Abstract

Objective: To analyze patient safety training strategies for health professionals in the context of primary care. Methods: This is an integrative review conducted in the Medical Literature Analysis and Retrieval System Online, Latin American and Caribbean Center on Health Sciences Information, Base de Dados de Enfermagem, Web of Science and Scopus databases, with the descriptors “Professional Training”, “Patient Safety” and “Primary Health Care”. Results: A total of 390 studies were identified in the databases, which resulted in a final sample of six articles for the composition of the review. These were published between the years 2017 and 2019, developed in countries in Europe, North America and Oceania. Conclusion: The following items were described as training strategies: workshop, implementation of a medication safety program, identification of key factors for quality improvement, feedback and learning through errors.

Descriptors: Professional Training; Primary Health Care; Patient Safety; Health Personnel.

What is already known on this?

During the training of health teams on patient safety, some difficulties may be faced: communication barriers, planning of the teaching-learning process and appropriate spaces that favor learning.

What this study adds?

The strategies identified can contribute to guiding measures to be implemented in health facilities, with the aim of providing effective patient safety, thus improving the quality of care.
INTRODUCTION

Primary Health Care (PHC) is configured by a group of activities, with a view to serving individuals and communities, through actions of protection and prevention against health problems, promotion of care directed from diagnosis to rehabilitation, seeking to reduce harm and promote health maintenance. In this sense, its main objective is to develop a complete and safe care that positively impacts the health situation of the collectivities.(1)

Primary care activities must be carried out by a multidisciplinary team composed of physician, nurse, nursing assistant or technician and community health workers. Oral health professionals, including dental surgeon and oral health assistant and/or technician, can also be part of this composition.(1)

In this context, PHC is the main gateway to the Brazilian Unified Health System (SUS, as per its Portuguese acronym), as the communication center of the Health Care Network (HCN), where actions of great relevance in health risk management are carried out. Therefore, in order to contribute to the quality and care management indicators, as well as to promote patient safety at this level of care, it is necessary to strengthen the work processes developed in these units.(1,2)

In light of the foregoing, there is a need for professional qualification, through permanent or continuing education on patient safety, with the aim of providing tools to plan and improve health care, minimizing risks and the occurrence of adverse events.(3) To that end, it is important to integrate the theme into the work agenda of the professionals working at this level of care.(4)

Patient safety refers to “a framework of organized activities that creates cultures, processes, procedures, behaviors, technologies and environments in the health area that consistently and sustainably reduces risks, decreases the occurrence of preventable harm, makes errors less likely and reduces the impact of harm when it occurs”.(5,6) Among the pillars for its adoption, one can cite skills and adequate training of health workers.(5)

Therefore, it is essential to develop strategies for training the multidisciplinary teams in terms of patient safety becomes so that they can act in a safe and qualified way.(6) Accordingly, the research becomes relevant because there are few reports in the literature regarding the teaching of professionals with the main focus being the promotion of the theme and consequent reduction of risks.(7,8)

Nevertheless, during the process of training health teams on the theme, some difficulties can be faced, such as: communication barriers, inadequate planning of actions and appropriate spaces that favor the teaching-learning process of the target audience.(9) Thus, it is necessary to improve strategies for safety in PHC and offer conditions for health professionals to participate in this educational process.(10)

Therefore, it is noted the impact that educational activities on patient safety in primary health care can contribute to the strengthening of this service, with the aim of improving the quality of care. Given the
above, this study had the objective of analyzing the strategies for training on patient safety for health professionals in the context of primary care.

METHODS

This is an integrative literature review (IR), which represents a broad methodological approach, allowing the inclusion of many different types of study. In addition, it can combine data from theoretical and empirical literature, defining concepts, reviewing theories and evidence, as well as analyzing important aspects of a particular topic.(11)

The study was structured and constructed in six pre-established steps:(12) 1) choice of theme and research guiding question; 2) definition of inclusion and exclusion criteria and search for studies in the databases; 3) extraction of data from each study and organization of those included in the review; 4) critical evaluation of the studies; 5) synthesis and discussion of the review results; and 6) presentation of the integrative review.

