

## Original research

## Expanding nursing simulation programs with a standardized patient protocol on therapeutic communication

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## ABSTRACT

Simulation is used with greater frequency by nursing programs to strengthen the learning process of student nurses. Best practices suggest active learning with the addition of standardized patients engages the student in realistic lifelike scenario. Therefore, the aim of the research study was to have nursing student's self-evaluate classroom learned communication skills through practical application on a standardized mental health patient simulated scenario. Undergraduate nursing students registered for three successive mental health nursing courses during one academic year were recruited. A self-reported pre/post survey measured the nursing student's level of confidence of learned therapeutic communication skills, preparation to engage their skills in clinical experience, and satisfaction with the standardized patient simulated experience. The self-reported online pre/post questionnaire return rate was 72.5% (N=116). The pre/post results suggest the standardized simulated experience enhanced nursing student confidence  $p < .001$ ; the nursing students felt prepared for clinical as noted by the mean score of 7.78 of 10 and overall were satisfied with the simulation process with a mean score of 8.04 of 10. The addition of the standardized patient in a mental health simulated experience promoted an active learning environment that highlighted individualized confidence in therapeutic communication skills through a realistic application process.

## 1. Introduction

Nursing simulation settings are noted to provide the student nurse with a safe and active learning environment. Simulation laboratories have manikins from static to high level fidelity abilities. Interaction with manikins limits the natural conversation between the student and the simulation participants (Sidares et al., 2013). It is important to preserve the human interaction experience to prepare students for the clinical setting. The addition of standardized patients offers a return to the human interaction as integral to learning therapeutic communication. A well-developed standardized patient program within a nursing simulation program offers a realistic opportunity to practice therapeutic communication prior to clinical practice for nursing students.

## 2. Background

## 2.1. Nursing simulation programs

Simulation has been used with greater frequency by nursing programs to strengthen the learning process (GOH et al., 2016). Best practices suggest the promotion of active learning through the use of

simulation using standardized patients (Jarosinski and Webster, 2016; Oh et al., 2015; GOH et al., 2016). Standardized patients provide the opportunity to engage the learner in active learning through the provision of a realistic scenario with a human interaction experience (Webster, 2013, 2014). Simulated realism also allows the learner to actively participate in the application of learned knowledge from the classroom (GOH et al., 2016; Jarosinski and Webster, 2016; Oh et al., 2015). Therefore, the addition of standardized patients to nursing simulation programs encourages an additional learning strategy for the undergraduate nursing student (Hyunsook et al., 2015; Lewis et al., 2013). Student knowledge is triggered by the organization of information in patient specific situations (Lewis et al., 2013). Progression of the learning process includes the ability to critically think, make appropriate clinical judgments, and develop strong assessment skills (Hyunsook et al., 2015; Slater et al., 2016). Further, the development of nursing knowledge takes time and effort in the classroom and clinical areas. Therefore, the use of standardized patients encourages both theoretical and practical knowledge that brings the classroom learned experience into the clinical environment (Sarikoc et al., 2017).

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## 2.2. Therapeutic communication skills

An area that nursing simulation laboratories can expand and provide a systematic protocol for nursing students is learning therapeutic communication skills. Generally, undergraduate nursing programs emphasize therapeutic communication skills during the mental health course of the curriculum (Martin and Chandra, 2016). Operational therapeutic communication is an essential skill to learn during the nursing student's mental health clinical (Martin and Chandra, 2016; Thompson and Neelam, 2016). Areas in the literature on the implementation of therapeutic communication with student nurses note that students feel challenged and anxious when thinking about speaking and interacting with mental health patients (Martin and Chandra, 2016; Webster, 2014). In addition, the literature shows promise in addressing the need for simulation programs to include realism with acute mental health issues through the use of standardized patients prior to clinical practice (Alexander and Dearsley, 2013; Webster, 2014; Williams et al., 2017). However, the use of standardized patients and the standardized patient process shows limited research on the use of active practice of therapeutic communication skills in undergraduate nursing programs (Sidares et al., 2013; Alexander and Dearsley, 2013; Martin and Chandra, 2016). Additionally, an integrative review noted additional studies are needed to enhance the limited available evidence on mental health clinical practice (Ogard-Repal et al., 2018). Further, nursing students' learning has been noted to improve with an intentional critical inquiry process related to the content and application of content through scenario-based situations (Swart, 2017). A strategy that can enhance learning for the student nurse is the application of standardized patients in critical inquiry situations that develop nursing knowledge through practice (Swart, 2017). An area the learned process can be applied in the undergraduate nursing program is the skill of therapeutic communication.

## 2.3. Theoretical framework for active learning

Constructivist learning theory suggests learning can be highlighted by engaging the learner in an active learning frame of reference (Merriam et al., 2012). Learners engage new knowledge by engaging in a learning process that emphasizes active participation to form an experience (Chambers et al., 2013). Consequently, active learning experiences promote learning through repetition and replication. Therefore, learning strategies must emphasize the relationship between the new knowledge and learned knowledge (Carr et al., 2015). The building of individualized learning actualizes the learners understanding and recreation of the learned knowledge (Merriam et al., 2012). As a result, emphasis on a personalized learning experience can construct new knowledge through varied cognitive pathways for the individual learner (Freeman et al., 2014).

