

## LITERATURE REVIEW

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**SIMULATION-BASED EDUCATION  
COMPARED TO CLINICAL TEACHING FOR  
UNDERGRADUATE NURSES: A SYSTEMATIC  
REVIEW**

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**Introduction:** Simulated practice learning is simulation-based education (SBE) that must adhere to the Nursing and Midwifery Council (NMC) Standards for Pre-Registration Nursing programmes including the Standards for Student Supervision and Assessment [1]. The use of SBE aids the development of clinical knowledge, skills and practice in students and increases the possibility of applying the acquired knowledge and skills into clinical practice. Unlike clinical practice, where the needs of the patient are the main priorities, simulation exercises are centred upon the needs of the student and can be tailored to meet required learning outcomes. This systematic review evaluates the effectiveness of using SBE to teach clinical practice-based patient care skills to nursing students compared to clinical practice-based and/or patient-based teaching on the same topic.

**Methods:** Included were comparative studies published between January 2000 and January 2024 where outcomes were externally verified exams, proficiencies or competencies for both groups. Searches were conducted in 10 databases (platforms): MEDLINE (OVID), Embase (OVID), Maternity and Childcare (OVID), CINAHL (EBSCO), PsycINFO (EBSCO), Central (Cochrane Library), Scopus, Science Citation Index (Web of Science), ERIC (EBSCO), and Assia (ProQuest). Citation checking, data extraction and quality assessment were in duplicate, and Revman (5.4) used for meta-analysis, using standardised mean differences (SMD).

**Results:**

**Discussion:** Meta-analysis results show that SBE is as good or better than clinical teaching only to teach clinical practice-based patient care skills to nursing students. Replacement of hospital placements with SBE is viable but is resource-intensive and requires strategic planning. Future research could assess the cost effectiveness of SBE to teach undergraduate nursing students.

**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.

## REFERENCES

1. Nursing and Midwifery Council (NMC). Part 2: Standards for student supervision and assessment. 2018. Available from: <https://www.nmc.org.uk/globalassets/sitedocuments/standards/2023-pre-reg-standards/new-vi/printer-friendly/standards-for-student-supervision-and-assessment-print-friendly.pdf>.

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