Walking the bridge: Nursing students' learning in clinical skill laboratories

CrossMark

Mona Ewertsson [a], Renée Allvin [a, b], Inger K Holmström [c, d], Karin Blomberg [a, *]

[a] Faculty of Medicine and Health, School of Health and Medical Sciences, Örebro University, Örebro, Sweden
[b] Clinical Skills Centre, Örebro University Hospital, Örebro, Sweden
[c] School of Health, Care and Social Welfare, Mälardalen University, Västerås, Sweden
[d] Department of Public Health and Caring Science, Uppsala University, Uppsala, Sweden

ARTICLE INFO

ABSTRACT

Despite an increasing focus on simulation as a learning strategy in nursing education, there is limited evidence on the transfer of simulated skills into clinical practice. Therefore it's important to increase knowledge of how clinical skills laboratories (CSL) can optimize students' learning for development of professional knowledge and skills, necessary for quality nursing practice and for patient safety. Thus, the aim was to describe nursing students' experiences of learning in the CSL as a preparation for their clinical practice. Interviews with 16 students were analysed with content analysis. An overall theme was identified — *walking the bridge* — in which the CSL formed a bridge between the university and clinical settings, allowing students to integrate theory and practice and develop a reflective stance. The theme was based on categories: *conditions for learning, strategies for learning, tension between learning in the skills laboratory and clinical settings*, and *development of professional and personal competence*. The CSL prepared the students for clinical practice, but a negative tension between learning in CSL and clinical settings was experienced. However, this tension may create reflection. This provides a new perspective that can be used as a pedagogical approach to create opportunities for students to develop their critical thinking.

© 2015 Elsevier Ltd. All rights reserved.

Introduction

Studies and reports from around the world show that nursing education, especially clinical education, does not always prepare students for the demands of working as a professional registered nurse (Löfmark et al., 2006; Pellico et al., 2009; Swedish Association of Local Authorities and Regions, 2010). Newly graduated nurses are described as having only "weak" practical skills (Bradshaw and Merriman, 2008; Higgins et al., 2009), which can be considered a patient safety risk. Thus, nursing education faces a major challenge to design and implement learning activities that provide students with opportunities to develop their practical skills (Peddle, 2011) while also incorporating patient safety principles (Duhn et al., 2012).

Background

Previously, clinical settings were the learning environment in which nursing students' practical skills were trained and developed. In the last decade, however, the clinical skills laboratory (CSL) has become an essential arena in which nursing students can develop their practical skills through simulation exercises (Benner et al., 2010; Cant and Cooper, 2010). Safety is often argued to be an important reason for using simulated situations in the CSL, where students can learn and practice in a safe environment without the pressure of real-world performance (Freeth and Fry, 2005). Furthermore, it could be argued that it is no longer justifiable to use patients to train practical skills when this can be achieved in simulated learning environments with no risk of patient harm (Salminen et al., 2010).

Within nursing education, learning of practical skills in the CSL is organized in different ways, with different educational approaches and levels of simulation. Simulation can be defined as activities that mimic the reality of a clinical environment (Jeffries, 2005). The fidelity of simulation may include low- and medium-

fidelity simulation, such as static mannequins, part-task trainers, role play, computer games, and standardized patients, as well as high-fidelity simulation, where different healthcare scenarios are built with computerized models (Harder, 2010). Despite the development of the CSL as a learning environment, there is no consensus on the best educational approach and outcomes for learning through simulation in this environment (Blum and Parcell, 2012; Bland et al., 2011). Thorough planning of the pedagogic approach is necessary to give students the opportunity to develop their knowledge (Ricketts, 2010; Peddle, 2011). A theoretical origin for simulation situations in the CSL could be related to the theory of experiential learning (Kolb, 1984; Dewey, 1938). According to this theory, the ability to transfer theoretical knowledge and apply it in a practical setting leads to the acquisition of knowledge. Students' learning is enhanced when they are actively involved in gaining knowledge through experience with problem solving and decision-making. Active reflection is important to the learning process (Kolb, 1984; Dewey, 1938). To integrate this theoretical framework, it is crucial to first understand the nursing students' learning process and how they transfer their practical skills to the clinical setting.

