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The Impact of Nursing Practice Environments on Patient Safety Culture in Primary Health Care - A Scoping Review Protocol


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Abstract

Background Patient safety is a key area of health care organizations, with direct impacts for patient health and well-being. The increasing complexity of current health care settings, associated with high work demands and increasingly stressful professional practice environments, contributes to an increased likelihood of errors and adverse events. Primary health care, given the comprehensiveness of care concentrates a large proportion of the care delivered to the population.

Aim This scoping review aims to map the knowledge about the impact that professional nursing practice environments have on safety culture in the primary health care settings. This knowledge is essential for a more effective and appropriate understanding of this phenomenon and the definition of strategies that can promote the provision of safer care to the population.

Design & setting A scoping review will be conducted based on the method proposed by the JBI, and PRISMA-ScR will be used.

Method Study selection, data extraction, and synthesis will be performed by two independent reviewers. Based on Participants, Concept and Context (PCC) framework, this scoping review will consider studies that address nurses' professional practice environment and patient safety culture in primary health care. We will consider all studies, published or unpublished, from 2002 to the present.

Conclusion The results from this scoping review are expected to provide an overview of the importance of the nursing practice environments on patient safety culture, which will be crucial to define an appropriate range of strategies to promote the delivery of the safest health care to the population.

Open Science Framework protocol registration: https://osf.io/wy48r.

Keywords: environment, nursing, patient safety, primary health care, professional practice.

How this fits in: Primary health care is the main gateway to health services, concentrating a large proportion of the care delivered to the population. The results of this scoping review will be used to understand the impact that nursing practice environments have on patient safety culture in the specific context of primary health care, which is a context where there has been little research related to issues of patient safety and nursing practice environments. The knowledge that this review may bring is essential to
understand more effectively the relationship between nursing practice environments and patient safety, which will be crucial to define appropriate strategies that promote the safest care delivery to the population.

1. Introduction

Patient safety is a key area of health care organizations, with direct impacts for patient health and well-being and is intimately connected with economic costs [1]. The increasing complexity of current health care settings, associated with high work demands and increasingly stressful professional practice environments, contributes to an increased likelihood of errors and adverse events [2-7]. According to World Health Organization (WHO) data the provision of unsafe care is responsible for the annual global loss of 64 million disability-adjusted life years and is one of the top 10 causes of disability and death worldwide [8,9]. Aware of the scale of the global patient safety issue, in 2004 the WHO created the World Alliance for Patient Safety, with the goal to establish concepts while developing guidelines and recommendations to reduce risks and adverse events in health systems [2,10].

Patient safety can be defined as "The process of amelioration, avoidance, and prevention of adverse injuries or outcomes that arise as a result of the healthcare process" [11] (p.11). Safety culture is understood as "the product of individual and group values, attitudes, perceptual skills, and behavioral models" [12] (p.12), and it is essential that there is trust and open communication within organizations so that professionals collaborate in identifying problematic situations and unsafe environments [6,13,14].

The 2004 Institute of Medicine (IOM) report "Keeping Patients Safe: Transforming the Work Environment of Nurses" [15] validated this relationship and brought important reflections, highlighting the importance of nurses’ involvement in organizational management, the nurse-to-patient ratio [16], the need for active nursing leadership, and the need for constructive work environments to promote patient safety [17,15]. In 2020, the WHO also highlighted the need to link patient safety and professional practice environments and established the theme "Safe health workers, safe patients" on World Patient Safety Day that year [19].

The work environment, and specifically the professional practice environment of nurses, is indeed an important variable related to patient safety, and this relationship has been recognized in several studies conducted in the last years [1,17,19-21]. In 2021, Jarrar and colleagues also concluded that healthy nursing practice environments were related not only to improved quality of care, but also to an evident reduction of patient harm. Aspects such as heavy workloads, lack of staff and resources, miscommunication, lack of staff involvement in organizational policies and decision-making, negatively affect the psychological and physical health of nurses [17], increase the likelihood of adverse events occurring [19], and have been associated to poorer patient safety ratings by nurses [1].

The dimensions highlighted in recent studies as being the most important for improving the quality and safe of care include staff recruitment, human and material resources adequacy, participation in health organization decisions, promotion and enhancement of nurses, communication [17,19], cooperation between nurses and other professionals, and support received by nurse managers [1,20].