The research question was formulated with the help of the PICO strategy, acronym for Population (multidisciplinary team), Intervention (training/distance learning on patient safety), Context (Primary Health Care) and Outcome (professional training). Accordingly, the following guiding question was developed: “What are the strategies used for training on patient safety in the context of primary health care for health professionals?”.

In order to perform the searches, the databases Medical Literature Analysis and Retrieval System Online (MEDLINE) (via PubMed), Latin American and Caribbean Center on Health Sciences (LILACS), Base de Dados de Enfermagem (BDENF, as per its Portuguese acronym), Web of Science and Scopus were used. Access to research sources was carried out remotely through the Comunidade Acadêmica Federada (CAFe, as per its Portuguese acronym), the journal portal of the Coordination for the Improvement of Higher Education Personnel (CAPES, as per its Portuguese acronym), belonging to the Brazilian Ministry of Education (MEC, as per its Portuguese acronym).

In this context, the controlled descriptors “Capacitação Profissional”, “Segurança do Paciente” and “Atenção Primária à Saúde” were used, originating from the Descritores de Ciências da Saúde (DeCS, as per its Portuguese acronym); and “Professional Training”, “Patient Safety” and “Primary Health Care”, from Medical Subject Headings (MeSH), which were connected by the Boolean operator “AND”, as displayed in Table 1, below:

<table>
<thead>
<tr>
<th>Database</th>
<th>Search strategy</th>
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<tr>
<td>MEDLINE</td>
<td>(((Professional Training) AND (Patient Safety)) AND (Primary Health Care))</td>
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<td>LILACS</td>
<td>Capacitação profissional AND segurança do paciente AND atenção primária à saúde</td>
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<tr>
<td>BDENF</td>
<td>Capacitação profissional AND segurança do paciente AND atenção primária à saúde</td>
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<tr>
<td>Web of Science</td>
<td>(training, professional) AND TÓPICO: (patient safety) AND TÓPICO: (primary health care)</td>
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<tr>
<td>Scopus</td>
<td>(((training, professional) AND (patient safety) AND ( primary health care )) )</td>
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</table>

Source: Elaboration of the authors (2022).

The included studies dealt with training of health professionals in the context of PHC published in the last five years, since one study of the same type gathering studies published until 2017 was identified.(13) There was no delimitation as to the types of study to be included, given the scarcity of publications, seeking to cover as much research as possible. The search and selection of articles were carried out in March and April 2022.

After data collection, the obtained studies were exported to the free software Rayyan, which helps in the process of selecting and organizing the articles.(14) Initially, duplicates were excluded, and then the first selection of articles was made by reading the titles and abstracts. After that, the selected articles were read in their entirety to select the final sample. All steps were held by two independent reviewers, with the help of a third researcher for conflict resolution.

The data of the included studies were extracted through reference to an instrument(15) that allowed the analysis and synthesis separately of each article at the methodological level and at the results level,
such as, for example: authors, title, year and country of publication, type of study, training strategy used and main results.

RESULTS

A total of 390 studies were identified in the databases, of which 74 were excluded for being duplicates and 288 for not meeting the eligibility criteria after reading the title and abstract. Accordingly, 28 studies were selected. After their analysis, upon reading in full, 22 articles were excluded, resulting in a final sample of six articles for the composition of the review. Figure 1 displays the results of the search and of each step of study selection, as well as the justification for the exclusions.

Figure 1. Study selection process flow for review adapted from the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA). Redenção, Ceará, Brazil, 2022.

