

Table 1-A19: Identified clinical reasoning models based on the scoping review (continued)

The Self-Regulated Learning (SRL) Model for reflective clinical reasoning (Kuiper and Pesut, 2004).	To explore the impact of self-regulated learning theory on reflective practice in nursing, and to advance the idea that both cognitive and metacognitive skills support the development of clinical reasoning skills.	Integrative review of published literature in social science, educational psychology, nursing education, and professional education. The SRL model describes self-regulation as a dynamic process that includes the observations of behaviours and self-regulation of reactions to make self-judgments of competence and areas for improvement for clinical reasoning. The environmental self-regulation of skills, activities, physical context and relationships with preceptors, staff and patients is necessary to determine the context where clinical reasoning takes place. Metacognitive self-regulation includes metacognitive (reflective) self-correction associated with the use of knowledge and thinking strategies that are used to determine goals.	The SRL model is offered to support teaching and learning of reflective clinical reasoning. The model supports the development and acquisition of higher order thinking skills such as interpretation, analysis, inference, explanation, and evaluation.
The Clinical Reasoning Model (CRM) (Levett-Jones, 2010)	To enhance nurses' clinical reasoning skills and consequently their ability to manage 'at risk' patients.	A literature review and an examination of research data to identify commonly occurring thinking strategies. The model describes an eight-step cyclical process: look, collect, process, decide, plan, act, evaluate, and reflect. Effective use of the CRM by nursing students and its application in practice by novice nurses is directly linked to the five rights of clinical reasoning, that is, the ability to collect the right cues and take the right action for the right patient at the right time, and for the right reason	The CRM has applications for classroom teaching and provides a structure that links well with problem-based and enquiry-based learning. The phases and steps in the model are appropriate for self-directed learning and can be used to develop computerized learning packages and case studies. The CRM also provides an approach that can be used in simulation-based learning experiences using patient simulators or standardized patients

competence and seniority levels, and applicability to other healthcare professions. The authors are presently working on the development of a new model using an innovative and rigorous approach.

Ethics statement: Authors confirm that all relevant ethical standards for research conduct and dissemination have been met. The submitting author confirms that relevant ethical approval was granted, if applicable.

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EDUCATION

A20

DOES THE USE OF SIMULATION ENHANCE THE DEVELOPMENT OF REGISTERED PHYSIOTHERAPIST'S RESPIRATORY 'ON-CALL' SKILLS – A LITERATURE REVIEW

Emily Barnfield^{1,2}; ¹Gloucestershire Hospitals NHS Foundation Trust, Gloucester, United Kingdom²Coventry University, Coventry, United Kingdom

Correspondence: emily.barnfield@nhs.net

10.54531/NNQB8682

Background and aim: On-call respiratory physiotherapy is utilized when an acutely unwell patient could deteriorate without immediate assessment and treatment overnight. Education related to this topic varies greatly and is often of poor quality. Simulation-based education (SBE) has been increasingly used within other areas of healthcare yet, Gough et al. [1] completed a study in 2013, which found only 39% of acute trusts used simulation for respiratory on-call training.

Aim: To determine from existing research, whether SBE can enhance the development of registered physiotherapists respiratory 'on-call' skills in order to impact future practice.

Methods: A qualitative literature review was completed as part of a PgCert in Health Simulation at Coventry University, in March 2023. Ethical approval was gained from Coventry University (P149952). Studies included were found by searching AMED, CINAHL Embase and Medline databases. Figure 1-A20 presents the PRISMA flow diagram [2]. Final reports included were critically analysed using the Critical Appraisal Skills Programme framework [3] and data extracted and formatted into a table. General themes were identified using an inductive approach.

Results: Eleven papers were selected to be reviewed after the removal of duplicates, screening and the exclusion criteria were applied. The main themes identified were the use of high-fidelity simulation, the measure of confidence and/or competence, and findings of positive implications for practice. SBE is widely used for other healthcare professions with positive outcomes; however, its use within respiratory physiotherapy is limited. Most studies chose to measure

