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Communication education regarding patient safety for registered nurses in acute hospital settings: a scoping review protocol

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ABSTRACT

Introduction The importance of correct and timely communication continues to be emphasised in the area of patient safety. Nurses play a key role in communicating with a variety of healthcare personnel to deliver safe care for patients. Many attempts have been made to improve nursing professionals' communication competencies regarding patient safety. However, the scope, method and effectiveness of communication education regarding patient safety for registered nurses have not been sufficiently reviewed. In order to understand the overall status of this field, a scoping review with a systematic framework is necessary. The objective of this study is to map the extent, range and nature of literature on communication education regarding patient safety for registered nurses in acute hospital settings and identify gaps to guide future research, policy and practice.

Methods and analysis This study will be conducted in accordance with the methodology for scoping reviews developed by Arksey and O'Malley. To strengthen its rigour, the scoping review will follow the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews guidelines. The overall review process will involve an independent review by two reviewers to select and analyse literature. The databases to be explored are MEDLINE (Ovid), Embase, Education Resources Information Center (ERIC), the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and the Korean Medical Database (KMBASE). In addition, we will endeavour to include the grey literature through manual searches on patient safety-related websites. This review will target literature on communication programmes for patient safety provided to registered nurses in acute hospital settings and will include peer-reviewed literature in English and Korean since 2000, when research in the field of patient safety started to increase rapidly.

Ethics and dissemination Since this study is a review of previous studies, no ethics approval is required. The findings of the study will be disseminated in a peer-reviewed journal for publication.

Strengths and limitations of this study

- This scoping review will provide a comprehensive overview of communication education regarding patient safety for registered nurses in acute hospital settings.
- In order to ensure the rigour of the review, we will use the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews guidelines, the most current guidance on conducting scoping reviews.
- A comprehensive search strategy has been developed in consultation with a librarian and a study selection and data extraction process were carried out with a research team composed of content experts in the field of patient safety.
- This scoping review may include some grey literature published outside of journals and not written in English and Korean, and the reference lists of included articles and relevant literature in patient safety-related journals will be handsearched to identify articles missed by the search strategy.
- No formal quality assessment will be conducted due to the nature of the scoping review framework.

INTRODUCTION

In the highly complex healthcare environment, various personnel provide advanced medical technologies through multiple procedures.[1] Therefore, effective communication has been pointed out as a crucial contributor to patient safety.[2] Since 2000, when a pivotal report was released on the prevalence of patient safety incidents in healthcare,[3] the importance of effective communication for patient safety has been consistently emphasised.[4]

It is essential for healthcare professionals to communicate with team members and patients correctly and in a timely manner to ensure patient safety. Patient safety communication is a dynamic process wherein healthcare professionals exchange information that facilitates positive interpersonal relationships in clinical settings, both within and between organisational structures, to provide effective and safe patient care and to prevent adverse events.[5] According to the suggestions made by the Canadian Patient Safety Institute,[5]

effective communication for patient safety can be divided into two main categories: preventing adverse events and responding to adverse events. In order to have communication competencies for both categories, all healthcare providers, including nurses, must have knowledge, skills and attitudes about effective written, verbal and non-verbal communication in order to communicate in a safe way. The proper use of electronic communication tools and channels to ensure patient safety is also essential.[5]

Nurses in clinical settings, in particular, place the patient at the centre of the treatment process to achieve the best health outcomes[6] and are always present at every significant point of communication to ensure patient safety and the quality of care.[6 7] To attain the shared goal of ensuring the safety and quality of patient care, nurses should be able to communicate closely with other nurses and various healthcare providers, as well as with patients and their families as members of one team.[1] As such, the importance of the role of nurses in patient safety underscores the need to prepare nurses by equipping them with communication competency for patient safety.

In an effort to efficiently convey the concept and content of patient safety, representative patient safety organisations such as the Australian Commission on Safety and Quality in Health Care (Australia),[8] the National Patient Safety Agency (UK),[9] and the Canadian Patient Safety Institute (Canada)[5] have developed a systematic framework for patient safety education. In particular, the Canadian Patient Safety Institute proposed the Safety Competencies Framework in 2008, which emphasises communication as a distinct domain consisting of six domains.[5] The third domain presented enabling competencies for each of the four core competencies required to 'communicate effectively for patient safety.'

- Show effective communication skills (both verbal and non-verbal) to prevent adverse events.
- Communicate in specific high-risk situations effectively to ensure patient safety.
- Use written communication effectively to ensure patient safety.
- Use communication technologies properly and effectively to ensure safe patient care.