The learned skill from a constructed learning strategy highlights the learned experience that features new knowledge that becomes a formed cognitive learned experience. A standardized at risk mental health patient scenario was provided to the student nurse. Active learning was strategized using a standardized patient simulated experience presented in Fig. 1, Depiction of Standardized Patient Active Learning Premise. The intent of the strategy was to emphasize the classroom learned experience therapeutic communication skill and application of knowledge in a role playing scenario (Jarosinski and Webster, 2016). Active learning engaged the participant by emphasizing construction of knowledge through a planned simulated activity (Carr et al., 2015; et al., 2014).

## 2.4. Problem statement and research question

The overarching goal of this study was to enhance the active learning experience in the simulation laboratory through the addition of a standardized patient (SP) to the simulation experience. As a result,

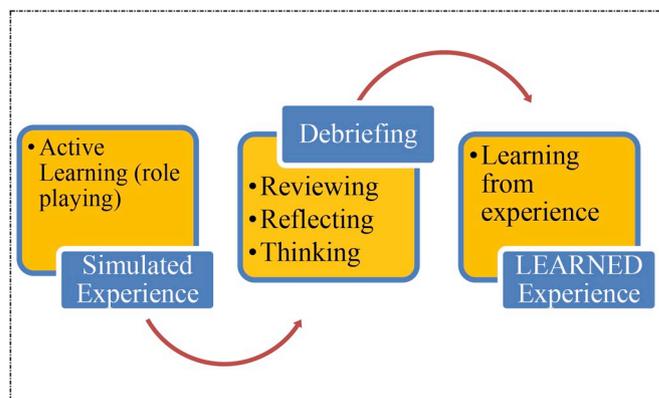


Fig. 1. Depiction of standardized patient active learning premise.

a nursing simulation program protocol was developed to include the use of SP's in the simulation scenarios. The undergraduate nursing course and skill chosen to implement the SP's into the simulation laboratory was the mental health course and therapeutic communication skills. Therefore, the purpose of the research study was to examine the efficacy of learned classroom therapeutic communication techniques applied to a standardized patient mental health simulated experience. The research question was as follows: What is the relationship between learned therapeutic communication techniques and a standardized patient simulated experience?

## 3. Method

A quantitative research methodology with pretest and posttest survey with intervention design was used. Approval for the study was obtained through the University Internal Review Board (IRB) for human research.

### 3.1. Sample and setting

A total of 160 undergraduate nursing students registered for three successive mental health nursing courses during academic year 2015–16. Following a classroom discussion on therapeutic communication, nursing students were provided a cover letter and consent to voluntary participate in the study. Risks and benefits of the study were reviewed with the nursing students and included the potential to experience anxiety as a result of participation in the simulated scenario. Nursing students were assured that participation or lack of participation in the study would not affect the nursing student's course grade. After obtaining consent, nursing students were asked to complete an anonymous pre and post survey following their participation in the standardized patient simulation experience. The setting for the experience was a simulated hospital room housed within the university undergraduate nursing program. The use of standardized patients was new to the nursing simulation program. Therefore, the laboratory staff strategized on the implementation of a standardized patient (SP) program and best practices. Supplementary material contains information related to recruitment, training, and retention of (SP) for current and future simulation experiences. Refer to the supplementary protocol data further down for protocol description and implementation.

### 3.2. Measurement tool

A self-reported pre and post simulation survey used was developed by Disler et al. (2013). Permission to use the survey was obtained from the primary author of the survey. The pretest questions included demographics of the student nurse participants. In addition, student nurses were asked to rate their level of confidence in caring for the simulation patient prior to the standardized patient simulation scenario

**Table 1**  
Pre/post simulation specific questions: Scale 1-10.

<p><b>Pre-Simulation:</b> At this stage of your course, please rate how confident you feel in caring for patients similar to those you will see in the simulation experience.</p>
<p><b>Post Simulation:</b> Now that you have completed the simulation, please rate how confident you feel in caring for patients similar to those in the simulation experience. Please rate your overall satisfaction with the simulation learning experience. Please rate to what degree you feel the simulation learning experience has assisted you in preparing for your upcoming clinical placement.</p>

on a scale of 1–10 with 1 being “no confidence” and 10 being “very confident”. The posttest questions asked the student nurse to rate the in caring for the simulation patient, satisfaction in the learning experience and simulation learning experience prepared the student for an upcoming clinical placement on a scale of 1–10 see Table 1, Pre-Post Simulation Specific Questions. The student nurse was also asked to rate the simulation components used in relation to learning and were rated as “no assistance, satisfactory assistance, or high assistance”.

