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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

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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.

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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CONTENT

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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

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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