

Patient Safety in Nursing Teaching: A Scoping Review

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ABSTRACT

Objective: To identify and map the teaching of Patient Safety in nursing.

Methods: This is a scoping review. Data collection took place in July 2017, in 15 national and international databases. For data analysis, the following indexes were used: year of publication; country of publication; methodological design; level of evidence; modality of teaching; basic patient safety protocols addressed; teaching strategies used; and content addressed.

Results: The sample was made up of eight studies, which were published from 2008 to 2017, mostly originating from the United Kingdom and Canada. Most studies addressed aspects related to the international goals for Patient Safety.

Conclusion: It became clear that the teaching of patient safety in the nursing courses has been consolidating, although the number of publications on the subject is still low, and there is a remarkable scarcity of studies that address some themes related to patient safety.

INTRODUCTION

Patient safety (PS) stands out as a current theme that permeates important debates regarding the quality of health care. Since this theme emerged, and especially after 1999, when the Institute of Medicine (IOM) published the report *To Err Is Human*, which indicated the high prevalence of avoidable adverse events (AE) during patient assistance, it was shown that the care offered by the health team was going against health promotion ^[1,2].

Based on this evidence, the World Health Organization (WHO) instituted, in 2004, the World Alliance for Patient Safety, aimed at promotion debates regarding PS, proposing reports, protocols, and goals that promote PS in an effective way in the health services ^[3].

Also, in addition to documents and standardizations for an effective implementation of the PS in all sectors and levels of health care, it was introduced into the curriculum of health professionals, to train and capacitate them for PS. As a result, they would have the capacity of providing high-quality and harm-free health assistance ^[2,4].

However, the teaching of PS is complex, and there are some hindrances which can make its implementation difficult. These are related both to the training of the professors about PS, so they can promote its teaching and to the preparation of the students, since teaching PS demands the student to have an active role in the teaching-learning process [4].

From this perspective, the WHO created a guide with directives for multi-professional PS teaching, the Patient Safety Curriculum Guide: Multi-professional Edition, which aims to direct the teaching of PS in the world and, as a consequence, foment the dissemination of this content, culminating in the formation of health workers whose knowledge is based on PS [5].

This guide clarifies that PS is a cross-sectional subject within the health team, as it emphasizes that all professionals are responsible for the promotion of an assistance that is based on PS. Among the many professional categories in the multidisciplinary team, nurses stand out [5].

That is because the nursing team workers may be more susceptible to the incidence of mistakes during their working process, since they carry out their activities in direct contact with the patient. Also, there are organizational and structural factors that affect these workers, such as the lack of materials/input and work overload, which is associated to the need of having two jobs, and to inadequate personnel sizing to attend to the demands of the sectors [6].

Also, the different scopes of nursing work stand out during their work process, since they develop distinct activities and have a direct relation to the international PS goals. As a result, it is paramount that nurses are trained with regards to this theme, so their practice can be carried out with safety, which would improve the health state of the patient [6,7].

Therefore, the relevance of the nursing team during patient health assistance and the need for these workers to be trained in the provision of safe care mean that it is essential to investigate how PS teaching is addressed, but especially with regards to nursing.

As a result, this study has the following guiding question: What aspects are addressed during the teaching of Patient Safety by nursing professors? Its objective is to identify and map the teaching of Patient Safety in nursing.

LITERATURE REVIEW

This is a scoping review with a research protocol registered in the Open Science Framework (<https://osf.io/fvpxq/>) under identification 10.17605/OSF.IO/FVPXQ. It was developed and structured based on the recommendations from the international PRISMA-ScR10 [8] guide and from the Joanna Briggs Institute Reviewers Manual [9], according to the theoretical framework substantiated by Arksey and O'Malley [10].

This type of revision consists in a broad investigation of literature that uses different databases, which maps and goes in depth in the theme investigated, enabling the identification of gaps in literature about it [9,10].

Scoping Reviews are structured based on the recommendations from the Joanna Briggs Institute [11], according to which this type of study has six stages: the identification of the research question, the identification of the relevant studies, the selection of the studies, the extraction of data, the presentation of the results, and the publication of the results [10].

For the identification of the research question, this study considered the following guiding question: What aspects are addressed during the teaching of Patient Safety by nursing professors?

For the research of the studies that made up the sample, the PCC strategy was used. P (population) - Docentes de enfermagem/Faculty, Nursing; C (concept) - Ensino da Segurança do Paciente/ Teaching; Patient Safety; C (context) - Educacao Superior/ Education, Higher.

