



**NURSING PERCEPTION OF SAFETY CULTURE: INTEGRATIVE REVIEW**  
**CULTURA DE SEGURANÇA NA PERCEPÇÃO DA ENFERMAGEM: REVISÃO INTEGRATIVA**  
**CULTURA DE SEGURIDAD EN LA PERCEPCIÓN DE LA ENFERMERÍA: REVISIÓN INTEGRADORA**

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**ABSTRACT**

**Objective:** to analyze the scientific production regarding the perception of nursing professionals about the culture of patient safety in hospitals. **Method:** integrative review carried out in the databases LILACS, MEDLINE and CINAHL with the Portuguese and English descriptors: cultura de segurança; hospital; percepção; enfermagem/ safety culture; hospital; perception; nursing. The sample consisted of 12 articles, with time delimitation of 2005-2015. **Results:** two categories were analysed: the perception of the nursing staff and the factors that influence the perception of patient safety culture. **Conclusion:** Nursing professionals realize that patient safety culture influences the quality of care, and underreporting of adverse events is determined, among other factors, by the punitive culture of errors and lack of open dialogue between employees and their superiors. **Descriptors:** Safety Culture; Hospital; Perception; Nursing.

**RESUMO**

**Objetivo:** analisar as produções científicas sobre a percepção dos profissionais de enfermagem acerca da cultura de segurança do paciente nos hospitais. **Método:** revisão integrativa realizada nas bases de dados LILACS, MEDLINE e CINAHL, com os descritores em português e inglês: cultura de segurança; hospital; percepção; enfermagem / safety culture; hospital; perception; nursing. A amostra foi composta por 12 artigos, com delimitação temporal de 2005-2015. **Resultados:** foram analisadas duas categorias: a percepção dos trabalhadores de enfermagem e os fatores que interferem na percepção da cultura de segurança do paciente. **Conclusão:** os profissionais de enfermagem percebem que a cultura de segurança do paciente influencia a qualidade da assistência prestada e a subnotificações de eventos adversos é determinada, entre outros fatores, pela cultura punitiva dos erros e a falta de abertura ao diálogo entre os profissionais e seus superiores. **Descritores:** Cultura de Segurança; Hospital; Percepção; Enfermagem.

**RESUMEN**

**Objetivo:** analizar las producciones científicas sobre la percepción de los profesionales de enfermería acerca de la cultura de seguridad del paciente en los hospitales. **Método:** revisión integradora realizada en las bases de datos LILACS, MEDLINE y CINAHL, con los descriptors en portugués e inglés: cultura de segurança; hospital; percepção; enfermagem/safety culture; hospital; perception; nursing / cultura de seguridad; hospital; percepción; enfermería. La muestra fue compuesta por 12 artículos, con delimitación temporal de 2005-2015. **Resultados:** fueron analizadas dos categorías: la percepción de los trabajadores de enfermería y los factores que interfieren en la percepción de la cultura de seguridad del paciente. **Conclusión:** los profesionales de enfermería perciben que la cultura de seguridad del paciente influye la calidad de la asistencia prestada y la sub-notificación de eventos adversos es determinada, entre otros factores, por la cultura punitiva de los errores y la falta de apertura al diálogo entre los profesionales y sus superiores. **Descriptores:** Cultura de la Seguridad; Hospital; Percepción; Enfermería.

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## INTRODUCTION

The concept of patient safety has gained notoriety since 1986 after the Chernobyl nuclear accident.<sup>1</sup> In 1999, the Institute of Medicine of United States published a report entitled "*To Err is Human*" due to the large number of people who die every year in consequence of adverse events that are preventable in most of the cases.<sup>2</sup> Among those events are improper medication and transfusions, surgical injuries and surgeries in wrong places, injury or death related to retention, falls, burns, pressure sores and mistakes in the identification of patients.<sup>3</sup>

In this perspective, patient safety can be defined as the reduction of unnecessary damage risk during health care to a minimum acceptable. The main objective is to reduce adverse events arising from the lack of safety of medical and hospital procedures, given that each year thousands of patients suffer temporary or permanent sequelae or die due to failures of such assistance in hospitals.<sup>1</sup>

There are tools for measurement of safety culture that evaluate the perception of professionals about the atmosphere of teamwork, job satisfaction, working conditions and stress factors. These tools provide knowledge for the development of actions to strengthen this culture and consequent improvement of the quality of health care.<sup>4</sup> The most common are: the *Hospital Survey on Patient Safety Culture* (HSOPSC)<sup>5</sup>, created by the *Agency for Healthcare Research and Quality* (AHRQ) in 2004<sup>6</sup>, and the *Safety Attitudes Questionnaire* (SAQ).<sup>4</sup>