Beside this, it is important to continue learning in the CSL. The students' opportunities to practice skills in clinical settings will have decreased, as they will not be able to practice *all* the necessary skills while working as a registered nurse (Waldner and Olson, 2007). An extensive restructuring of healthcare has occurred, including a reduction in hospital beds, which has also reduced the number of potential clinical settings for students' clinical practice. Additionally, recent European research including Swedish nurses showed several shortcomings in health care settings, such as poor work environment, limited time to practice nursing skills, and perceived high workload among nurses (Aiken et al., 2012, 2013, 2014). At the same time, the number of nursing students has increased in many countries, including Sweden (Barnett et al., 2010). Advance preparation in a CSL is advantageous in optimizing students' learning in clinical settings (Bland et al., 2011; McWilliam and Botwinski, 2010). However, there is a gap in the literature related to students' opportunities and outcomes in transferring the knowledge gained from the CSL to clinical settings (Norman, 2012; Murray et al., 2008). It is therefore important to study how the CSL can best support and increase student learning in relation to learning in clinical settings. This can provide a greater understanding of both the processes and outcomes of simulation as a learning activity (Bland et al., 2011). Outcomes from the CSL and the opportunity to transfer knowledge to clinical settings can provide safer care to patients in today's increasingly technologically dependent healthcare. The aim of this study was to describe nursing students' experiences of learning in the clinical skill laboratory in preparation for their clinical practice.

Method

Design

The study had a qualitative descriptive design with an inductive approach. Data were collected through semi-structured interviews.

Participants

Nursing students in their fourth semester at a university in Sweden participated in the study. They had recently completed their clinical practice on general medical or general surgical wards located in three hospitals. The reason to include students in this semester was that they had repeated experience of learning in the CSL, having completed three courses with content including both CSL (low- and medium-fidelity simulation) and practice in clinical settings. We selected a strategic sample of students from this group, of varying ages, genders, and clinical practices (Polit and Beck, 2010). The students were recruited from the course list, informed about the study in writing, and asked by telephone to participate. Of the 70 students in the course, 18 were invited to participate and 2 declined, leaving 16 participants: 12 women and 4 men, all between 21 and 43 years of age.

Ethical considerations

The participants received both written and verbal information explaining the purpose of the study. They were informed that participation was voluntary, the data would be treated confidentially, and they could withdraw from the study at any time. None of the students were in a position of dependence on the researcher who had invited them to participate and who conducted the interviews. This researcher was not involved in teaching or grading in the CSL, but had good knowledge of the topic. The data are presented here in a way that ensures individuals cannot be identified. The Regional Ethical Review Board in Uppsala (ref: 2011/07) approved the study.

Data collection

The semi-structured interviews (Kvale and Brinkmann, 2009) were conducted one to two weeks after the students completed their clinical practice. An interview guide was created with a focus on the students' experiences of learning in the CSL. The opening question was: "What is your view of the CSL as a place for learning?" The students were then asked whether they experienced the CSL as a preparation for their clinical practice. The interviews were audio recorded, lasted 25–40 min, and took place at locations chosen by the students.

Data analysis

The interviews were analysed with qualitative content analysis (Downe-Wamboldt, 1992) using the analytical stages described by Graneheim and Lundman (2004). The interviews were transcribed verbatim by a professional transcriber, and then the first author verified the transcribed text against the audio files. Next, the texts were read several times to gain a sense of the whole. Meaning units with similar content describing the nursing students' experiences of learning in the CSL were identified and then condensed while retaining the essential content. In the next step, each meaning unit was labelled with a code. Codes with related meanings were sorted into subcategories, and these were sorted and abstracted into categories. Finally, an overall theme was developed from the underlying meanings of the categories (see Table 1). During the analysis, all authors scrutinized and repeatedly discussed the coding and interpretations to ensure trustworthiness (Graneheim and Lundman, 2004).

Findings

The analysis resulted in the theme "*walking the bridge*", where the CSL constitutes a bridge between the university and the clinical settings in which students integrate theory and practice and develop a reflective stance. The theme can be understood as a learning process that extends over time. Initially, the students' learning in the university CSL was based on theoretical assumptions. Later, they transferred their taught knowledge and skills during their clinical practice by practicing them in a clinical situation, in clinical settings.