Simulation in pre-registration physiotherapy education: a scoping review

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Background: Practice based learning (PBL) is vital to professional practice registration. Advances in technologies & shortages in practice plascements underpin a need to explore the use of simulation based learning (SBL) in physiotherapy pre-registration education.

Aims: To explore SBL within physiotherapy pre-registration education

Methods: A scoping review was undertaken in line with Arksey & O'Malley (2005) framework. Three reviewers were involved in screening, selection, data extraction and charting data summaries.
-Eligibility criteria: SBL within pre-registration physiotherapy education.
-Data sources: MEDLINE, CINAHL, PEDro databases (inception to Oct 2021), grey literature, & key journals.
-Data extraction and synthesis: study setting, location, aims (educational purpose), methods of enquiry, year group, practice area, duration, approach to SBL and outcome measures.

Results: Of 60 eligible sources just 30 were published in full. The majority were from Australia and USA, with most exploring different SBL approaches, stakeholder acceptability of SBL & student development of professional practice knowledge, skills, behaviours and attributes.
Areas of practice and focus of knowledge/skill acquisition varied considerably. Some studies investigated different curriculum/placement models (e.g. integrating SBL within traditional clinical PBL blocks). A plethora of outcome measures were reported, with just the Assessment of Physiotherapy Practice tool used more than once.

Practice area: Neurology, Musculoskeletal, Cardiorespiratory/acute care, Older adults, Paediatrics

Programme design: Integrated or a substitute for clinical PBL. (e.g. SBL 1 week + PBL 3 weeks)

Approaches

Standardised patient *(actors, patients)*
Role play *(student)*
Simulated learning environment
High fidelity manikin *(i.e. SimMan, age suit)*
Virtual reality

Focus: Various, including knowledge acquisition, communication skills, cultural empathy, stress etc.

Measurement outcomes used +++ (e.g. Global Consultation Rating Scale, Assessment of Physiotherapy Practice)

Methods of enquiry: Survey, interviews, focus groups, observational longitudinal

Stakeholder views
Student development

- ✓ **Appropriate**
- ✓ **Satisfaction**
- ✓ **Acceptable**
- ✓ **Safety**
- ✓ **Skills**
- ✓ **Confidence**
- ✓ **Knowledge**
- ✓ **Competence**
- ✓ **Clinical reasoning**

Conclusion: SBL offers considerable potential as an adjunct or substitute for traditional PBL. Findings reveal that pre-PBL SBL was positively received by key stakeholders, with students exhibiting development of knowledge, skills, behaviours & attributes with University-based SBL.

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