The HSOPSC, created by the AHRQ, consists of nine sections, totaling 42 items, and covering 12 dimensions of safety culture evaluated at the level of individual, units and hospital. It also presents the variables of income and the degree of agreement among professionals on questions concerning the safety culture through a Likert scale, whose possible answers range from "strongly disagree" to "strongly agree".<sup>6</sup>

The SAQ culturally validated and adapted to the reality of Brazilian hospitals is a scale that was built and validated in the United States by researchers at the University of Texas. As for the content, it consists of two parts: the first contains 41 questions involving the perception on patient safety. The second part aims to collect data about the professional. Thus, this instrument has six domains, namely: 1. Teamwork atmosphere; 2. Safety atmosphere; 3. Job Satisfaction; 4.

Perception of stress; 5. Perception of Management; and 6. Working conditions.<sup>4</sup>

Nursing occupies a prominent position in patient safety by its daily presence in the provision of care, which involves assuming the lead, the development and evaluation of innovative strategies.<sup>7</sup> Therefore, the analysis of nurses' perception on safety culture in hospitals will demonstrate the importance given by these health professionals to this essential component of the quality of care.<sup>5</sup>

In this context, perceptions are the qualitative characteristics of the patient safety culture, because they are constructed from the experience of nursing professionals in the context of assistance. Perceptions can, therefore, be analyzed and restructured in order to use the subjective sensitivity to understand the generalizations and specificities of patient safety culture in hospital services.<sup>8</sup>

Therefore, this study aimed to analyze the scientific production about the perception of nursing professionals on patient safety culture in hospitals.

## METHOD

Integrative review<sup>9</sup> based on the question << Which is the perception of nursing professionals about the patient safety culture in hospitals? >> carried out in compliance with the six stages: 1 - identification of the theme and selection of the research question, 2 - establishment of criteria for inclusion and exclusion of studies/sampling or literature search, 3 - categorization of studies, 4 - evaluation of the selected studies, 5 - interpretation of results and 6 - presentation of the review/synthesis of the knowledge.<sup>10</sup>

Inclusion criteria were: original articles published between the years 2005-2015, available in full-length, in Portuguese, Spanish and English. literature reviews/reflections, editorials, abstracts published in annals, theses, dissertations, course conclusion works, epidemiological reports, management reports, official documents of national and international programs, books, publications that did not fit in the delimited time period and studies that did not answer the question of the research were excluded from the sample.

The search was conducted by two reviewers to ensure the accuracy of the process of selection of articles in the databases *National Library of Medicine* (MEDLINE) and *Latin American and Caribbean Health Sciences* (LILACS) and *Cumulative Index to Nursing and Allied Health Literature*

(CINAHL) in the period of February-March 2016, with standardized descriptors available in the Descriptors in Health Sciences (DeCS/MeSH)"safety culture" [and] "hospital" [and] "perception" [and] "nursing".

The search strategy was designed according to each database. A tool for collecting information to answer the main question of this review was elaborated with the following items: identification of the original article (title, author, country and year of publication), local of the study, methodological characteristics of the study (type of study, sample, instrument for measure safety culture, level of evidence), objectives and results.

After reading the selected researches in full-length, organization and analysis of themes took place, in order to describe and classify the results, exposing the knowledge produced on the proposed theme. In this sense, evidence-based practice was observed as an approach that enables the improvement of health care quality implying the use and application of researches, involving the definition of a problem, the search and critical evaluation of available evidence, implementation of evidence in the practice

and evaluation of the results as a basis for decision making.<sup>9</sup>

In the analysis of level of evidence, hierarchy in seven levels was considered. At level 1, evidence from systematic review or meta-analysis of randomized controlled clinical trials or evidence derived from clinical guidelines based on systematic reviews of randomized controlled trials; level 2, evidence derived from at least one randomized controlled clinical trial clearly delineated; level 3, evidence from well-designed clinical trials without randomization; level 4, evidence from cohort studies or well-designed case-control studies; level 5, evidence from systematic review of descriptive and qualitative studies; level 6, evidence derived from a single descriptive or qualitative study; level 7, evidence from opinion of authorities and/or report of expert committees.<sup>11</sup>

After considering inclusion and exclusion criteria, reading of titles and abstracts of articles was started. In the sequence, the 12 articles that constituted the sample for presenting relevant results to the main question, as shown in Figure 1, were read in full-length.

| Electronic media | Articles |          |          |
|------------------|----------|----------|----------|
|                  | Found    | Excluded | Selected |
| LILASC           | 11       | 6        | 5        |
| MEDLINE          | 8        | 7        | 1        |
| CINHAL           | 55       | 49       | 6        |
| TOTAL            | 74       | 62       | 12       |

Figure 1. Distribution of articles found, deleted and selected.