Constant efforts are being made to improve the communication competency of nurses for patient safety through measures[10] such as standardised communication,[11 12] handover tools,[13] simulations[14] and speaking up.[15] A study that systematically reviewed the literature on patient safety communication focused on handover communication,[16] standardised communication tools[17] and general patient safety education including falls prevention.[18 19]

However, in nursing education, patient safety education still lacks systematicity and is conducted in different ways from institution to institution.[20] This is also the case in Korean nursing education.[21] To our knowledge, it is not known to what extent each competency of communication regarding patient safety has been covered. In addition, specific communication techniques, such as structured communication among healthcare professionals[17 22] or therapeutic communication with patients[23] tend to be emphasised rather than a comprehensive approach to communication competency regarding patient safety. Regarding teaching methods, it is known that direct participation provides authentic education, and various educational methods have been recommended.[24] It is meaningful to reconfirm the methods of communication education for patient safety and their effectiveness in the healthcare setting.

In light of the above considerations, it is important to understand the current state of education on communication to improve patient safety, and to examine the scope of such education and the methods covered, before attempting to identify interventions for nurses to improve patient safety communication effectively. Therefore, this scoping review will systematically explore how communication education for patient safety has been implemented in healthcare settings for nurses.

OBJECTIVES

The objectives of this review are to understand the current state of communication education regarding patient safety for registered nurses in acute hospital settings. The findings of this scoping review will provide a basic understanding of which areas have been highlighted and which areas have been overlooked. Moreover, this review will guide further educational interventions by addressing the impacts of extant communication education on patient safety. Specifically, the aim of this scoping review is (1) to assess the scope, extent and nature of the literature on communication education related to patient safety for registered nurses in acute care settings; (2) to map the current literature to generate an overview of communication education on patient safety for registered nurses in acute hospital settings and (3) to identify gaps in existing studies for future education, research and practice.

METHODS AND ANALYSIS

This scoping review will be conducted based on the methodological framework developed by Arksey and O'Malley[25] and refined by Levac *et al*.[26] This framework consists of six stages: (1) identification of the research question, (2) identification of relevant studies, (3) study selection, (4) charting the data, (5) collating, summarising, and reporting the results, and (6) finally, external consultation with relevant stakeholders.

Scoping reviews are useful tools to identify current knowledge in a given field and to examine how research is conducted on a certain topic. We will conduct a scoping review to examine how communication education regarding patient safety is conducted in the clinical nursing field. We would also like to map an initiative to improve the communication competencies of registered nurses to fit the already established Canadian framework for safety competencies, for which a scoping review is a suitable method.[25 27] Additionally, since this scoping

review will include a variety of communication education regarding patient safety, it can be used as a precursor to systematic reviews.[25 27]

The protocol follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews guidelines to ensure rigour in reporting the methodology.[28] The scoping review searches will be completed by December 2021, and the subsequent analysis of relevant literature will be completed by March 2022.

Stage 1: defining the research question

Scoping reviews include broad research questions since they aim to synthesise the breadth of evidence for areas of inquiry.[26] Our research team developed research questions with a wide frame in consideration of the population (registered nurses), the concept (communication regarding patient safety) and the context (acute hospital settings). The specific research questions are:

- What kinds of communication education programmes regarding patient safety for nursing professionals have been evaluated?
- What aspects of communication competencies for patient safety are taught in educational interventions?
- What outcomes of communication education programmes regarding patient safety have been empirically tested and measured?
- What were the lessons learnt from existing education initiatives to improve communication competency for patient safety?

Stage 2: identifying relevant literature

The comprehensive search strategy was developed by the research team in collaboration with an experienced librarian at the researcher's university. Eligible studies will be identified through MEDLINE (Ovid), Embase, Education Resources Information Center (ERIC), the Cumulative Index to Nursing and Allied Health Literature (CINAHL), and the Korean Medical Database (KMBASE). We selected these databases for their coverage of health sciences, education and nursing literature.

The search query was first developed in MEDLINE (Ovid) and will be translated for use in the other databases. The search terms cover all areas of communication regarding patient safety and registered nurses, including Medical Subject Headings terms, subject headings and keywords, and free text (table 1). To search for terms for patient safety, we will use a search filter with the best combination of sensitivity (92.77%) and precision (94.26%), which was designed by Tanon *et al*: (safe$.ti,ab. OR exp Safety/ OR Err$.ti,ab. OR Adverse.ti,ab.) AND (exp *Risk Management/ OR exp *Medical Errors/ OR *Safety Management/).[29] A preliminary search conducted by one researcher and research team will test the query prior to the scoping review to ensure the validity of the search sensitivity.