Among the six selected articles, the main information extracted is displayed in Table 2. Accordingly, the selected studies were published between 2017 and 2019, and developed in Spain, the United States, Canada, England and Australia. Among the cited interventions, one can highlight: workshop, implementation of a medication safety program, identification of key factors for improving patient safety, feedback and learning through errors.
Table 2. Details of the articles selected from the final review sample. Redenção, CE, Brazil, 2022.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Title</th>
<th>Year</th>
<th>Country</th>
<th>Type of study</th>
<th>Training strategy</th>
<th>Main results</th>
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<tr>
<td>González-Formoso et al. (17)</td>
<td>Effectiveness of an educational intervention to improve the safety culture in primary care: a randomized trial</td>
<td>2019</td>
<td>Spain</td>
<td>Randomized clinical trial</td>
<td>Workshop</td>
<td>Workshop, lasting 2 hours, held in seven areas, taught by a nurse and a family physician. Each participant received data on the incidence of adverse events in primary care, and checked initiatives both in Spain and internationally. There was an introduction to patient safety: concepts of effect, incident, adverse event, complication, side effect, adverse drug reaction; types of errors and their analysis; drug use-related errors and the importance of the reporting form. The odds of reporting one to two events increased by 1.14% (0.39-3.35) and by 13.75% (2.41-354.37) of three or more events. Different dimensions had significant independent effects on each variable related to outcomes.</td>
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<td>Wagner et al. (18)</td>
<td>Entrustable professional activities for quality and patient safety</td>
<td>2018</td>
<td>United States</td>
<td>Descriptive study</td>
<td>Implementation of a quality and safety program</td>
<td>Seven steps are provided to develop entrustable professional activities for nurses through the example of a quality and safety program (EPA). The example incorporates quality education and safety skills for nurses, as well as working with evidence-based literature. EPAs provide a practical approach to thinking about quality and safety evaluation. Although skills are abstract and context-independent, EPAs offer a solution as an integrative framework that allows for the evaluation of skills in the authentic work tasks of the nursing professional.</td>
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<td>Khalil et al. (19)</td>
<td>The implementation of a successful medication safety program in a primary care</td>
<td>2018</td>
<td>Canada</td>
<td>Descriptive study</td>
<td>Medication safety program</td>
<td>The program had among its phases, a drug safety training for physicians. The training consisted of lectures, case studies and discussions in small groups during 1 day; its content was problem-solving for possible medication errors and how to avoid them. The results show that medication training improved knowledge, confidence and behavior.</td>
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<td>Arora et al. (20)</td>
<td>Patient Safety Education 20 Years After the Institute of Medicine Report: Results From a Cross-sectional National Survey</td>
<td>2021</td>
<td>England</td>
<td>Cross-sectional study</td>
<td>Identification of key factors for quality improvement</td>
<td>From a cross-sectional study, key factors for successful patient safety education in terms of content and delivery were found, such as standardization of methods and evaluation, dedicated funding for continuing education policies with involvement of training for patients and families, optimization of education programs, recognition of a culture based on transparency and freedom of expression. Standardization involved identifying the key skills for patient safety education, along with regulating the frequency, quality and content of the offered education programs. However, staffing issues and lack of accessibility to training were noted as primary barriers.</td>
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<td>Llamas et al. (21)</td>
<td>La formación en seguridad del paciente y una docencia segura en</td>
<td>2021</td>
<td>Spain</td>
<td>Literature review</td>
<td>Learning through errors</td>
<td>As for the strategies identified for education and training in patient safety, one can cite: Coaching or mentoring: skilled professionals perform direct mentoring on other colleagues; Appointment of different members of a team as leaders in an area of interest to advise other colleagues; Analysis</td>
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<td>Reference</td>
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<td>Paiva JS et al.</td>
<td>Strategies for training multidisciplinary primary care teams</td>
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<td>Use of video recordings with specific (Problem Based Interview) or general</td>
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<td>(global visualization) methodologies; Use of portfolio as a reflective tool</td>
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<td>to improve patient safety skills; and Feedback and case follow-up: providing</td>
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<td>information on the approach to some complex clinical cases and promoting</td>
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<td>follow-up on those about which decisions were made with high uncertainty.</td>
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<td>more sophisticated practices, such as clinical simulation with standardized</td>
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<td>Khalil et al. (22)</td>
<td>Medication safety programs in primary care: a scoping review</td>
<td>2017</td>
<td>Australia</td>
<td>Scoping review</td>
<td>Feedback Strategies for patient safety education were identified, as</td>
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<td>error reporting and short training programs based on the timely needs of the</td>
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**Source:** Elaboration of the authors (2022).
DISCUSSION

