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Review

Towards identifying nurse educator competencies required for simulation-based learning: A systemised rapid review and synthesis

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SUMMARY

Objectives: This paper presents the results of a systemised rapid review and synthesis of the literature undertaken to identify competencies required by nurse educators to facilitate simulation-based learning (SBL).
Design: An international collaboration undertook a protocol-based search, retrieval and critical review.
Data Sources: Web of Science, PubMed, CINAHL Plus, PsycInfo, ERIC, the Cochrane Library and Science Direct. The search was limited to articles published in English, 2002–2012.
Review Methods: The search terms used: nurse*, learn*, facilitator, simula*, lecturer, competence, skill*, qualificat*, educator, health care, "patient simulation", "nursing education" and "faculty". The search yielded 2156 "hits", following a review of the abstracts, 72 full-text articles were extracted. These were screened against predetermined inclusion/exclusion criteria and nine articles were retained. Following critical appraisal, the articles were analyzed using an inductive approach to extract statements for categorization and synthesis as competency statements.
Results: This review confirmed that there was a modest amount of empirical evidence on which to base a competency framework. Those papers that provided descriptions of educator preparation identified simulation-based workshops, or experiential training, as the most common approaches for enhancing skills. SBL was not associated with any one theoretical perspective. Delivery of SBL appeared to demand competencies associated with planning and designing simulations, facilitating learning in "safe" environments, expert nursing knowledge based on credible clinical realism, reference to evidence-based knowledge and demonstration of professional values and identity.
Conclusions: This review derived a preliminary competency framework. This needs further development as a model for educators delivering SBL as part of nursing curricula.

Introduction

The interest in simulation-based learning (SBL) has exponentially increased in nursing over the last decade. SBL and assessment has become a feature of many nurse preparation programmes. This is unsurprising given the growing perception that SBL is one solution to the challenges associated with producing practitioners who are able to function effectively in complex health care settings (Adamson, 2009). Indeed, Holmboe et al. (2011) in their position paper, argue that there is now sufficient evidence across medicine, dentistry and nursing to formally incorporate SBL into regulations associated with clinical practice requirements for health care professionals. Traditionally the theory relevant to nursing has been taught in the classroom, in contrast with clinical skills and professional behaviors acquired largely in clinical settings. The expectation being that the student should be able, or can be enabled, to integrate theory into practice. This model undoubtedly contains intrinsic flaws that have been rehearsed over the years elsewhere (for example, see Maben et al., 2006; Ousey and Gallagher,

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2007; Rafferty et al., 1996; Rolfe, 1998). New graduates of nursing programmes may have acquired what has been described as the "trinity of fitness for purpose, award and practice" (Benton, 2011, p. 276) for licensure (or registration) but nevertheless remain novices (Benner, 1984) in terms of competence. In effect, not yet fully formed for the full responsibilities of the real world of the registered nurse (Benner et al., 2010).

SBL has been used in a number of industries to hone and refine expertise and reduce risk or errors (Wilford and Doyle, 2006). The level of interest and utilisation in nurse education, and many of the other health care professions, is unsurprising given the global concerns regarding patient safety. Particularly as SBL is considered an ideal strategy for rehearsing, developing and practicing effective individual and team work thereby facilitating the analysis and reduction of human error (Issenberg et al., 2005; Kenaszchuk et al., 2011; van Soren et al., 2011).

SBL has also become ubiquitous out of necessity due to the pressure to provide student placements when the quality of clinical learning cannot be guaranteed (Wilford and Doyle, 2006). Yet to integrate SBL is not cost neutral (Adamson, 2009; Jansen et al., 2009). Some argue the upsurge in interest has grown in parallel with the capacity of increasingly sophisticated technology to replicate complex health care scenarios. Although debates remain about fidelity and whether in itself it is as important as authenticity to learning (Bland et al., 2014). The increased use of, and investment in technology, facilities, staff and infrastructure, have possibly contributed to the realisation that educators require preparation to effectively plan and deliver meaningful SBL experiences. There seems to be a growing consensus that it is not enough to "buy the kit" in the absence of support for faculty to deliver effective learning and teaching (Hyland and Hawkins, 2009; Jeffries, 2008), or indeed a need for all education providers to buy expensive technology. Yet little clarity exists in the literature about what constitutes effective nurse educator simulation-based pedagogical practice, or whether facilitating SBL should be part of the skill set of all nurse educators or merely the domain of staff with specialist expertise. There is growing evidence that SBL may well serve as a bridge between theory and practice, possibly spanning the gap, and provide a context where the cognate disciplines that inform nursing can be integrated (Shriner et al., 2010). Logically, nurse educators should have a minimum skill set in order to integrate simulation appropriately into program delivery. This paper presents a systemised rapid review of the literature undertaken to define the educator competencies that might constitute the "must-have" competencies, required to facilitate SBL as part of nurse education programmes. This review of the literature was conducted as the first phase of an international project to study the competencies of nurse educators who use SBL. Later, this project continued with the funding of a grant from the European Union (EU) to develop the competencies for nurse educators to integrate SBL into curriculum delivery.