RESULTS

The analysis of patient safety culture, focusing on the perception of nursing professionals, directed the development of this study. Among publications analyzed, one (8.33%) was found in MEDLINE, five (41.47%) in LILACS and six (50%) in CINAHL.

The year with the highest number of publications was 2015, with four (33.33%) articles. As for the place of publication, four (33.33%) were produced in Brazil, one (8.33%) in Mexico, one (8.33%) in the United States, one (8.33%) in a multicentre (US and Canada), one (8.33%) in Korea, one (8.33%) in China, one (8.33%) in South Africa, one (8.33%) Oman

and one (8.33%) Jordan. Among the articles, eight (66.67%) had been published in international journals and four (33.33%) in national journals. The journal with most of international publications was *International Nursing Review*, with two articles (16.67%) and the national journal was Text Context Nursing, with two articles (16.67%). The 12 publications (100%) had evidence of level 6, considering that such studies do not show strong evidence for clinical application.

For analysis and synthesis of references that were part of the sample, a summary table including the characterization of the selected studies was used (Figure 2).

| Authors/year                                                                     |                         | Type of study/sample/instrument/level of evidence                                                               | Objectives                                                                                                                                                                  | Results                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Massoco Melleiro, 2015 <sup>12</sup>                                             | ECP, MM,                | Descriptive-exploratory study. N = 95 nursing professionals. HSOPSC. Level 6                                    | To know the perception of nursing workers at a teaching hospital and highlight communication as a relevant factor to patient safety culture.                                | Data identified the fear of punishment and the exposure of the professional as a limiting factor in reporting of errors and reporting adverse events.                                                                                                                                                                                                                                                            |
| Khater Akhu-Zaheya LM, Mahasneh SI, Khater R, 2015 <sup>13</sup>                 | WA, Al-SI, R,           | Cross-sectional study. N = 658 nurses. HSOPSC. Level 6                                                          | To evaluate the patient safety culture in Jordanian hospitals from the perspective of nurses.                                                                               | Nurses perceived areas that need improvement: communication, human resources, non-punitive responses to errors and teamwork in all units. The factors that influence the perception of safety culture: age, years of experience, working in university hospitals, use of evidence-based practice and work where patient safety is considered a priority.                                                         |
| Ammouri Tailakh Muliira Geethakrishnan R, Al Kindi SN, 2015 <sup>14</sup>        | AA, AK, JK,             | Cross-sectional study. N = 414 nurses. HSOPSC. Level 6                                                          | To investigate the perception of nurses on patient safety culture and to identify the factors that need to be emphasized in order to develop and maintain a safety culture. | Nurses with greater perception of patient safety were supervisors or managers who accompanied the team work in the units, knew about communicating errors and the frequency of reported events. Also, professionals with more years of experience and working in teaching hospitals had higher perceptions of patient safety culture.                                                                            |
| Silva-Batalha EMS, Melleiro MM, 2015 <sup>15</sup>                               |                         | Descriptive-exploratory and quantitative study. N = 301 nursing professionals. HSOPSC. Level 6                  | To evaluate the perception of nurses about patient safety culture and identify differences between hospital units.                                                          | Significant differences were found between the perception of professionals of different units, with prominence of the pediatric unit which got better security perceptions.                                                                                                                                                                                                                                      |
| Blignaut AJ, Coetzee SK, Klopper HC, 2014 <sup>16</sup>                          |                         | Cross-sectional study. N = 1,117 nurses. HSOPSC. Level 6                                                        | To report the perception of nurses on patient safety and quality of care and determine the relationship between perceptions of nurses from public and private hospitals.    | No correlation was found between the perceptions of nurses working in public and private hospitals on patient safety, quality of care and the level of training of nurses.                                                                                                                                                                                                                                       |
| Wang X, Liu K, You L, Xiang J, Hu H, Zhang L, Zheng J, Zhu X, 2014 <sup>17</sup> |                         | Descriptive study. N = 463 nurses. HSOPSC. Level 6                                                              | To describe the perception of nurses on patient safety culture, frequency of adverse events, and to check the relationship between them.                                    | Results confirm the hypothesis that the improvement in patient safety culture is related to the decrease of adverse events.                                                                                                                                                                                                                                                                                      |
| Mello Barbosa, 2013 <sup>5</sup>                                                 | JF, SFF,                | Quantitative study, survey type, cross-sectional and comparative. N = 91 nursing professionals. HSOPSC. Level 6 | To systematize the recommendations of nursing professionals about patient safety in two adult intensive care units.                                                         | More timely perceptions of nursing professionals contributed to the systematization of patient safety measures.                                                                                                                                                                                                                                                                                                  |
| Castaneda-Hidalgo Hernandez Salinas Zuñiga Porras Perez, 2013 <sup>18</sup>      | H, RG, JFG, MP, GA, AA, | Cross-sectional study. N = 195 nurses. HSOPSC. Level 6                                                          | To identify areas of strength and opportunity continuous improvement perceived by nurses in relation to the safety culture in the care of patients in a general hospital.   | We identified two strong dimensions for safety in patient care (team work in the unit and organizational learning) and six problematic dimensions (staff, non-punitive response to errors, support for hospital management in patient safety, safety problems perceived in shift changes and transmissions between wards/departments and openness to communication with opportunity for continuous improvement). |
| Rigobello Carvalho Cassiani, 2013                                                | MCG, REFL, SHB,         | Cross-sectional study. N = 203 nursing professionals.                                                           | To evaluate the perception that the nursing team working in                                                                                                                 | The evaluation of the perception of the safety atmosphere among nursing team members showed varying                                                                                                                                                                                                                                                                                                              |



