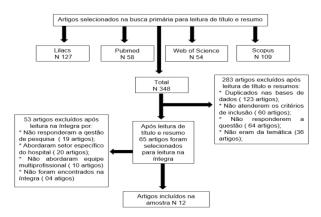
Regarding the time period considered in the selection of productions, it is noteworthy that there was no temporal cut-out. The selection of productions was developed in a double and independent way, in order to overcome possible biases in this stage.

Inclusion criteria were: primary studies available in full in the databases, which answered the guiding question of the research, in English, Portuguese or Spanish. We included articles that, although not fully available in the electronic search, were fully accessed by manual search on the Internet and the UNIJUÍ Library. Exclusion criteria were: studies that covered only one specific sector / unit of the hospital and studies that included in its population only one or two professional categories, considering that we consider a multidisciplinary team when a study brings together three or more areas.

Then, the full texts of each article were read, seeking to elect the studies that met the selection criteria already mentioned. The studies included in the review are presented in **Table 2**.

348 productions were located, of which 12 made up the corpus of the present study (**Figure 1**). It should be noted that the productions that were repeated were considered only once.

Figure 1 - Flow of selection of primary studies included in the integrative review according to data bases



Source: Prepared by the authors.

After analyzing the included productions, a form

for documentary extraction was completed, consisting of the items: article identification (author, title), year of publication, origin of the study, purpose and study design, level of evidence and main results. Subsequently, we extracted the main contributions addressed in each article and of interest to researchers. They were compared and grouped by content similarity, in the form of empirical categories.

To classify the studies according to the level of evidence (NE), we used the classification of evidence strength with clinical question directed to intervention or diagnosis, with the following hierarchy: level 1- studies with methodological design of meta-analysis or systematic reviews. ; level 2-randomized controlled trials; level 3- clinical trials without randomization; level 4- cohort and case-control studies; level 5- systematic reviews of descriptive and qualitative studies; level 6- descriptive or qualitative studies; level 7-expert opinion.¹⁰

RESULTS AND DISCUSSION

In this review, 12 articles were selected, all published in the English language as presented in **Table 2**. The LILACS and SCOPUS databases revealed the largest number of productions found.

Regarding the location of the studies, three studies were conducted in the United States¹¹⁻¹³, two in the Netherlands¹⁴⁻¹⁵, one in Norway¹⁶, one in Lebanon¹⁷, one in Canada ¹⁸, one in Ethiopia¹⁹, one in the United Kingdom²⁰, one in Belgium²¹ and one in Egypt²², denoting the incipience of studies addressing the multiprofessional team, especially in Brazil, where no study was found with the selected descriptors.

The publications in the study correspond to the years 2004^{11} , $2009^{12,14}$, 2010^{16-17} , $2012^{20,22}$, 2013^{13} , $2014^{15,18}$, 2015^{21} and 2016^{19} . According to the level of evidence, there was a predominance of studies with evidence 6, 83.3% (n = 10).

The selected studies presented different methodological approaches, highlighting the quantitative approach as the most frequent (n = 10), which shows that this method is the most used in view of the theme under study. However, a gap in the production of knowledge is identified, since the combination of methods allows a better understanding of the object under study.

The journals that published these studies were: Quality & Safety in Health Care, BMJ Quality Safety and International Journal for Quality in Health Care, with two articles each, followed by the Journal of Health Organization and Management, The American Journal of Nursing, Health Care Management Review, BMC Health Services Research, Eastern Mediterranean Health Journal and Journal Patient Safety, with one article each.

As for the multiprofessional team investigated, the participants were: physicians, nursing staff, pharmacists, nutritionists, psychologists, managers, administrative,

laboratory and radiology professionals.

The articles selected for analysis that met the selection criteria are presented in **Chart 2**.

