Nurse Education Today 50 (2017) 12–16

Contents lists available at ScienceDirect

Nurse Education Today

journal homepage: www.elsevier.com/nedt

Midwifery students' experiences of simulation- and skills training

Lena Lendahls, Marie G Oscarsson *

Department of Health and Caring Sciences, Linnaeus University, Sweden

ARTICLE INFO

Article history:
Received 8 August 2016
Received in revised form 12 November 2016
Accepted 8 December 2016
Available online xxxx

Keywords:
Experience
Midwifery students
Simulation- and skills training
Qualitative research

ABSTRACT

Background: In Sweden, simulation- and skills training are implemented in midwifery education in order to prepare students for clinical practice. Research regarding the use of both low to high levels of fidelity in simulation in midwifery programme is limited.
Aim: The aim of this study was to explore midwifery students' experiences of simulation- and skills training.
Methods: Midwifery students (n = 61), at advanced level, were interviewed in 13 group interviews from 2011 to 2105. A semi-structured interview guide was used, and data were analysed by content analysis.
Results: The results are presented in four main categories: *develops hands on skills and communication, power of collaborative learning, highly valued learning environment and facilitates clinical practice*. The majority of students felt that the simulation- and skills training were necessary to become familiar with hands on skills. Having repetitive practices in a safe and secure environment was viewed as important, and students highly valued that mistakes could be made without fear of comprising patient safety. Student's collaboration, reflections and critical thinking increased learning ability. Simulation- and skills training created links between theory and practice, and the lecturer had an important role in providing instructions and feedback. Students felt prepared and confident before their clinical practice, and simulation- and skills training increased safety for all involved, resulting in students being more confident, as patients in clinical practice became less exposed. Furthermore, mentors were satisfied with students' basic skills.
Conclusion: Simulation- and skills training support the development of midwifery skills. It creates links between theory and practice, which facilitates students' learning ability. Training needs to include reflections and critical thinking in order to develop their learning. The lecturer has an important role in encouraging time for reflections and creating safe environment during the skills and simulation training.

1. Introduction

There is increased interest in simulation- and skills training in midwifery education. Many universities and hospitals have built centres that are similar to delivery and maternity wards. Simulation- and skills training in midwifery programmes are implemented to develop clinical skills in order to reduce pressures in clinical practice beforehand and offer opportunities to develop skills in a safe environment (Berragan, 2011).

2. Background

There are several reasons why simulation- and skills training are implemented in midwifery programmes including improving students' knowledge and skills, enhancing patient safety and practising different cases that occur infrequently in clinical setting. Also, other non-clinical skills such as communication, decision-making, prioritisation, critical thinking and teamwork can be practised and enhanced through simulation.

Previously, there was a systematic review that critically examined the evidence for simulation-based learning in midwifery (Cooper et al., 2012). Results showed that benefits of simulation learning compared to didactic formats were apparent. Results in the review indicated that simulation had an impact on clinical practice. Development of confidence and competence was higher in groups that received simulation training (Cooper et al., 2012). However, in that review, majority of the target group were professionals, obstetric staff doctors and midwives. Few studies have focused on midwifery students.

Among simulation-based studies focusing on midwifery students, several studies have described that midwifery students developed greater level of knowledge and competence (Davis et al., 2009; Dow, 2008, 2012a, 2012b; Norris, 2008; Reynolds et al., 2010; Smith et al., 2012), leading to them feeling prepared before clinical practice (Dow,

* Corresponding author: at: Department of Health and Caring Sciences, Linnaeus University, SE-391 82 Kalmar, Sweden.
E-mail address: marie.oscarsson@lnu.se (M.G. Oscarsson).

http://dx.doi.org/10.1016/j.nedt.2016.12.005
0260-6917/

2012b; Hughes et al., 2014). Midwifery students valued the possibility to practise in a safe environment without fear of making mistakes on patients (Davis et al., 2009; Hughes et al., 2014; Norris, 2008). Simulated learning also increased midwifery students' feelings of self-efficacy (Hughes et al., 2014), confidence (Cioffi et al., 2005; Davis et al., 2009; Hughes et al., 2014) and satisfaction (Smith et al., 2012; Tyer-Viola et al., 2012). Additionally, it has also been shown that simulation trainings developed awareness of the importance of teamwork and communication (Hughes et al., 2014; Norris, 2008). A pilot study (Cioffi et al., 2005) investigated the effects of a simulation strategy on the clinical decision-making process compared to lecture based formats. Results showed that the simulation group demonstrated higher clinical information management and decision-making (Cioffi et al., 2005).