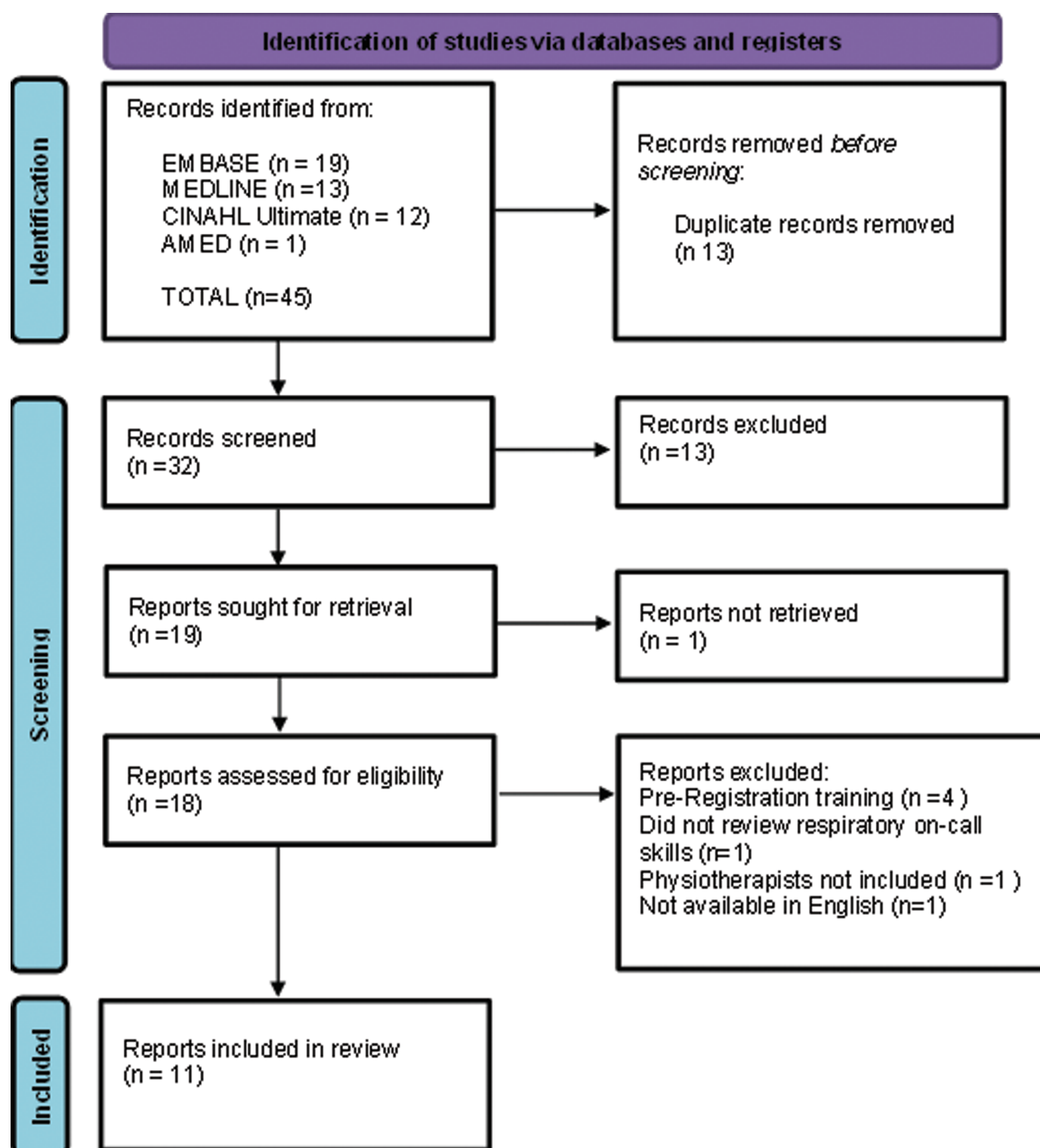


Figure 1-A20: PRISMA flow diagram

self-reported levels of competence and confidence, which is an example of Kirkpatrick level-one evaluation. These measures have only casual links to transfer of knowledge and behaviour change, which are key requirements when applying training to clinical settings. Interestingly, the review also demonstrates favourable use of high-fidelity manikins within this population. Although this was not discussed by the researchers, this may be a barrier for further implementation due to cost and technical knowledge required to use the equipment.

Conclusion: The use of SBE has been beneficial in other healthcare professions and similar positives were found for its use with respiratory physiotherapists. However, much of the research is of low quality, and further research is required to review other confounding factors that may influence the outcomes and longitudinal staff behaviour.

Ethics statement: Authors confirm that all relevant ethical standards for research conduct and dissemination have been met. The submitting author confirms that relevant ethical approval was granted, if applicable.

