



# Problem-based learning in nurse education

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## BACKGROUND AND PURPOSE

- ▶ This is a summary of Sharma *et al*'s study.<sup>1</sup>
- ▶ 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
<ul style="list-style-type: none"> <li>▶ Quasi-experimental and randomised controlled trials using PBL</li> <li>▶ Student nurses</li> <li>▶ Published in English</li> </ul>	<ul style="list-style-type: none"> <li>▶ Search completed 2022</li> <li>▶ Seven databases, Google Scholar and previous reviews</li> <li>▶ Two reviewers completed screening independently</li> </ul>	<ul style="list-style-type: none"> <li>▶ Critically appraised using Joanna Briggs Institute checklist and Risk of Bias tool</li> <li>▶ Meta-analysis using standardised mean difference</li> </ul>

## 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.