Nurses should be involved in the decisions of healthcare organizations, be provided with appropriate training in quality development programs, leadership support, and interdisciplinary relationships to improve care delivery and make care safer [17,21,22]. Nurse managers play a key role in promoting positive and safer practice environments by enhancing nurse involvement and participation, encouraging nurses to
adopt evidence-based practices and clinical research, and providing staff training related to safer and higher quality care [19].

Good nursing professional practice environments have a positive correlation not only with patient safety culture, as aforementioned in recent studies, but they are also very important for increasing nurses' job satisfaction, their involvement in institutions and in the profession itself, decreasing the risk of burnout and, consequently, providing higher quality care [21].

Patient safety has been widely studied in recent years in hospital settings, although not so much in primary health care with notoriously less attention, where adverse events occur not only due to high workload, but also due to limitations in infrastructure and procedures [6,22]. Safe primary health care is a global priority for WHO, not only because the patient is not under continuous supervision, but also because of the difficulty in sometimes identifying safety-related incidents of care [5,23,24].

Whatever the level of health care, patient safety is an unquestioned priority and the importance and need for risk-free, effective, and efficient health care is well recognized. Primary health care, given the comprehensiveness of care and including health promotion, disease prevention, diagnosis, treatment, and rehabilitation interventions [10,25], concentrates a large proportion of the care delivered to the population [26]. Therefore, it is essential to understand the impact that nursing practice environments have on patient safety culture in the specific context of primary health care. This knowledge is essential for a more effective and appropriate understanding of this phenomenon and to enable the definition of strategies that can promote the provision of safer care to the population.

A preliminary search of JBI Evidence Synthesis, the Cochrane Database of Systematic Reviews, PROSPERO, Open Science Framework and MEDLINE was conducted and two scoping reviews were identified as being relevant – the first aimed to map evidence about the nursing practice environment in primary health care, but did not address the concept of patient safety, which is central to this study [7]; the second identified the patient safety challenges reported by health professionals in primary health care, but didn’t address the issue of nursing practice environments [27]. Besides the aforementioned revisions, no other current or in progress scoping reviews or systematic reviews on the topic were identified and the primary evidence is poorly described. For this reason, mapping all the knowledge about the impact that professional nursing practice environments have on safety culture becomes an especially interesting subject.

The objective of this scoping review is to map the knowledge about the impact that professional nursing practice environments have on safety culture in the primary health care settings. The review question is “What impact do professional nursing practice environments have on patient safety culture in primary health care?”.

2. Method

The proposed scoping review will be conducted in accordance with the JBI methodology for scoping reviews [28] and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) [29], having the checklist followed when writing the review. The current protocol followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols
Eligibility Criteria

The eligibility criteria were elaborated according to the Population, Concept and Context (PCC) framework [31]. Regarding the participants, we will consider studies that include nurses in any field of action. The concept under study in this review is evidence mapping related to patient safety culture and nurses' professional practice environments.

Patient safety is defined by the World Health Organization as “the reduction of risk of unnecessary harm associated with healthcare to an acceptable minimum” [32] (p.15) and patient safety incident is “an event or circumstance which could have resulted, or did result, in unnecessary harm to a patient” [32] (p.22).

The safety culture is considered the “product of individual and group values, attitudes, perceptions competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization’s health and safety management” [32] (p.142).

Nursing work environment can be defined as “the set of characteristics of the work context that facilitate or constrain the professional nursing practice” [33]. For International Council of Nurses (ICN) a favorable work environment is characterized by having a safe work environment, innovative policies focused on recruiting and retaining professionals, adequately compensation to professionals, and sufficient recognition programs and material resources [34].

Studies that include and relate these two concepts, with the definitions mentioned, will be considered in this review. Studies that guide or describe nurses' professional practice environments if they also consider suggestions related to patient safety or patient safety culture will also be included in this scoping review.