To capture the grey literature, we will also extensively conduct a hand-search of reference lists of the selected articles and key journals regarding patient safety including *Journal of Patient Safety, BMJ Quality and Safety*, and *Journal of Patient Safety and Quality Improvement*. In addition, we will include Google Scholar and search targeted websites related to patient safety such as Quality and Safety Education for Nurses, Institute for Healthcare Improvement, Patient Safety Network weekly issues, and the Joint Commission. The searches will be limited to articles published after 2000 when the patient safety concept was first emphasised in the Institute of Medicine's report, *To Err is Human: Building a Safer Health System*.

Table 1 Initial search strategy for MEDLINE (Ovid)

Keyword	Query for Ovid MEDLINE
Registered nurses	exp Nurses/ OR exp Nursing/ OR (care adj2 (provider* or professional*)).ti,ab,kw./ OR (health adj2 (provider* or professional*)).ti,ab,kw.
Communication	exp communication/ OR verbal*.ti,ab,kw./ OR nonverbal*.ti,ab,kw./ OR listen*.ti,ab,kw./ OR written*.ti,ab,kw./ OR document*.ti,ab,kw./ OR record*.ti,ab,kw./ OR hand*off.ti,ab,kw./ OR hand*over.ti,ab,kw./ OR notif*.ti,ab,kw./ OR report*.ti,ab,kw./ OR (communicat* adj2 (structur* or standard* or tool* or techniq* or technolog*)).ti,ab,kw.
Education	exp Education/ OR exp Curriculum/ OR program.ti,ab,kw./ OR training.ti,ab,kw.
Patient safety	safe$.ti,ab. OR exp Safety/ OR Err$.ti,ab. OR Adverse.ti,ab.) AND (exp *Risk Management/ OR exp *Medical Errors/ OR *Safety Management/
Period	limit yr="2000 -Current"

Stage 3: study selection

EndNote V.20 will be used for data collation and deduplication. Two reviewers will independently review titles and screen abstracts with prespecified inclusion criteria and will decide whether to include studies in the analysis. Discrepancies will be managed by reviewing full-text articles and by a discussion between the two reviewers or a third reviewer if required.

The following inclusion criteria will be used when reviewing and selecting articles: (1) studies focusing on any type of communication education regarding patient safety; (2) communication regarding patient safety according to the CPSI framework includes (A) effective verbal and non-verbal communication abilities to prevent adverse events, (B) communication in special high-risk situations to ensure the safety of patients such as clinical crises, emotional or distressing situations and conflict, (C) written communication for the patient and (D) communication technologies to provide safe patient care such as the Electronic Health Record, the telephone, the fax machine and other such technologies; (3) studies

including registered nurses who provide direct nursing care to patients in acute hospital settings; (4) all published empirical studies, such as experimental (randomised controlled trials, quasi-randomised controlled trials, non-randomised clinical trials) and quasi-experimental studies (interrupted time series, controlled before-after studies); (5) studies written in English or Korean; and (6) papers published from the year 2000 onwards due to reflect current patient safety practice.

The exclusion criteria for literature are as follows: (1) studies focusing on general interpersonal communication or therapeutic communication techniques; (2) studies including undergraduate nursing students and nurse managers; (3) qualitative studies, observational studies, literature reviews and commentaries; and (4) studies focusing on the impact of health information technology/systems and/or checklists themselves rather than educational interventions.

After reviewing the title and abstract to identify relevant articles, a full-text review will be performed to confirm eligibility for the review. When conducting full-text reviews, the reviewers will evaluate each article using the following questions.

1. Does the article focus on communication education in an acute hospital setting?
2. Does the educational intervention focus on communication regarding patient safety?
3. Does the educational intervention target registered nurses?

Stage 4: charting the data

A standardised charting form will be developed by the research team to chart the data. There will be a meeting to examine the charting form and to share how to use this form before full-scale data extraction begins. In order to confirm the charting form, two reviewers will extract the data from the first 10 studies as a pilot-test, and the form may be revised if necessary.