Chart 2: Description of the articles selected to compose the integrative review

AUTHORS	TITLE	PERIODIC	NE
Espen Olsen, Karina Aase ¹⁶	A comparative study of safety climate differences in healthcare and the petroleum Industry	Quality & Safety in Health Care	N6
Katherine J Jones, Anne M Skinner, Robin High, Roni Reiter-Palmon ¹³	A theory-driven, longitu-dinal evaluation of the impact of team training on safety Culture in 24 hospitals	BMJ Quality Safety	N4
Milisa Manojlovich, Mickey Kerr, Barbara Davies, Janet Squires, Ranjeeta Mallick, Ginette L.Rodger ¹⁸	Achieving a climate for patient safety by focusing on relationships	International Journal for Quality in Health Care	N4
By Ann Freeman Cook, Helena Hoas, Katarina Guttmannova, Jane Clare Joyner ¹¹	An error by any other name	The American Journal of Nursing	N6
Dirk F. de Korne, Jeroen D.H. Wijngaarden, Cathy van Dyck, U. Francis Hiddema, Niek Klazinga ¹⁵	Evaluation of aviation-based safety team training in a hospital in The Netherlands	Journal of Health Organization and Management	N6
Jonathan Benn, Susan Burnett, Anam Parand, Anna Pinto, Charles Vincent ²⁰	Factors predicting change in hospital safety climate and capability in a multi-site patient safety collaborative: a longitudinal survey study	BMJ Quality & Safety	N6
Sara J. Singer, Alyson Falwell, David M. Gaba, Mark Meterko, Amy Rosen Christine W. Hartmann, Laurence Baker ¹²	Identifying organizational cultures that promote patient safety	Health Care Management Review	N6
M Smits, C Wagner, P Spreeuwenberg, G van der Wal, P. P Groenewegen ¹⁴	Measuring patient safety culture: an assessment of the clustering of responses at unit level and hospital level	Quality & Safety in Health Care	N6
Sintayehu Daba Wami, Amsalu Feleke Demssie, Molla Mesele Wassie, Ansha Nega Ahmed ¹⁹	Patient safety culture and associated factors: A quantitative and qualitative study of healthcare workers' View in Jimma zone Hospitals, Southwest Ethiopia	BMC Health Services Research	N6
Fadi El-Jardali, Maha Jaafar, Hani Dimassi, Diana Jamal, Rana Hamdan ¹⁷	The current state of patient safety culture in Lebanese hospitals: a study at baseline	International Journal for Quality in Health Care	N6
Annemie Vlayen, Ward Schrooten, Welcome Wami, Marc Aerts, Leandro Garcia Barrado, Neree Claes, Johan Hellings ²¹	Variability of Patient Safety Culture in Belgian acute hospitals	Journal Patient Safety	N6
A.M. Aboul-Fotouh, N.A. Ismail, H.S. Ez Elarab, G.O. Wassif ²²	Assessment of patient safety culture among healthcare providers at a teaching hospital in Cairo, Egypt	Eastern Mediterranean Health Journal	N6

Table 2: Description of the articles selected to compose the integrative review

By carefully reading the selected articles, about the scientific evidence available in the literature about the patient safety culture in the hospital environment from the perspective of the multiprofessional team, it was possible to identify two categories: one that is about patient safety culture evaluation, and another about strategies for generating improvements in patient safety culture.

Assessment of patient safety culture

It was possible to identify in the studies that the patient safety culture is a complex aspect, important for the quality of health care and a concern of worldwide concern. Considered a key factor in organizational culture, patient safety culture is a basic structural indicator to promote initiatives aimed at reducing risks and avoiding adverse events.^{14,19-20}

Several instruments are available to assess safety culture in hospitals, however, the Hospital Survey on Patient Safety Culture (HSOPSC), developed by the United States Agency for Healthcare Research and Quality (AHRQ) in 2004, was the instrument used in the studies selected from this review to measure patient safety culture.^{13-14,16-17,19,21-22}

The HSOPSC includes 42 items that measure 12 dimensions of SP culture, enabling assessment at the individual level, by hospital unit / sector and the hospital as a whole, and is therefore not restricted exclusively to health professionals.²³

Based on studies that measured the culture of SP, it was possible to identify that the dimensions of the instrument best evaluated, that is, that contribute to a positive safety culture in hospital institutions, were: teamwork within the units^{17,19,22}, organizational learning and continuous improvement^{17,22}, and hospital management support for patient safety.¹⁷

However, the dimensions: shift / shift change and transfers between hospital units / services, ^{14,17} adequacy of professionals, ^{17,19} communication opening, ^{17,19} non-punitive error response, ^{11,17,19, 22} and frequency of notification of AE¹⁹ were evaluated in studies with negative scores, in order to highlight the areas that need to be worked on in institutions, in order to improve the patient safety culture.

A quantitative cross-sectional study conducted in four Ethiopian hospitals ¹⁹ showed a low level of safety culture among the studied institutions (46.7%). The dimension with the highest average percentage of positive responses was "teamwork within units" (82%), while the area with the highest potential for improvement and the lowest average percentage of positive responses was the non-punitive error response (23, 7%).

Similarly, in a study conducted in Egypt, ²² the highest positive score was for the organizational learning dimension for continuous improvement (78.2%). This result denotes the existence of a learning culture only when errors are disclosed, which reinforces that a learning culture organization is one that is skilled at creating, acquiring and transferring knowledge and modifying its behavior to reflect new knowledge and insights.

In a survey of 68 hospitals in Lebanon¹⁷ the dimensions of the safety culture that measured teamwork within units (82.3%), hospital management support for patient safety (78.4%), and organizational learning and continuous improvement (78.3%), showed positive scores. The dimensions with the lowest scores were shift / shift change and transfers between hospital units / services (49.7%), adequacy of professionals (36.8%) and non-punitive error response (24.3%).

