Problem-Based Learning in Nurse Education

Background and purpose
- This is a summary of Sharma, et al. (2022) outcomes of problem-based learning in nurse education: a systematic review and meta-analysis, Nurse Education Today, 120: 1-10.1
- 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

<table>
<thead>
<tr>
<th>Inclusion criteria</th>
<th>Search strategy</th>
<th>Appraisal and analysis</th>
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<tbody>
<tr>
<td>Quasi-experimental and randomised control trials using PBL.</td>
<td>Search completed 2022</td>
<td>Critically appraised using Joanna Briggs Institute checklist and Risk of Bias tool.</td>
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<td>Student nurses.</td>
<td>Seven databases, Google Scholar, and previous reviews.</td>
<td>Meta-analysis using standardised mean difference (SMD).</td>
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<td>Published in English.</td>
<td>Two reviewers completed screening independently.</td>
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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 minutes) 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), 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.

Citation

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