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Exploring the use of standardized patients for simulation-based learning in preparing advanced practice nurses

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SUMMARY

The use of standardized patients for simulation-based learning was integrated into the Master of Nursing curriculum in the 2012–2013 academic year. The study aimed to explore the Master of Nursing students' experiences with and perceptions of using standardized patients in simulations, and to identify the students' learning needs in preparing to become advanced practice nurses. The study adopted an exploratory descriptive qualitative design, using a focus group interview. The study was conducted at a university in Singapore. Seven Master of Nursing students who were enrolled in the Acute Care Track of Master of Nursing program in the 2012–2013 academic year participated in the study. The data were gathered at the end of the first semester. Content analysis was used to analyze the data. Three main categories – usefulness, clinical limitations, and realism – were identified in the study. The results revealed that the students felt using standardized patients was useful and realistic for developing skills in history taking, communication, and responding to an emergency situation. On the other hand, they found that the standardized patients were limited in providing critical signs and symptoms of case scenarios. To meet the learning objectives, future development and integration of standardized patients in the Master of Nursing curriculum might need to be considered along with the use of a high-fidelity simulator. This can be an alternative strategy to fill the gaps in each method. Obviously, using standardized patients for simulation-based learning has added value to the students' learning experiences. It is highly recommended that future studies explore the impact of using standardized patients on students' performance in clinical settings.

Introduction

Limited patient contact in clinical settings has resulted in fewer opportunities to experience rare events and procedures of patient care (Sharek et al., 2007; Weinberg et al., 2009). Healthcare education institutions have been concerned about this issue. As a result, simulation technology has been used as a training strategy for healthcare education, without compromising patient safety (Kamdar et al., 2013). Similar to using standardized patients (SPs) in simulations, this strategy has gained acceptance as an effective modality for teaching and evaluation (Jenkins and Schaivone, 2007) in both medical and nursing education.

An SP has been defined as "a person trained to portray a scenario, or an actual patient using his or her own history and physical exam findings" (Gliva-McConvey, 2009). The methodology was initially described by Barrows and Abrahamson (1964). In their paper, they described a "programmed patient" who simulated a neurological disorder, which was used in appraising medical students' clinical skills and competence. Today, SPs are being used not only for assessing students' performance but also for teaching and learning purposes, as the effectiveness of the methodology has been fairly well established (Rethans et al., 2012). Thus, the use of this methodology has been gaining momentum as evidenced by the increasing use of SPs in simulation training, particularly in nursing education (Anderson et al., 2010). Because of the realism, simulations with SPs enable students to be emotionally engaged and perform as they would in real settings (Flanagan et al., 2004). Studies found that using SPs provided students or trainees with interactive practice, increased clinical knowledge, and improvements in advanced clinical performance of diagnostic reasoning and management of the disease (Cohen et al., 2014; Manning and Kripalani, 2007; Moulton et al., 2009; Shawler, 2011). The SP methodology has also been shown to be beneficial to students in their transition to clinical practice (Liaw et al., 2014), and it has led to significant improvement in communication skills for advanced practice nurse (APN) graduate students (Lin et al., 2013).

The apparent value of the SP methodology has prompted its use in many countries worldwide, particularly in the United States where it has been utilized since the 1960s (Barrows, 1993). However, the use of this modality is fairly new in Asia. In Taiwan, SPs were used to train

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APN students in interpersonal and communication skills (Lin et al., 2013). They found that the APN students' interviewing skills improved. Similar to the study in Singapore, using SPs helped the final-year undergraduate nursing students in improving their interprofessional skills, collaboration, management, and confidence (Liaw et al., 2014). However, the review study suggested that more qualitative and quantitative studies were needed to support the evidence-based use of SPs for teaching and learning (May et al., 2009).

Recently, the SP has been integrated into the Acute Care Track and Adult Health Track simulation sessions for the Master of Nursing (MN) students to prepare them to become APNs. The MN program is a two-year full-time postgraduate program that aims to train experienced registered nurses in advanced knowledge and skills needed to lead clinical and research innovations in the nursing profession. The program is comprised of different specialization tracks, and students, regardless of specialization, are required to complete and pass both theoretical and clinical practice components of each module. The theoretical component involves classroom lectures and tutorials, and skills practice in a high-fidelity simulation center. Simulation sessions initially used high-fidelity simulators, such as Sim Man (3G), as patients. In 2012, however, the university simulation center initiated a Standardized Patient (SP) program, wherein healthy volunteers were trained to mimic patients with various types of conditions. The commencement of the program paved the way for the plan to integrate SPs into MN program simulation sessions. This endeavor was started to enable the MN students, with years of actual clinical experience, to benefit from the SP methodology as they honed specialized skills and competencies needed for advanced practice.