|                                                              |                                                                     |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Galon T, Capucho HC, Deus NN, 2012 <sup>4</sup>              | SAQ. Level 6                                                        | the medical and surgical wards of a hospital has on safety atmosphere.                                                                                                                                                  | responses, according to each domain, professional category and time of performance.                                                                                                                                                                                                                                                                     |
| Armellino D, Griffin MTQ, Fitzpatrick JJ, 2010 <sup>19</sup> | Descriptive study. N = 257 nurses. HSOPSC. Level 6                  | To examine the relationship between structural training and patient safety culture among nurses in adult intensive care units.                                                                                          | In order to promote patient safety culture, nurses leaders should consider the provision of working environments that may strengthen the role of nurses.                                                                                                                                                                                                |
| Wagner LM, Capezuti E, Rice JC, 2009 <sup>20</sup>           | Cross-sectional study, multicentre. N = 550 Nurses. HSOPSC. Level 6 | To describe the perception of safety culture among nurses in institutions for long-term care.                                                                                                                           | Interventions aimed at improving safety culture in long-term care institutions should be focused on the concerns of nurses and improving communication between nurses and their managers.                                                                                                                                                               |
| Kim J, An K, Kim MK, Yoon SH, 2007 <sup>21</sup>             | Exploratory study. N = 886 nurses. HSOPSC. Level 6                  | To describe the perception of nurses on patient safety culture in their work and to examine whether this perception was significantly associated with their work experience, position, unit type, age and working time. | Nurses expressed concern about patient safety in their work unit, especially when not reported or when there is delay in reporting errors due to insufficient knowledge about what mistakes should be reported. They realize that medical errors were not always reported. The characteristics of nurses had a significant impact on their perceptions. |

Figure 2. Characterization of the selected studies according to authors/year/reference, study type/sample/instrument, objectives and key results.

It was observed that there is a growing approach to studies that highlight the perception on patient safety culture, with an increase in the number of publications in the last three years, considering that the first publication of this study was in 2007 and the prevalence of the use of the questionnaire HSOPSC.

DISCUSSION

The nursing student learns, during academic training, that effective health work should be focused on the team. A working group is one that interacts primarily to share information and makes decisions that help each member to perform the tasks individually.<sup>12</sup>

The professional nursing practice is permeated by experience and daily perception of risk situations. These can support the management of care in relation to patient safety, highlighting the importance of the recommendations made by professionals which complement or clarify data obtained through tools to assess the safety culture.<sup>5</sup>

As for the assessment tools used, the *Hospital Survey on Patient Safety Culture* (HSOPSC)<sup>5,12-21</sup>, created by the Agency for Healthcare Research and Quality (AHRQ) in 2004 was the one that prevailed. This tool measures the safety culture among health professionals working in hospitals, which in turn, influences directly or indirectly patient care. In Brazil, there are two free translations of HSOPSC, the first was created by Clinco in

2007, and the second, by Zimmer et al. in 2009. However, this instrument was validated by Reis only in 2013.<sup>6</sup>

Only one research adopted the *Safety Attitudes Questionnaire* (SAQ), which is an instrument for measuring the safety atmosphere, evaluation of the perception of professionals about the atmosphere of teamwork, job satisfaction, working conditions and stress factors.<sup>4</sup>

The analysis of articles in this review shows the perception that nursing professionals have about patient safety culture in hospitals. The process of categorization of data resulted in two thematic categories: perception of the nursing staff and factors that influence the perception on patient safety culture.