As the PCC was established, an initial research was carried out in the National Library of Medicine - PubMed and in the database Cumulative Index to Nursing and Allied Health Literature - CINAHL, to determine which keywords and descriptors would make up the research strategy. With the addition of the Boolean operators "AND" and "OR", the following strategy was formed: Faculty, Nursing OR (Nursing education OR health professional education OR nursing) AND Teaching OR (Curriculum) AND Patient Safety OR (Safety in care OR Safety in healthcare OR Safety) AND Education, Graduate OR (Education OR baccalaureate education in nursing).

The databases selected to search for the studies were: Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed, Scopus, Cochrane, Web of Science, PSYCHINFO, the platform of theses and dissertation from CAPES, Education Resources Information Center (ERIC), The National Library of Australia's Trove (Trove), Academic Archive Online (DIVA), DART-Europe E-Theses Portal, Electronic Theses Online Service (EThOS), Repositório Científico de Acesso Aberto de Portugal (RCAAP), National ETD Portal, Theses Canada.

Regarding the criteria of inclusion and exclusion, the research considered studies that answered the objective of this investigation and were available in full through the use of the authentication protocol "CAFe", from the Universidade Federal

do Rio Grande do Norte, in the platform of journals from the Coordination for the Improvement of Higher Education Personnel (CAPES). Duplicate studies, editorials, letters to the editor, and opinion articles were excluded.

The selection of studies in the databases took place in stages. First, the titles and abstracts of the publications found by using the combination of descriptors mentioned above were read; then, considering the criteria already defined, the articles were read in full.

The studies selected were analysed according to the indicators: year of publication; country of publication; methodological design; level of evidence [11]; modality of teaching (face-to-face, semi- face-to-face, or distance teaching); basic PS protocols addressed; teaching strategies used; and content addressed.

Regarding the results, they were evaluated using simple descriptive statistics, synthesized, and descriptively presented in tables.

RESULTS

From the analysis of the 91,139 studies found, only 8 (100.0%) were about the theme, and made up the final sample. The selection of the studies is presented in the flowchart below (Figure 1).

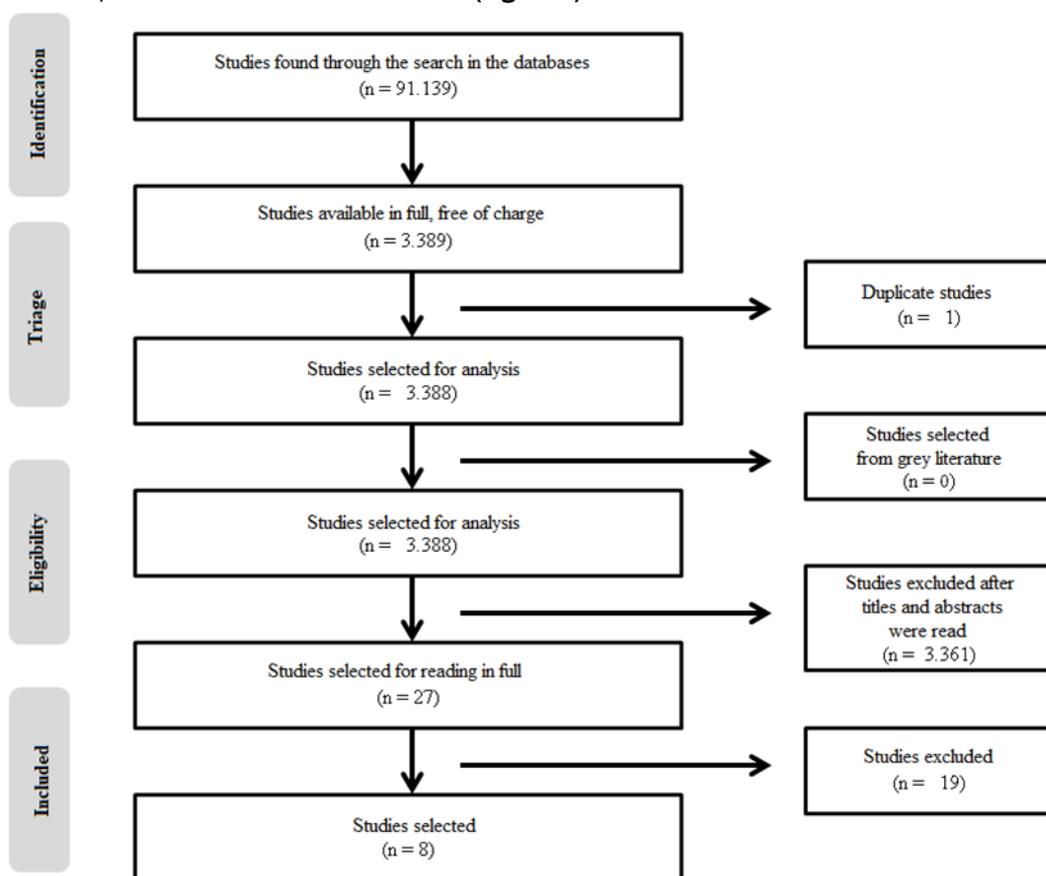


Figure 1. Flow-chart of the stages of study selection (Natal, RN, Brazil, 2020).