Several barriers have been described in using simulation- and skills training such as lack of sufficient time and not having the resources of skilled trained teachers to conduct the sessions (Wilson et al., 2016). Midwifery students and teachers generally agreed that there were some things, during birth, which could not be simulated (McKenna et al., 2011). Additionally, concerns have been raised of the risk that skills training could replace clinical practice (Berragan, 2011).

Earlier studies have investigated certain skills i.e. dystocia, an acute situation or training from teacher's perspective but little has been documented to support the use of simulation- and skills training in midwifery programme from student's perspective. As far as we know, no studies have investigated the use of simulation- and skills training in a whole programme and in a Swedish context.

2.1. Simulation- and Skills Training

In the midwifery programme where this study was performed, students train both skills training and scenarios. In skills training, students train different manoeuvres or actions, both technical and non-technical. The skills are repeated several times and can also be performed in a context. In simulation training, different skills are put together and are trained in scenarios of authentic cases. Fidelity is the term used to describe the realness of the experience. High fidelity refers to an environment that attempts to replicate the real environment as closely as possible (Bogossian et al., 2012). In the beginning of the midwifery program, the level of fidelity is low and gradually increases during the programme.

2.2. Context

In Sweden, midwife is a protected professional title that may be used by those who hold a license to practice. Students can only apply to the midwifery programme when they have received a nursing certification. The programme in Midwifery Science leads to an academic and professional degree, which gives authorisation to work as a midwife. The programme also provides for a Master's degree. This is awarded after students have completed the coursers required to gain 90 credits, and half of these credits are conducted in clinical practice. The use of simulation- and skills training varies in Sweden.

In the setting where this study is performed, simulation- and skills training are used extensively and integrated in the programme which has 14 students a year. Students train in groups of 4–7, and a lecturer always leads the training. During the first year, students train normal birth procedures including, external and internal palpation, perineal protection and suturing. When students have gained experience from antenatal clinics and delivery wards, they practise for complicated births and perform scenarios. Complicated births include e.g. vacuum extraction, breech and shoulder dystocia. Furthermore, they practise additional skills such as performing pelvic examination, taking Pap smear tests and inserting IUDs and implants. In the scenarios, midwifery students play different roles such as parents, obstetricians and midwives.

Normal and complicated births are simulated using a high technology childbirth robot, which can simulate a wide range of complicated births. Furthermore, a model of a lower body and a foetus having authentic weight are used. The models of the body and the foetus are made of a highly realistic flesh-like material that creates a realistic tactile experience when simulating birth. Students practise gynaecological examinations and inserting IUDs by using models of the female genitals.

Simulation- and skills training can support the development of knowledge and skills in a range of clinical practice scenarios. Little has been documented to support the use of simulation- and skills training in midwifery programme from student's perspective. Therefore, the aim of this study was to explore midwifery students' experiences of simulation- and skills training.

3. Methods

3.1. Sample and Data Collection

The inclusion criteria were all students in the midwifery programme willing to share their experiences. Results are based on group interviews. A semi-structured interview guide was designed based on research group experiences and evaluations of earlier simulation- and skills training. The interview guide had three open-ended questions: What are your experiences of training under normal birth situations? What are your experiences of training under complicated birth situations? What are your experiences of training for pelvic examinations, Pap smears, inserting IUD and implants?

Ethical requirements as outlined in the Declaration of Helsinki were fulfilled. Students were asked to participate via email and received an information letter describing the purpose and procedure of the study. They were informed that participation was voluntary and that they could withdraw at any time without giving any explanation and that they were guaranteed confidentiality. Once the groups were gathered, the students were asked verbally if they agreed to participate, and written consent was obtained prior to the interviews. The informants were asked to complete a short questionnaire with background data and to estimate the usefulness of simulation- and skills training on a scale from zero to ten.

Thirteen group interviews ($n = 61$) were held with three to eight students. The moderator was a teacher in the midwifery programme but was not the one who had the simulation- and skills training. The interviews were conducted during 2011–2016. The interviews lasted approximately 45–60 min and were audio-recorded and transcribed verbatim.

3.2. Data Analysis

Analysis of data was guided using an inductive approach. The transcribed material was read through several times to make sense of the data. Open coding was performed initially by applying codes in the text. Meaning units were identified and were condensed and abstracted (Downe-Wamboldt, 1992). In order to reduce the number of categories, they were merged together into higher order categories based on similarities and dissimilarities (Burnard, 1991). The categories were processed so that they would be exclusive, and the number of categories was reduced until only four categories remained. During categorisation, the authors switched from looking at the text as a whole to studying parts in order to understand it in context. The analysis was performed by the second author and two midwifery students (Haidar and Svensson, 2015). The two authors reviewed transcripts and categories in order to validate the interpretations and categories (See Table 1).