◆ Perception of nursing professionals

The perception of nursing professionals on patient safety is a dimension that is influenced the processes and systems existing in the hospital operating units to prevent mistakes and perceived problems.<sup>5</sup>

Patient safety culture is important in the effort to reduce adverse events in the hospital and to improve patient safety through values, attitudes, perceptions and skills, whether in group or individual basis, determining a pattern of behavior and commitment with the management security of the institution.<sup>4-17</sup> Lack of communication can significantly compromise patient safety and the outcomes of patient care, as it is one of the main factors contributing to errors.<sup>14</sup>

In order to keep an adequate safety culture, it is important to be concerned with the workplace, identifying the barriers that nurses face to provide safe care.<sup>20</sup> Thus, studies show that nurses working in hospitals recognize that the lack of communication, inadequate training, poor working relationships and fear of punishment to the occurrence of errors from the reporting of adverse events are important factors in the patient safety culture.<sup>12-13-14</sup>

The dimensions perceived with the continuous improvement of patient safety were: staff, non-punitive response to errors, support to hospital management in patient safety, safety problems perceived in the change of shifts and transitions between departments/units, and open communication. The supervisor/manager has a central role when he accepts comments from staff to improve the quality of assistance and does not neglect problems related to patient safety.<sup>15,18</sup>

Patient safety can be improved with the introduction of a non-punitive culture in which nurses may discuss the errors and potential risks of adverse events.<sup>21</sup> The organizational culture committed to patient safety encourages the reporting of adverse incidents with a view to minimize underreporting and contribute to the quality of care in hospitals.<sup>16</sup>

### **Factors that influence the perception of patient safety culture**

Among the factors that hinder the development of actions for security, stand out: the shortage of human resources, great care demand, the strong workload, new technologies that are unknown to the professionals. This combination of factors leads to the production of interventions poorly controlled by professionals with increased complications to patients and, of course, reduction in quality of care.<sup>7,22</sup>

Thus, the evaluation of the perception of safety atmosphere among nursing team members showed a variation of responses depending on domain, professional class, practice time and location/unit (medical or surgical clinic).<sup>4</sup>

It is noticed that there are significant differences between the units, highlighting that nurses of pediatric units had better security perceptions.<sup>15</sup> Also, nurses with more years of experience working in teaching hospitals had a better perception of patient safety culture.<sup>14-21</sup>

The presence of specialist nurses in the staff showed no correlation with the

perception of patient safety culture and quality of care.<sup>16</sup> However, the hypothesis that improvement of patient safety culture is related to a decrease of adverse events was confirmed.<sup>17</sup>

In order to improve patient safety, it is important to start on the front line, promoting a non-punitive culture in which nurses and other health professionals can openly discuss errors and identify potential risks, which are the most important steps to achieve patient safety, that is, through communication and notification of errors.<sup>21</sup>

Nursing takes on the leadership when it comes to safety in hospitals. Safety has as priority targets the training, research, evidence-based practice and the idea that patient safety is the safety of all. In this sense, the main barriers identified were: the corporate position of professionals, organization and infrastructure with a large variability, great care pressure, scarce filing of reports, and absence of authentic leadership in safety, the lack of reliable and accepted indicators, lack of communication and lack of safety culture and, finally, the lack of specific training in safety.<sup>7</sup>

### **CONCLUSION**

It seems that the publications on the topic of patient safety culture are growing and have begun to be emphasized in the past three years, with predominance of international studies. The instrument mostly used to measure patient safety culture was the HSOPSC.

Teamwork is perceived positively by nurses as an important component of patient safety culture to influence directly the quality of care.

One point strongly addressed in the literature is the communication and reporting of adverse events, showing high underreporting index. This fact is due to the predominance of a punitive culture for errors and the lack of openness to dialogue between employees and their superiors, among other reasons.

The studies showed the position occupied by nursing professionals towards the patient and, consequently, in patient safety. It is noteworthy that these professionals consider it important to know the errors so that measures may be implemented to prevent them. Therefore, due to the main role of nursing in patient care, strategies of consolidation are fundamental to ensure patient safety in the hospital setting.

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