Even though there is much evidence on the effectiveness of the SP methodology in terms of preparing healthcare students or trainees for actual clinical exposure, the use of this pedagogical modality and its benefits for this distinct group of MN students, with at least five years of real patient experience, was yet to be explored. Also, the use of SPs was a fairly new experience for the MN students. The purposes of this study were to explore the MN students' perceptions of how SPs added value to their simulation-based learning experiences and how they could help them translate their learning to their future clinical encounters as APNs. In this study, the use of SPs was first integrated into NUR 5502 Advanced Practice Nursing II module, for the Acute Care Track, MN program, in the 2012–2013 academic year.

Teaching and Learning Activities

The main objectives of the NUR5502 Advanced Practice Nursing II module are to provide students with an understanding of the theoretical knowledge and evidence-based skills needed by the APN to diagnose and manage physiological alterations involving the gastrointestinal and neurological systems in the critically ill population, and to provide an experiential framework for the APN to function effectively in the critical care setting. Based on the objectives, the module consists of two main teaching methods; one is lecture (theoretical knowledge) and another is simulation-based learning (evidence-based skills). The high-fidelity simulator, Sim Man (3G), was used in the simulations in the NUR5501 Advanced Practice Nursing I module, which was a prerequisite for NUR5502 Advanced Practice Nursing II module for the Acute Care Track. In this study, the Sim Man (3G) was not used in simulations, but only the SPs were used. The simulation-based learning using SPs was first developed and implemented in the NUR5502 Advanced Practice Nursing II module, in the 2012–2013 academic year. Seven critical care case scenarios were developed, and SPs were trained by the module coordinator and educator from the university simulation center accordingly to the case scenarios. Table 1 presents case scenarios and examples of SPs' roles.

The simulations were conducted in the local tertiary education simulation center. Each session used an SP and was played out in realistic clinical settings. The MN students in the simulation and observation room were blinded to the diagnosis. The diagnosis and patient management was discussed at the debriefing. All seven sessions/case scenarios were consecutively conducted in August to November 2012. This was the first time any of the students had encountered SPs in simulation. Seven students had enrolled in this module and had at least two years' experience working as registered nurses in critical care settings. In addition, the students had used a high-fidelity simulator (e.g. Sim Man 3G) for simulation-based learning in the previous semester (January to April 2012). Table 2 presents the overview of a typical session's structure and a description of activities for simulation-based learning using SPs.

Aims of Study

Using SPs was a new method in simulations for these MN students. The study aimed to explore the MN students' experiences with and perceptions of using SPs for simulation-based learning and to identify the students' learning needs in preparing to become APNs. Research questions for the study were:

1. What are the MN students' perceptions of how SPs add value to their simulation experiences?
2. How can the simulations using SPs help the MN students translate their learning to their future clinical encounters as APNs?

Methods

Design and Setting

An explorative, qualitative approach was adopted to explore the MN students' experiences with and perceptions of using SPs for simulation-based learning. Semi-structured questions were used to guide a focus group interview. The interviews took place in a conference room at the nursing department to ensure privacy and comfort.

Sample

A purposive sampling was used to ensure that all the students involved in the MN program in Acute Care Track were represented. The inclusion criteria were MN students who were involved in simulations using SPs during the first semester of the 2012–2013 academic year. There were seven students enrolled in the NUR5502 module and all students agreed to participate in the study. The majority of the participants were female (six out of seven) and all of them were Chinese. The average age was 35.7 years old (range = 32–43), and the average number of years of work experience was 9.7 years (range = 2–19). All participants have obtained the Bachelor's degree and had more than five years of working experience in the hospitals. Four participants worked in intensive care units (ICUs), two participants worked in the emergency department (ED), and one participant worked in coronary cardiac unit (CCU). None of the participants had encountered SPs before the 2012–2013 academic year. All participants had equal opportunity to play the role of an APN for one session and observed the other six sessions.

Ethical Considerations

The University Institutional Review Board (IRB) approved the study before data collection. The purposes and data collection procedure of the study were explained to the participants before obtaining their consent and conducting the focus group discussion. The participants' names or other identification were not recorded on the transcripts or in any report to ensure anonymity and confidentiality. In the research report, all participants were assigned a code number (e.g. P1, P2) to protect his or her identity. Participation in this study was voluntary. There was no impact on the academic performance evaluation or final grade if the participant refused or withdrew from the study. A qualified research assistant (RA), who was trained to facilitate the group discussion,