Aim

The aim of this rapid review was to identify the competencies that nurse educators require to facilitate SBL as part of nurse education. These would form a competency and curriculum framework for a preparation program for nurse educators facilitating SBL.

Review Methods

A search of the following databases was undertaken: Web of Science, PubMed, The EBSCOhost Research Databases (CINAHL Plus, PsycInfo and ERIC), and The Cochrane Library and Science Direct.

Search terms were identified and then corroborated using the index of keywords for each database. The search terms used in different combinations were: nurse*, learn*, facilitator, simula*, lecturer, competence, skill*, qualificat*, educator, health care, "patient simulation", "nursing education" and "faculty". The search was limited to articles published in English between 2002 and 2012. A wide range of articles, surveys, reports and expert opinion were retrieved. In total, 2156 citations using the search terms were identified from the following sources: Science Direct (1672), Web of Science (186), EBSCO (8), Cochrane Library (6) and PubMed (284).

These 2156 abstracts were reviewed by the researchers from the international project team. Very few papers were identified that associated quantitative research designs with the focus of the review. The majority of the articles used either a qualitative methodology, methodological triangulation or systematic reviews. As a result, both qualitative research articles and systematic reviews were included in this review.

Finally, 72 full texts of articles were identified for further interrogation based on the abstracts. In this review, the quality of the articles were evaluated utilising existing frameworks (Dixon-Woods et al., 2004; Mattila et al., 2012). The full-text articles were included in the review process because they described either (1) the role of the educator, (2) the guidelines, competences or statements relating to participant outcomes from training or (3) approaches for delivering SBL training. Each article was then screened by a minimum of two independent members of the international review team and retained if there was evidence of double-blind peer review, and findings derived from original research, evaluation or asystematic review related to the research aims. Duplicates were extracted as well as papers that did not meet the inclusion criteria, or the quality requirements for the papers (Dixon-Woods et al., 2004; Mattila et al., 2012).

Retained articles were then compared by the researchers and considered at a consensus workshop and, finally, nine articles (see

Table 1
Included Articles.

Author(s)	Title of Article	Journals
1. Anderson M, Bond ML, Holmes TL, Cason CL. 2012	Acquisition of simulation skills: Survey of users	Clinical Simulation in Nursing, 2012 (2), 59–65
2. Arthur C, Kable A, Levett- Jones T. 2011	Human patient simulation manikins and information communication technology use in Australian schools of nursing: a cross-sectional survey	Clinical Simulation in Nursing, 2011 (7), 219–227
3. Bentley R, Seaback C. 2011	A faculty development collaborative in interprofessional simulation	Journal of Professional Nursing 2011, 27 (6) 1–7
4. Cant RP, Copper SJ. 2012	The benefits of debriefing as formative feedback in nurse education	Australian Journal of Advanced Nursing, 2012, 29 (1) 37–47
5. Kaakinen J, Arwood E. 2009	Systematic review of nursing simulation literature for use of learning theory	International Journal of Nursing Education Scholarship, 2009, 6 (1) 1–20
6. Keskitalo T. 2011	Teachers' conceptions and their approaches to teaching in virtual reality and SBL environments	Teachers and Teaching: theory and practice, 2011, 17 (1) 131–147
7. Keskitalo T, Ruokamo H, Väisänen O. 2011	Facilitators' and students' conceptions of teaching and learning in SBL environment	World Conference on Educational Multimedia, Hypermedia and Telecommunications (EDMEDIA) Proceedings, 2011, Lisbon, Portugal June 27, 2011. p. 2215–2224
8. Reid-Searl K, Eaton A, Happel B. 2011	The educator inside the patient: Students' insight into the use of high fidelity silicone patient simulation	Journal of Clinical Nursing 20(19-20), 2752–2760
9. van Soren M, Devlin-Cop S, MacMillian K, Baker L, Egan-Lee E, Reeves S. 2011	Simulated interprofessional education: An analysis of teaching and learning process	Journal of Interprofessional Care, 2011: 25 (6), 434–440