Nurse Education Today xxx (2014) xxx–xxx

Contents lists available at ScienceDirect

Nurse Education Today

journal homepage: www.elsevier.com/nedt

Review

Time to unravel the conceptual confusion of authenticity and fidelity and their contribution to learning within simulation-based nurse education. A discussion paper

Andrew J. Bland [a,*], Annie Topping [b,1], Jane Tobbell [c,2]

[a] Department of Nursing & Health Sciences, University of Huddersfield HD1 3DH, UK
[b] Centre for Health & Social Care Research, University of Huddersfield, UK
[c] University Teaching Fellow, Division of Psychology and Counselling, University of Huddersfield, UK

ARTICLE INFO

Article history:
Accepted 5 March 2014
Available online xxxx

Keywords:
Simulation
Education
Learning
Fidelity
Authenticity
Nursing

SUMMARY

High-fidelity patient simulation is a method of education increasingly utilised by educators of nursing to provide authentic learning experiences. Fidelity and authenticity, however, are not conceptually equivalent. Whilst fidelity is important when striving to replicate a life experience such as clinical practice, authenticity can be produced with low fidelity. A challenge for educators of undergraduate nursing is to ensure authentic representation of the clinical situation which is a core component for potential success. What is less clear is the relationship between fidelity and authenticity in the context of simulation based learning. Authenticity does not automatically follow fidelity and as a result, educators of nursing cannot assume that embracing the latest technology-based educational tools will in isolation provide a learning environment perceived authentic by the learner. As nursing education programmes increasingly adopt simulators that offer the possibility of representing authentic real world situations, there is an urgency to better articulate and understand the terms fidelity and authenticity. Without such understanding there is a real danger that simulation as a teaching and learning resource in nurse education will never reach its potential and be misunderstood, creating a potential barrier to learning. This paper examines current literature to promote discussion within nurse education, concluding that authenticity in the context of simulation-based learning is complex, relying on far more than engineered fidelity.
© 2014 Elsevier Ltd. All rights reserved.

Introduction

Authenticity was identified by Bland et al. (2011) as a critical attribute of simulation in undergraduate nurse education. Conceptually, authenticity was clearly evident from the analysis but upon reflection I would suggest that what is understood by its meaning in the context of simulation-based learning has become blurred and unclear. This lack of clarity is particularly evident when authenticity is considered in relation to fidelity as these terms are often used synonymously within simulation-based nursing literature. For example, fidelity refers to how authentic or life-like the manikin and/or simulation experience is (Lapkin and Levett-Jones, 2011). Nursing students can learn within authentic environments either in clinical practice or via carefully constructed high-fidelity simulated scenarios with manikins exhibiting authentic physiological properties (Onda, 2011). Interpretation of such and other accounts indicate an implicit assumption that fidelity and authenticity are interchangeable. Bland et al. (2011) argue however that authenticity and fidelity are not conceptually equivalent with Rystedt and Sjoblom (2012) adding that authenticity is often treated as unproblematic following automatically from particular designs. Fidelity is a term profoundly represented within the simulation-based literature with authenticity playing catch-up. This is problematic because whilst there appears to be a better understanding of what fidelity is there is less clarity regarding what authenticity is, how it is achieved or contributes to learning. Exploration and understanding of how authenticity and fidelity are used within the context of simulation-based learning is lacking yet timely and relevant given that Rystedt and Sjoblom (2012) identify that mimicking reality through fidelity is the prevailing movement towards authenticity increasingly seen as the central premise for learning in simulation.

Fidelity and Authenticity

The quest for realism has clearly been at the forefront of high fidelity simulator design and such resemblance with real patients that breathe and talk is geared towards authenticity. But authenticity is often considered as an effect of the simulator and not as an object of inquiry in its

* Corresponding author. Tel.: +44 1484 473473.
E-mail addresses: a.j.bland@hud.ac.uk (A.J. Bland), a.e.topping@hud.ac.uk (A. Topping), j.tobbell@hud.ac.uk (J. Tobbell).
[1] Tel.: +44 1484 473974.
[2] Tel.: +44 1484 472588.

http://dx.doi.org/10.1016/j.nedt.2014.03.009
0260-6917/© 2014 Elsevier Ltd. All rights reserved.

Please cite this article as: Bland, A.J., et al., Time to unravel the conceptual confusion of authenticity and fidelity and their contribution to learning within simulation-based..., Nurse Educ. Today (2014), http://dx.doi.org/10.1016/j.nedt.2014.03.009

own right (Rystedt and Sjoblom, 2012) a concern prompting their study to explore the requirements needed to establish and maintain simulations as authentic. Simply increasing fidelity through technology does not necessarily increase authenticity. Although fidelity is important when seeking to match the appearance and behaviour of the real situation (Kinney and Henderson, 2008) authenticity can be reproduced with low fidelity. Fidelity in the context of simulation-based learning is considered as a close as is possible reproduction of an object reality whereas authenticity may be considered as a subjective interpretation/response to a constructed situation in which the student interacts with context, other students, facilitators and technology with varying degrees of fidelity. Splitter (2009) indicates that perceptions of similarity are highly subjective and contextually relative as what counts as authentic for one person may be far from authentic for another. Interpretation of authenticity is individual which is highly relevant for educators of nursing to consider when presenting students with the latest high-fidelity human patient simulator. Rystedt and Sjoblom (2012) identify from the work of Petraglia (1998) that authenticity often stands out as a kind of desideratum rather than something that actually characterises the learner's experience. This observation raises concern in that as we become receptive to the developments of new and more capable simulation technologies there is increasing potential to assume that the fidelity will inevitably lead to authentic learning opportunities. Educators need to understand the fundamental differences between fidelity and authenticity and look at what else is going on in the learning environment if we are to provide effective learning opportunities in simulation-based education.