Weaknesses related to the shift / shift shift and transfers between hospital units / services dimension are related to problems that occur in the exchange of information between units. Communication failures contribute to adverse events and compromise the quality of care and patient safety.^{17, 21} Concern about the adequacy of professionals is related to staff undersizing and work overload, which may trigger stress, anxiety and depression, thus increasing the risk of incidents.¹⁷

Considered another aspect of fragility, a study conducted in Lebanese hospitals showed that communication problems are the main contributors to adverse events.¹⁷ The quality of care and patient safety depend on effective communication between health professionals, as well as the patients and their families.

Studies also show the heterogeneity of the safety culture of hospital institutions related to area / sector and positions. A study conducted in Belgian hospitals showed that health professionals with management positions have better safety perceptions compared to other health professionals.²¹ In contrast, in a study conducted in US hospitals, the best perception of safety was related to lower safety perceptions hierarchy, which suggests that hierarchy levels can have an effect and dampening on communication and information flow, making it an impediment to patient safety.¹²

Still, professionals who worked in low-risk units had better positive perceptions regarding patient safety when compared to professionals who worked in high-risk units.²¹ These results show the importance of directing strategies at the area / hospital level and position of professionals.^{12, 14, 21}

A study that sought to investigate differences in the safety climate between employees of a large Norwegian hospital and an oil industry showed that the safety climate in the former was lower compared to the latter.¹⁶ The most substantial difference between the two sectors was in the supportive dimension of organizational management for patient safety.16 In this sense, researchers infer that hospital systems are designed to rely on the performance of individuals as if they were always error-free, while in the oil industry, error Human consumption is considered inevitable and risks are understood as combinations of active failures and latent conditions.

Among aspects of organizational culture strongly related to safety climate, group culture (teamwork within units) correlated with a higher level of safety climate, while hierarchical culture was associated with a lower safety climate. ¹². These results suggest that efforts to improve patient safety culture should be addressed at the unit level (decentralized) rather than at the individual or hospital level (centralized).^{14-15,17}

Strategies to drive improvements in patient safety culture

In this category are presented the strategies associated with the improvement of patient safety culture identified in the analyzed studies. They were found to be related to organizational culture, including training programs, ^{13,15} open communication in the workplace and reporting of adverse events^{17,19} and non-punitive error response.^{11,17,19,22}

Considering a potential related to the theme, studies indicate that participation in patient safety programs

increases the degree of safety culture. A study of 37 US hospitals to assess the impact of a team training program on safety culture has shown that training can result in positive transformational changes in safety culture as long as the work environment supports the safety culture training and the transfer of learning to a new behavior.¹³

Similarly, a quantitative and qualitative study conducted at a Dutch ophthalmic hospital found that large-scale aviation-based team training for non-technical skills training, improved communication and leadership, increased safety awareness and reflection on individual behavior they are useful for stimulating the safety culture.¹⁵

Importantly, training programs should encompass process safety auditing, team activities, different educational approaches focusing on interactive lectures, newsletters, videos and realistic simulation, reducing the number of adverse events and increasing incident reporting.¹⁵

System-related factors (underreporting of AE, work overload, and shortages of supplies and equipment), health care professionals (internal conflicts, poor teamwork), and patient (lack of professional-patient interaction) negatively affect safety culture of the patient. Increasing patient awareness of the service, error-based learning culture, positive attitude of healthcare professionals in patient safety, better communication between healthcare professionals, increased teamwork and adequate supply chain are all important factors in achieving a culture better patient safety.¹⁹

Patient safety improvements can only occur in healthcare organizations where preventive measures are taken after AEs and Near Misses are identified, reported and analyzed. In this sense, error recognition and event notification contribute to organizational learning. ¹⁷ Among the strategies to enhance the safety culture are the implementation of protocols and guidelines and the continuous risk assessment. ¹⁶

CONCLUSIONS

The analysis of the publications found in the corpus of this research from the search strategies used reveals an incipient number of studies on the theme involving the multiprofessional team in hospital institutions as a whole. In addition, no studies published in Brazil were found. In large part, the studies found performed the assessment of patient safety culture through the HSPSCO instrument. They also presented strategies for promoting safety culture in the hospital environment.

Among the dimensions that need to be worked out in the institutions, the shift / shift and transfers between hospital units / services, adequacy of professionals, openness of communication, non-punitive response to the error and frequency of notification of adverse events stand out. As potentialities, the following dimensions were identified: teamwork within the units, organizational learning and continuous improvement, and hospital management support for patient safety.

Training programs, open communication in the workplace, adverse event notification and non-punitive error response were evidenced in the study as strategies to promote safety culture.

There was an incipient number of studies published in recent years with the object of study the SP in the multiprofessional perspective. This denotes the need for the development of research that includes this population, with a view to contributing to the production of knowledge. Research with this broad perspective can generate evidence to contribute to decision making and thus minimize the occurrence of AEs in healthcare settings, which will greatly contribute to strengthening the integrality of health care offered to patients, supported by evidence based on evidence with higher degree of recommendation.

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