The preliminary variables include (1) author, (2) year of publication, (3) the country where the study was conducted, (4) study design, (5) the theoretical foundation used in the programme, (6) duration, (7) teaching methods, (8) tool, (9) the use of a single-disciplinary or multidisciplinary approach and (10) the target of communication (eg, nurse to physician, nurse to nurse, nurse to patients). We will also map each article to the relevant competency of the third domain in the Canadian Patient Safety framework.[5]

Intervention outcomes will be charted according to Kirkpatrick's four levels of evaluation.[30 31] First, the level of the reaction indicates learners' responses to the programme, including educational satisfaction, and evaluation of the programme. The level of learning includes learners' knowledge, skills and attitudes, and we will examine whether they are objective (eg, performance evaluation) or subjective (eg, self-reported evaluation). The level of behaviour includes behavioural changes transferred to the clinical practice site. Finally, the level of results includes expanded impacts on patient outcomes (eg, patient safety incidents and the mortality rate) and on organisational outcomes (eg, changes in organisational culture and psychological safety).

Two reviewers will extract the data independently. While charting the data, if themes that are not provided in the charting form emerge, we plan to revise the form if necessary. Any disagreements and ambiguity will be resolved by iterative discussions or a third reviewer if required.

Stage 5: collating, summarising and reporting the results

Three steps outlined by Levac *et al* will be taken: (1) analyse the data using a descriptive numerical summary and thematic analysis; (2) report the results according to the purpose of the scoping review with consideration of readers; and (3) discuss the meaning of the review and the broader implications for future research, policy and practice.[26]

When analysing data, we will first conduct a descriptive quantitative analysis with the extracted data to provide numerical summaries of the study characteristics.[25] Details of the studies, including education methods and outcomes, will be displayed as tabular summaries.

Two reviewers will also conduct a qualitative thematic analysis independently to identify emerging themes found within the charted data. The thematic analysis will be used to identify commonalities within each of the communication competencies regarding patient safety and levels of the outcomes. The derived themes will be reviewed and confirmed by a research team composed of researchers with more than 5 years of clinical experience who have conducted nursing research in the field of patient safety.

Since it is not a requirement considering the goal of the scoping review, a quality evaluation of the literature will not be performed; however, details of the included articles will be reported in a summary table to provide context regarding the quality of the evidence.

Stage 6: external consultation with relevant stakeholders

A consultation meeting including patient safety experts, clinical nurses and relevant stakeholders will be held to add methodological rigour reflecting actual opinions from clinical practitioners. The consultation meeting will consist of structured presentations and focus group interviews with approximately five experts (clinical nurses and coordinators in charge of patient safety and quality in acute hospital settings). The research team will present the preliminary findings according to each research question, and then interpret the findings and reach a consensus through discussions to promote knowledge exchange in the focus group interviews. In addition, based on the research findings, we will identify strategies to improve communication education regarding patient safety during the interviews.

Patient and public involvement

Patients and the public will not be involved in the design or planning of this scoping review.

Ethics and dissemination

Since this study will synthesise information through a literature review, it does not require ethics approval. The findings of the study will be presented at a conference and disseminated in a peer-reviewed journal.

DISCUSSION

Several interventions have been made to improve communication for patient safety. To the authors' knowledge, this will be the first comprehensive review of communication education regarding patient safety for registered nurses. This review will enhance knowledge of how to equip nursing professionals during training with essential communication skills to ensure patient safety in the clinical field.

We anticipate that the findings of the scoping review will lead to the development and evaluation of interventions and programmes that aim to promote communication for patient safety. In terms of education and research, the results of this study will be used to identify and raise awareness regarding educational topics on communication regarding patient safety that are overlooked and to examine the effect of educational interventions. The results will lead to nursing policy improvements to foster nurses with communication competencies for patient safety through continuing programmes in terms of quality management of nursing personnel. Additionally, at the clinical practice level, strategies for improving nurse communication in the clinical field can be identified and applied in practice. This will eventually lead to a reduction in medical errors and improvements in patient safety, patient health and quality of care.

A limitation of this study is that it will only examine the literature on communication education for patient safety for nurses. Although multidisciplinary communication is certainly important for patient safety, the authors will focus on nurses due to their central role in patient safety. Our protocol encompasses studies that include both nurses and members of other professions, but not studies conducted among single groups of other professionals. Since patient safety is an important value for all healthcare workers, research on the current status of patient safety communication education in other professions is also needed.

Contributors HJ conceived the idea for the study and designed this protocol. HJ and ML developed the search strategy and drafted the manuscript. N-JL contributed to the refinement of the protocol. All authors (HJ, ML and N-JL) critically reviewed and approved the final manuscript of the study.

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Competing interests None declared.

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