In the Brazilian context, the patient safety practice in primary care has been identified as a challenge; however, solutions have been proposed, according to the implementation of the protocols of the Patient Safety Program. Among these, one can mention: the inclusion and engagement of patients and caregivers in safety promotion and evaluation actions; and the implementation of information technologies in the care routine, with the aim of standardizing the actions and compliance with the care routine.\(^{(23)}\)

In addition to these actions, continuing education can promote a patient safety culture in health facilities. Accordingly, these services are offering training, lectures, courses and theoretical classes for professionals as a strategy aimed at introducing the theme to their collaborators.\(^{(13)}\) Meanwhile, the implementation of training can be a strategy for mitigating medication-related errors, failures in care and harm to patients, besides enabling better organization of the physical environment and standardization of norms and routines. This measure needs to be supported by effective supervision by managers.

Accordingly, the allocation of specific funds and the involvement of the multidisciplinary team in training are essential factors for patient safety education.\(^{(20)}\) These are essential factors to overcome the difficulties related to the articulation between management levels, the lack of qualified professionals and their acceptance to implement risk prevention measures and the turnover of professionals due to the superficial link with the service. Therefore, there is a need to align these points for an effective training and updating of professionals working in primary health care.\(^{(24)}\)

Regarding the educational approaches, one can mention in situ simulation (ISS), which provides an opportunity to support the development of team skills among professionals at all levels and offers team members the opportunity to manage the factors that affect performance. Accordingly, ensuring that individual team members explore the skills required to work effectively together is essential. Professionals must feel the ability to actively participate, practice critical thinking, demonstrate closed-loop communication and vocalize their thoughts to ensure the best possible outcome for the patient.\(^{(25)}\)

In one of the listed studies, some techniques for patient safety education were found, starting with the collaboration of a pharmacist at the early stage of the intervention, such as: making available written materials and information bulletins during the execution of the interventions; using feedback as a learning strategy, with incentives to report errors; and finally, using short training programs based on the punctual needs of the professional.\(^{(22)}\)

As an example, the use of the Ishikawa diagram in institutions can favor the discovery of the root cause for the failures identified in the services and, based on this, outline strategies for training focused on the real needs of collaborators. In recent research, it was shown that the lack of resources and feedback are organizational or service factors that impact the quality of care.\(^{(26)}\)

In addition to those already mentioned, other paths for patient safety education can be taken: the use of tutorials by specialized professionals to support other colleagues, the appointment of leaders within the work team for advice and guidance, the use of portfolio as a reflective tool to improve skills on patient safety, the implementation of feedback and follow-up of cases to provide information on the approach to complex clinical cases and those about which decisions with high uncertainty have been made are examples of actions to be executed in favor of the Patient Safety Policy.\(^{(21)}\)

Corroborating the exposed above, one can cite “coaching” leadership in nursing. This strategy is used in the development of leadership skills, which makes it possible to evaluate the impact of this leadership model on the nursing team, relating it to job satisfaction and professional development. Nevertheless, the actions of identifying and developing leaders is one of the biggest challenges faced by managers in the health environment, taking into consideration the need for increasingly qualified professionals to achieve better results.\(^{(27)}\)

In addition, one of the studies presented the effects of a workshop as an intervention for professional training.\(^{(17)}\) In general, training had no effect on the degree of patient safety in the bivariate analysis. However, different dimensions had significant independent effects on each variable related to outcomes. The study evidenced that an educational intervention through a workshop on adverse events held in a family and community medicine teaching unit can improve reported incidents.

In reference to distance learning (DL), this is a widely accepted tool among most higher education disciplines, including nursing, entailing positive results for the performance of professionals. This form of teaching allows students a high degree of flexibility and convenience, providing an active involvement in the learning process. Accordingly, there are positive evaluations on the distance learning format of the Nursing and Patient Safety course, suggesting that the distance learning format of the Nursing and Patient Safety course can be considered effective in transmitting new knowledge.\(^{(28)}\)
It is underlined that one of the studies resulting from the final sample explained the implementation of a medication safety program. This training included lectures, case studies and discussions in small groups during 1 day, as well as specific problem-solving content, with the aim of detecting possible medication errors and how to avoid them. The results showed that the medication training improved the knowledge, confidence and behavior of the professionals.

