Problem-based learning in nurse education

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BACKGROUND AND PURPOSE

▶ This is a summary of Sharma *et al*'s study.[1]
▶ Problem-based learning (PBL) is a common learning strategy used in nurse education.
▶ During PBL, student nurses solve clinical scenarios and practice-based problems.
▶ Previous systematic reviews indicate PBL improves student nurse critical thinking, but the existing reviews are becoming dated and need updating with the latest research.
▶ The purpose of this systematic review and meta-analysis was to use the latest research to determine the effectiveness of PBL for student learning in nurse education.

METHODS

Inclusion criteria	Search strategy	Appraisal and analysis
▶ Quasi-experimental and randomised controlled trials using PBL ▶ Student nurses ▶ Published in English	▶ Search completed 2022 ▶ Seven databases, Google Scholar and previous reviews ▶ Two reviewers completed screening independently	▶ Critically appraised using Joanna Briggs Institute checklist and Risk of Bias tool ▶ Meta-analysis using standardised mean difference

RESULTS AND AREAS FOR FUTURE RESEARCH

▶ The review includes 16 studies (published 2001–2021) and 1143 student nurses.
▶ Studies were quasi-experimental (n=10) and randomised controlled trials (n=6).
▶ PBL was delivered weekly (10–120 min) over several weeks (3–32 weeks).
▶ Control groups received traditional learning (n=7), lectures (n=6), demonstration (n=1), clinical learning (n=1) or no intervention (n=1).
▶ Studies were based in Iran (n=7), South Korea (n=5), China (n=3) and Taiwan (n=1).
▶ Outcome data included critical thinking (n=8 studies), problem-solving (n=3 studies) and self-confidence (n=3 studies).
▶ PBL improved student nurse critical thinking, analysis and evaluation more than other learning strategies.

TAKE HOME MESSAGES

▶ The systematic review and meta-analysis provides an important addition to the literature on PBL within nurse education.
▶ PBL can improve critical thinking skills, analysis and evaluation by student nurses and may be more effective than traditional learning strategies.
▶ The value of PBL for improving student nurse problem-solving and self-confidence is less clear and needs further exploration.
▶ Limitations in the review include the small number of countries involved, the focus on certain learning outcomes and the limited information about how PBL was delivered.
▶ More research is needed to fully understand the value of PBL in nurse education.

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Reference

1 **Sharma S**, Saragih I, Tarihoran E, *et al*. Outcomes of problem-based learning in nurse education: a systematic review and meta-analysis. *Nurse Education Today* 2023;**120**.