Background

Simulation is recognised as an innovative pedagogical approach gaining international popularity (Moule, 2011) and as such requires educators to become familiar with its attributes in the context of learning. Simulation in nursing education attempts to replicate essential aspects of a clinical situation (Buckley and Gordon, 2011) and as an educational strategy, "replaces or amplifies experiences that replicate aspects of the real world in an interactive fashion" (Gaba, 2004, pi2). Many Universities have developed simulation centres that represent actual ward areas (Berragan, 2011) and purchased simulators that respond realistically using advanced computer technology which have contributed to recent interest within nurse education. Other reasons may include the increasing expectation that higher education institutions mirror clinical practice agency commitment to provide high quality patient care in a safe environment (Miller and Bull, 2013). To ensure students receive strategies that compliment traditional education with actual patients, educators strive to replicate practice as closely as possible becoming receptive to the possibilities simulation may offer including technology that attempts to replicate clinical situations through increasing fidelity. Despite the well documented use and perceived benefits of simulation in nursing, little evidence exists regarding how nurse academics regard the use of simulation as a teaching strategy (Miller and Bull, 2013). Parker and Myrick (2009) identify a lack of research into a pedagogy or educational philosophy to guide the technology-based learning tool of high-fidelity simulation. It may be prudent for educators to question whether there has been a rush to include simulation without fully understanding the mechanisms of learning which underpin it. Berragan (2011) found from an influential literature review that concern exists that we may be overtaken and seduced by developing technology that substitutes real patients, denying the student nurse opportunities for realistic interaction. When new technologies are introduced to academics, focusing on the technology in isolation and not on the context of education may occur (Hixon and Buckenmeyer, 2009; Alexander, 2009). Dewey (1938) cautioned curriculum development lacking sound philosophical foundation leaves educators at the mercy of the latest educational and technological fads without any depth of thought as to why it is appropriate to the teaching and learning process. Kaakinen and Arwood (2009) found from a systematic review of nursing simulation literature regarding use of learning theory that most nursing educators approach simulation from a teaching rather than a learning paradigm and may benefit from reflecting on the purpose of the simulation. Simulation technology may fuel this focus on teaching rather than the learning as there is potential to concentrate on reproducing objective reality through high-fidelity with the aim of producing authentic learning experiences. Houghton et al. (2012) identifying the clinical skills laboratory should provide an authentic learning environment. However authenticity may be interpreted individually, hence a challenge for some students to deal with less than perfect fidelity may obscure and create a barrier to potential learning if considered in isolation particularly if the focus is on learning the complexities of clinical practice and social interactions. As clinical practice is often regarded as complex there is a need to better understand the conceptual tensions of fidelity and authenticity and how they contribute to learning in simulation-based nurse education.

Methodology

This paper is a discussion paper based on a focused scholarly review of existing literature. The papers identified (Appendix 1) following a rigorous search process were appraised and considered influential in developing the discussion. Other literatures of less specific significance to the aims of the review but relevant to the developing discussion can be identified within the reference list. A literature search for papers concerning simulation-based education was conducted using combinations of the terms, 'simulation' with 'education', 'learning', 'nursing education', 'fidelity', 'high-fidelity', 'authenticity' and 'authentic learning' and entered into Google scholar, limiting to papers published in English between 2003 and 2013. A second search utilising the data bases CINAHL, Medline, PubMed, Cochrane and ERIC through a portal — Summon was conducted with the same limitations. The reference lists of the retrieved papers were hand searched to increase the potential of identifying all relevant studies (Kable et al., 2012). Initially 371 articles resulted from the searches as described above for initial review. To assess for relevance each abstract was read and the full paper was screened for appropriateness resulting in a total of 25 published papers which are documented in a summary table (Appendix 1) and form the basis of this discussion paper. Inclusion criteria for this review included literature reviews, discussion papers and original research studies that reported fidelity, realism, authenticity or authentic learning in simulation-based learning/education in health care and nursing education. Papers were excluded if they did not specifically detail the critical attributes fidelity, realism, authenticity or authentic learning in simulation-based learning/education. Although this discussion paper focuses on nursing education, papers that related to other healthcare disciplines or non-healthcare industry were not excluded if their content added to the understanding of authenticity and fidelity in relation to learning in simulation-based education. It is not the purpose of this paper to present a detailed process of the review itself but to identify key issues from the reviewed literature to help raise awareness and stimulate debate regarding authenticity and fidelity and their contribution to the learning within simulation-based education. It would appear that current simulation literature lacks robust research to substantiate process and effectiveness of simulation–based education. There is a tendency to utilise methods akin to participant satisfaction and product evaluation rather than educational research.

Fidelity and Simulation

Fidelity is associated with realism and the extent to which simulation mimics reality through fidelity is the essence of successful simulation (Jeffries, 2007). Such accounts indicate realism is at the heart of fidelity construction, which is increasingly utilising technology to simulate clinical situations. Stayt (2012) recognises many manifestations of

Please cite this article as: Bland, A.J., et al., Time to unravel the conceptual confusion of authenticity and fidelity and their contribution to learning within simulation-based..., Nurse Educ. Today (2014), http://dx.doi.org/10.1016/j.nedt.2014.03.009

Download English Version:

https://daneshyari.com/en/article/10316455

Download Persian Version:

https://daneshyari.com/article/10316455

Daneshyari.com