The eight studies that make up this sample were published from 2008 to 2017. The years 2008 and 2011 stood out, with two (25%) publications each. With regard to the countries in which the studies were published, the United Kingdom was the most common (37.5%), followed by Canada, with two (25%). Brazil, Iran, and Japan had one publication each (12.5%).

Researches used only two types of methodological designs. Seven had an exploratory descriptive design (87.5%), and one (12.5%) was a case study. All of them are classified as having a level of evidence of 4.

The studies presented the teaching of PS in nursing in the face-to-face modality. Regarding teaching strategies, five (62.5%) used traditional teaching methods focused on expository classes, while three (37.5%) used active methodologies during the classes. Some methods were cited, such as: focal groups, practical activities, group discussions, seminars, technical visits, dramatizations, and simulations.

The analysis of the studies pointed at the fact that only five out of the six basic PS protocols were addressed during the teaching of PS. The use of each protocol in each study and the synthesis of the knowledge addressed during the PS are presented in **Table 1**.

Table 1. Basic PS protocols and the synthesis of the content addressed for the teaching of PS. Natal, RN, Brazil, 2020.

Article	Protocols prescribed by the Ministry of Health (MH)	Content addressed in teaching Patient Safety in Nursing
Article 1 [12]	Improving the safety in the prescription, use, and administration of medications; hand hygiene to avoid infections; diminishing the risk of falls and pressure lesions.	Administration of medications, infection control (hygiene of hands and materials), falls.
Article 2 [13]	Improving the communication between health professionals.	Safety culture, effective communication, teamwork, management, managing and recognizing risks, and the building of safety-related skills.
Article 3 [14]	Correctly identifying the patient; Improving the communication between health professionals; improving the safety in the prescription, use, and administration of medications; diminishing the risk of falls and pressure lesions.	Safe environment (falls, beds, physical structure); infection control; communication; patient handling; risk assessment; safe practice of medications and records.
Article 4 [15]	Improving the communication between health professionals; Improving the safety in the prescription, use, and administration of medications.	Communication, teamwork, and care in the process of medicating.
Article 5 [16]	Hand hygiene to prevent infections; diminishing the risk of falls and pressure lesions.	Avoiding falls (elevated grids, moving the patient, etc.) and transport techniques.
Article 6 [17]	Correctly identifying the patient; improving the safety in the prescription, use, and administration of medications; diminishing the risk of falls and pressure lesions.	Identifying the patient, characterizing the errors in medication; preventing health problems from affecting the patient and preventing falls; the context of hospital infections (focus on hand hygiene).
Article 7 [18]	Correctly identifying the patient; improving the communication between health professionals.	The incidence of mistakes; identifying the patient; communicating; notifying; adverse events.
Article 8 [19]	Improving the communication between health professionals; improving the safety in the prescription, use, and administration of medications; diminishing the risk of falls; pressure lesions.	Nomenclature to refer to PS; how to research about PS; the relation between the culture and the patient; administration of medications; fall prevention; communication problems.

DISCUSSION

The studies analysed point at the fact that the dissemination of the PS as a subject in researches around the world is recent, since all publications took place from 2008 to 2017. This characteristic corroborates the fact that the beginning of PS debates was mainly generated by the high number of AEs that took place in health service, leading to increased financial costs [20].

These factors culminated with the publication of a report by the IOM at the end of the 20th century, and later, with worldwide initiatives to promote PS, such as the creation of the World Alliance for Patient Safety in 2004, the six international PS goals in 2009, and the publication of the guide with the directives for multi-professional PS teaching in 2011 [5,21,22].

In addition, it became relevant to evaluate in which countries the studies that mentioned the teaching of PS in nursing are produced. In this research, the United Kingdom and Canada were the ones who produced the most, which could be associated to the early implementation of PS-related policies and institutions, such as the National Patient Safety Agency (NPSA), from the United Kingdom, established in 2001, and the Building a Safer System report, published in Canada, in 2002, by the country's National Steering Committee for Patient Safety [12].

Therefore, it became clear that the strategies that promoted PS in the United Kingdom and in Canada started before worldwide measures, and propelled the efforts of other countries, culminating in a greater production of studies regarding this subject, which can effectively reflect on the implantation and development of resources that promote PS in these countries [12].

The studies were also analysed according to the methodological design used in their construction and to their evidence levels. Most of them presented a low level of scientific evidences, that is, they did not use complex methods and, as a result, do not have a high level of scientific reliability [23].