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EDUCATION

A21

THE USE OF SIMULATED LEARNING IN PREQUALIFYING PHYSIOTHERAPY EDUCATION: A SCOPING REVIEW

Jonathan Room¹, Robyn Stiger¹; ¹*Oxford Brookes University, Oxford, United Kingdom*

Correspondence: jroom@brookes.ac.uk

10.54531/HVPN9537

Background and aim: Simulation-based learning is an increasingly popular pedagogical approach. In some areas of physiotherapy, it is better been documented, for example, cardiorespiratory physiotherapy [1]. However, its use in other physiotherapy-related settings is less clear. Therefore, the aim of this project was to review the literature on simulation-based learning in prequalifying physiotherapy education, in order to explore where studies have taken place, which physiotherapy settings it is used in and indication of its effectiveness in teaching.

Methods: This study was carried out based on the scoping review methodology outlined by Arksey and O'Malley [2]. The following databases were searched: AMED, BNI, CINAHL, Embase, Emcare, HMIC, Medline and PsychInfo, using specific search terms, to find studies involving the use of simulation in a prequalifying physiotherapy setting. Returned papers were screened using inclusion and exclusion criteria by two reviewers. The database search results were recorded and managed using Rayyan™ [3].

Results: The database search retrieved 280 papers. Following the removal of duplicates, screening titles and abstracts and then screening full-text papers, 39 papers were included. The included studies were conducted in USA ($n = 23$), Australia ($n = 10$), Canada ($n = 1$), Finland ($n = 1$), Germany (1), Spain (1), Taiwan (1), UK (1). Simulation-based learning activities took place in a variety of physiotherapy settings. Most took place in an acute care or cardiorespiratory setting. There was a high level of variation in the reporting of the described simulation activity. This made it difficult to establish whether simulations were of high or low fidelity. Where reporting was well described, simulation activities tended to follow a framework of pre-brief, simulation and then debriefing. The majority of studies reported some measure of the effectiveness or feasibility of simulation-based learning.

Conclusion: This scoping review identified a growing body of evidence supporting simulation-based learning in prequalifying physiotherapy education. However, to date, its use in pedagogical research has tended to focus on the cardiorespiratory setting, and it has often been researched as a tool to explore or enhance interprofessional collaboration. Whilst both of these areas are of value to the profession, there is scope to explore the use of simulation-based learning

in settings such as musculoskeletal teaching. Further work on its use and value in the teaching of discrete complex tasks, in addition to collaborative practice, such as team working, de-escalation and communication is also needed.

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CONTENT

A22

THE USE OF SIMULATION IN PAEDIATRIC EMERGENCY MEDICINE: A SCOPING REVIEW

Laura Lee¹; ¹*Norfolk And Norwich Hospital, Wymondham, United Kingdom*

Correspondence: Laura.lee@nnuh.nhs.uk

10.54531/IIXM7782

Background and aim: The use of simulation in healthcare has increased in recent years. It is frequently used for replicating clinical scenarios and allows for the acquisition of skills in a safe environment. Whilst enabling candidates to make mistakes and learn from them without fear of harming patients is used across many specialities including paediatric emergency medicine for a range of teaching across all professional groups, Lateef [1] identifies that in order for it to reach its maximum potential, it needs to be integrated in traditional training programmes. This is becoming more commonplace. In order to know how to fully integrate it into practice, an understanding of how it is currently being used is essential. This scoping view aims to explore how simulation training is being used and what it is used for within paediatric emergency medicine (PEM), as reported by the literature.

Methods: This review followed a five-step scoping review framework outlined by Arksey and O'Malley [2]. Literature searches were conducted in Medline and CINAHL with no limitation applied. Sixty-six studies were screened. Reference lists were also screened. Of the screened studies, 25 were subject to full test review and 19 were included in the final review. Articles were screened at all levels by one reviewer. Data extraction was also carried out by one reviewer.

Results: No papers focused on the delivery of simulation within paediatric emergency medicine in the UK, with the majority of papers originating from the USA. There was also no paper that outlined the varied uses of simulation in PEM. Many of the papers described and evaluated single scenarios that were used in varying settings or simulation courses that were not specific to PEM. Both high and low fidelity simulations were reported with much of the focus on high-fidelity simulation. Delivered through either simulation suite-based learning or *in situ* simulation. There is little discussion about the use of simulation for interpersonal