In terms of the context, this scoping review will include studies conducted in primary care settings or primary healthcare organizations regardless of the country of origin or sociocultural environment, considering the authors' interest in mapping the existing evidence. Primary care is organized in different ways through the countries, with different approaches in each one. This diversity of interpretations and implementations in different countries motivated WHO and UNICEF to join efforts to develop a clear and simple definition that would facilitate its interpretation [35]. Thus, primary health care can be defined as “is a whole-of-society approach to health that aims at ensuring the highest possible level of health and well-being and their equitable distribution by focusing on people's needs and as early as possible along the continuum from health promotion and disease prevention to treatment, rehabilitation and palliative care, and as close as feasible to people’s everyday environment” [35] (p.2). Whereas in some countries primary health care operates based on a strong, nationwide health care system, in other countries primary health care consists of small services with few staff and resources, and in some cases these services are provided by private, independent health care institutions [33]. Therefore, in this review we will consider studies conducted in primary care settings, primary healthcare organizations or centers and community services or centers.
Search Strategy
A three-step search strategy will be conducted in this review. An initial limited search of MEDLINE (PubMed) and CINAHL (EBSCO) was undertaken to identify articles on the topic. The text words contained in the titles and abstracts of relevant articles, and the index terms used to describe the articles were used to develop a full search strategy (Supplementary Table 1). A second search using all the identified keywords and index terms will be undertaken across the following databases: MEDLINE (PubMed), CINAHL (EBSCO) and Embase (Elsevier). To the search for unpublished studies, we will include RCAAP – Repositório Científico de Acesso Aberto de Portugal, WHO – World Health Organization database, Agency for Health Research and Quality database, WorldCat and ProQuest Dissertations and Theses. Lastly, in a third step the reference lists of articles included in the review will be screened for additional papers.

We will consider literature published or unpublished in any language. Articles published from 2002 to the present will be included, as in January 2002 the WHO Executive Board discussed the topic of patient safety extensively, and since then many Member States have taken initiatives on patient safety within their own health care systems, becoming a very important milestone in patient safety.

This scoping review will consider quantitative (eg, experimental, quasi-experimental, prospective, and retrospective cohort, case-control, cross-sectional), observational (eg, case series, individual case reports, descriptive cross-sectional studies), qualitative (eg, phenomenology, ethnography, qualitative description), mixed-methods studies, systematic reviews, opinion papers and unpublished studies. This will allow a greater sensitivity in the search, which is desirable for this scoping review.

Study Selection
Subsequently to the search, all identified records will be collated and uploaded into EndNote X9.3.3 (Clarivate Analytics, PA, USA) and duplicates will be removed. The titles and abstracts will be reviewed by two independent reviewers to assess the eligibility of the studies against the initially defined inclusion criteria. A pilot screening process will be conducted independently by both reviewers on an initial 25 titles and abstracts. The results of the screening will then be compared and discussed, while allowing changes to the eligibility criteria to ensure that both reviewers agree, if required. This pilot process will continue until we reach at least 75% agreement between the reviewers [31]. The full text of articles that meet or potentially meet the inclusion criteria will be reviewed. The full text of selected citations will be assessed in detail against the inclusion criteria by two independent reviewers. Any disagreements between the reviewers at each stage of the selection process will be mitigated through a constructive discussion or by recuring to a third reviewer. Citations from eligible studies retrieved in full will be imported into Rayyan (Qatar Computing Research Institute, Doha, Qatar). Any reasons for exclusion of full-text papers that do not meet the inclusion criteria will be recorded and reported in the scoping review. The results of the search will be reported in full in the final scoping review and presented in a PRISMA flow diagram [36].

Data Extraction
Data will be extracted from selected studies included in the scoping review by two independent reviewers using a data extraction tool developed by the reviewers. The data extracted will include specific details
about the concept, context and study methods and specific objectives. The draft data extraction tool will be modified and revised as necessary during the process of extracting data from each included paper. Modifications will be detailed in the full scoping review. Once again, any disagreements that may arise between the reviewers will be resolved with a third reviewer. If necessary, the authors of the included papers will be contacted for further information or data clarification.

3. Discussion

With this scoping review, we aim to map the knowledge about the impact that professional nursing practice environments have on safety culture in primary health care settings. A possible implication of this study for practice and research is that it may allow the definition of appropriate strategies to implement interventions that, through the promotion of more positive and healthier nursing practice environments, can make the care provided safer.

We believe that this scoping review can influence and clarify how patient safety and nursing practice environments influence each other in such a specific context as primary health care. Optimizing nursing practice environments could impact the patient safety culture in primary health care by making care safer and reducing adverse events, which will have an undeniable impact on population health. We hope that this synthesized knowledge can bring important contributions to practice and research, developing new lines of research, and influencing professionals and managers in decision-making.

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