Regarding the teaching strategies indicated, most used traditional teaching methods as opposed to active methodologies. This is concerning, since the teaching of the PS is complex and, as a result, the student must be an active participant of the teaching-learning process, so that an effective learning of PS can be feasible, since the use and applicability of these methodologies offer this possibility to the student [4,24].

Regarding the subjects related to the teaching of PS in nursing, as addressed by the studies, it was found that in most cases they refer to the relation between these subjects and the basic PS protocols determined by the MH in 2009, which are: correctly identifying the patient; improving communication between health professionals; improving safety in the prescription, use, and administration of medicine; adequate hand hygiene to avoid infections; reducing the risk of falls and pressure lesions [22].

The subjects addressed were mostly related to the following protocols: improving the communication between health professionals; improving the prescription, use, and administration of medicines; and reducing the risk of falls and pressure lesions (PL).

The concern about the teaching of communication is reflective of the high and growing number of AEs that take place due to problems in this segment, since they have different etiologies, that result from both the work environment and the training process of nursing professionals, which varies among fields and among health institutions [25,26].

Still with regard to nursing, the work overload caused by having two jobs, the low number of workers in the hospitals, and the inadequate sizing of personnel lead to problems in communication, caused by the overload of activities [26].

This points at the cultural particularities of nursing, and that is why it is essential to discuss this subject in the training process of these professionals, as to promote a better education in order to develop strategies and/or actions that promote effective communication, even considering such hindrances [26].

Furthermore, the studies that were part of the final sample addressed aspects related to safety in the prescription, use, and administration of medications, focusing on the workers of the health team, since they are considered to be the main agents in the preparation and administration of the drugs. Therefore, the importance of this group can be noted. Since the formation of these professionals, the detection of nursing errors in this type of assistance can promote the construction of barriers that can prevent AEs that could affect patients going through this process [25,27].

The teaching of PS was also mostly devoted to subjects related to the incidence of falls and PLs, especially with regards to the prevention of said issues, since these events may be associated, in the health institutions, to the quality of the nursing assistance. That is because the professionals of this category carry out preventive activities, using evaluations and scales that determine the vulnerability of the patient with regards to these AEs, in addition to promoting care related to wound dressing, patient mobilization, grid placement, among others, aiming to prevent and treat [28].

In addition to the themes connected to the protocols of PS and associated to international goals, these studies also treated another important issue related to PS: the culture of patient safety, which is a relevant, current, and innovative aspect. It was idealized to aid bringing PS into effect in the health services, as it unveiled a punitive culture that was ingrained in the institutions [29].

Therefore, the culture of patient safety aims to develop, in the health professionals, a set of values, beliefs and actions that guide their practice, thus facilitating the implementation of a culture of safety that is fair, as opposed to a punitive culture, which only seeks the mistake and the punishment, instead of seeking the promotion of PS and the learning from one's mistakes [29].

Despite the multiple and important findings of these works, it should be noted that information on procedures and surgical interventions was not cited. That suggests potential deficiencies regarding the teaching of PS, which lead to serious repercussions in education and, consequently, in health assistance [29].

This reality is shown through scientific evidences that indicate the occurrence of AEs during the different moments of a surgery, which vary in severity, from the mildest to the most severe, and can culminate in death. As a result, it is necessary to improve surgical nursing teaching, basing it in particularities correlated to the PS, with the objective of building a profile of nurses that can promote PS when dealing with the inherent particularities of this type of work environment.

CONCLUSION

The teaching of PS in nursing was found to encompass many important subjects for a qualified formation of these professionals, such as: aspects of effective communication, the safe use and administration of drugs, care regarding the incidence of falls and PLs, and the culture of safety.

It should also be remarked that the studies evaluated showed that the teaching of PS involved both subjects related to the basic PS protocols and aspects that require a broader perspective regarding PS, such as the culture of safety. This shows that this type of teaching not only aims to instil strategies to apply PS in future nurses, but also has the interest of giving them the ability to reflect on the aspects that surround the PS. However, although aspects relevant to the construction of the profile of a nurse have been addressed, it stands out that there were gaps with regards to the content and to the teaching strategies used. That illustrates that the teaching of the PS in nursing is a work in progress and, as a result, still needs adaptations to become more effective and favour the formation of these professionals to be based on PS.

Finally, it should be remarked that, in scientific literature, studies that portrait the subjects addressed in the teaching of PS for nursing are still scarce, since the sample of this study is made up of only eight publications, which can suggest that, in spite of how pertinent the theme is with regards to the dissemination of PS in nursing, researchers have not been sufficiently concerned to produce researches about these aspects.

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