The theme training involved steps of prescription, dispensing, preparation, administration and post-administration follow-up. Its complexity can be attributed to a multi-step process that depends on the interaction of a multidisciplinary team. Since the preparation and administration steps are inherent to the nursing team members, the causes of medication errors are commonly attributed to these professionals, although it is known that they occur mainly due to systemic failures, related to the work environment and poorly elaborated processes.

Accordingly, it is perceived that safety and quality of care are associated with several factors, not restricted only to professional qualification. Moreover, despite the great relevance of educational activities aimed at patient safety, other aspects that affect the care processes also need to be addressed, such as improvements in the structure and adequate amount of material resources.

It is also important that, the workers are co-responsible for diagnosing errors and planning strategies for combating them in the work routine of PHC, thus feeling part of the process as a whole and not only of the implementation and practice of safer actions. By stimulating workers to practice patient safety in primary care and its consequent improvement, it is expected that, in addition to producing safe healthcare, there will be increased reliability, effectiveness of services, and intensification of the user's bond with professionals.

In this sense, entrustable professional activities (EPAs) emerge, which provide a practical approach to thinking about the evaluation of quality and safety in nursing, which are the pillars of nursing practice, education and research. EPAs offer a solution as an integrative framework that allows for the evaluation of skills in the authentic work tasks of the nursing professional.

Among the skills of nurses, one can cite communication, which is an extremely important factor in the work environment. Communication becomes a tool that can contribute effectively to the development of good practices for teamwork. Safe and quality care can be ensured through effective communication among professionals, thus preventing errors that could be avoided.

The recognition concerning the role of human factors, whether through a culture based on transparency, freedom of expression, or the use of supporters and models, is considered essential. The mission of patient safety education should be expanded to be more inclusive, targeting a wider range of health professionals (not just physicians and nurses) and involving patients and caregivers in training.

The development of these professional skills in health institutions can contribute to the improvement of professional performance and the implementation of actions focused on ensuring safe and quality care in health institutions, especially in primary care units.

A limitation of the study that stands out is the low number of identified articles, evidencing the need for more studies that bring educational strategies allied to the elucidation of alternatives for the effectiveness of a continuing education policy. However, its contribution to the theme is relevant, since it will allow the identification and possible implementation of the strategies listed in health services, contributing to the acquisition of a safety culture that reflects in actions also focused on family members and caregivers.

CONCLUSION

Given the presented results, it is concluded that there was a better knowledge on the strategies used to offer training on patient safety to the multidisciplinary team working in primary health care. Among these, one can cite the continuing education, which can be carried out through lectures, courses and theoretical classes that can be given personally or remotely, as well as through workshop, an educational intervention that brings positive results for the knowledge of professionals.

Accordingly, the results of this study revealed the importance of inserting training in the professional practice of the multidisciplinary team so that its members promote the mitigation of the occurrence of health care-related errors and improve the quality in the provision of services, thus enhancing patient safety in institutions. Another relevant aspect concerns the effective communication that works as a link in terms of ensuring safer care.

Nonetheless, it is imperative to consider that health professionals should have access and encouragement to participate in training sessions focused on the patient safety during their workdays, in
such a way as to enable them to improve practices and implement patient safety protocols in the institutions. Furthermore, greater participation of managers and improvements related to the organization of processes are essential for the implementation of activities focused on professional training in the institutions according to the needs presented by the teams.

CONTRIBUTIONS

Contributed to the conception or design of the study/research: Paiva JS, Costa EC. Contributed to data collection: Paiva JS, Sousa VTS, Nogueira MRN. Contributed to the analysis and/or interpretation of data: Paiva JS, Sousa VTS, Costa EC. Contributed to article writing or critical review Paiva JS, Sousa VTS, Martins FVA, Nogueira MRN, Vasconcelos PF, Costa EC. Final approval of the version to be published: Paiva JS, Sousa VTS, Martins FVA, Nogueira MRN, Vasconcelos PF, Costa EC.

REFERENCES