The measurement tool (survey) was evaluated for content validity by Disler et al. (2013). The nursing faculties were noted to have expertise in clinical nursing, higher education instruction, and simulation strategies (Disler et al., 2013). Additionally, the questions were reviewed by the School of Nursing simulation program nursing faculties for this part of the research study and no changes were made. The pre and post surveys were presented through a link embedded in the mental health course online educational platform with course room information for registered course participants.

### 3.3. Intervention

The nursing students were given classroom instruction by an experienced mental health faculty member on therapeutic communication techniques, which included video clips with discussion on effective and ineffective therapeutic communication. Student nurses were then given a pre-simulation checklist consisting of student learning objectives; simulation expectations for students, which included debriefing and orientation to simulation experience. In addition, students received reading assignments on therapeutic communication to facilitate learning and aid in preparation for standardized simulation experience. The standardized patient scenario used was a depressed patient that had recently experienced the death of a spouse. Each nursing student spent 60 min on the standardized patient simulation experience from prebrief through debriefing.

### 3.4. Data analysis

The student nurse participant data was collected and analyzed using an anonymous online survey and uploaded into SPSS software (Released, 2016, IBM SPSS Statistics for Windows, Version 24.0. Armonk, NY: IBM Corp). Data from the survey was stored on the secured university website and was to be destroyed within 7 years per the internal review board protocol. Additionally, study data was only accessible by study researchers. Data was described using simple descriptive statistics, frequencies, means, and standard deviation. Tests for normality and linearity were conducted of the continuous data. Normal distribution was analyzed using paired and one-sample sample

**Table 2**  
Pre-post simulation confidence level.

	Mean	SD	SEM	t-value	df	2-tailed Sig	95% Confidence Interval
Pre-Confidence	4.53	1.74	0.16	12.42	115	<.001	–2.91 to 2.00
Post Confidence	7.06	1.65	0.15				

t-tests. Additionally, subgroup analyses were conducted with one-way analysis of variance for pre and post survey data variables.

## 4. Results

A total of 116 out of 160 nursing students completed the on-line pre and post simulation survey with a 72.5% response rate. The descriptive characteristics of the participating student nurses were as follows: 11% males and 89% female, ages ranged from nineteen to thirty-three (19–33) years, highest educational qualifications included high school diploma were forty-four percent (44%), higher education fifty percent (50%), and technical school was noted as six percent (6%). Ninety-four percent (94%) of the participants had no previous experience in nursing, six percent (6%) had 1 year of experience in nursing.

### 4.1. Pre-post simulation confidence level

Paired-sample t-tests were completed to evaluate the nursing student's confidence in caring for patients like those in the simulated experience. In the pre-simulation survey, nursing students responded to a question on their confidence in caring for a patient in the simulated experience. The rating scale for this question was 0–10 with 0 being ‘no confidence’ and 10 being ‘very confident.’ The mean pre-simulation confidence calculated was 4.54 with a standard deviation of 1.75. The post-simulation question asked the respondents to evaluate how confident they were after the standardized simulated experience. Nursing students rated on a scale of 0–10 with 0 meaning “no confidence” and 10 meaning “very confident” in caring for patients similar to those in the simulated experience. The mean calculated value was 7.06 with a standard deviation of 1.65. A paired samples test for differences between pre and post confidence were calculated see Table 2 ( $p < 0.001$ ). These results suggest that the student nurse confidence in therapeutic communication with a mental health patient had increased. Further evaluation of confidence levels was analyzed with one-way between groups multivariate analysis of variance with the variables of gender, experience, international status, and educational level with no significance found ( $p > 0.05$ ).

### 4.2. Satisfaction and simulation learning experience

Nursing students rated on a scale of 0–10 with 0 meaning “not good” and 10 meaning “very good” by rating the students overall satisfaction with standardized patient simulated experience (Mean 8.04, SD 1.83, SEM 0.17). Tests for normality and linearity were calculated using the Shapiro –Wilk and Kolmogorov-Smirnov tests with a test value of 10 ( $p < .001$ ). One sample t-tests were performed and noted satisfaction with the standardized patient simulation experience with significance of  $p < .001$  (t-value –11.52, df 115, 95% CI -2.29 to –1.62). The results suggest student nurse overall satisfaction with the standardized simulation experience was a positive learning experience.

### 4.3. Learning experience and clinical preparation

Nursing students rated on a scale of 0–10 with 0 meaning “no assistance” and 10 meaning “high assistance” in rating the simulation experience as preparation for the upcoming clinical experience (Mean, 7.78, SD 1.60, SEM 0.14). Tests for normality and linearity were calculated using the Shapiro –Wilk and Kolmogorov-Smirnov with a test

value of 10 ( $p < .001$ ). One Sample tests  $t$ -tests were performed of simulation experience preparedness for clinical ( $t$ -value  $-14.83$ ,  $df$  115,  $p < .001$ ). The results suggest that the simulated experience learning experience assisted in preparation for upcoming clinical placement was significant.

#### 4.4. Additional simulation components

Student nurses were asked about their participation in the standardized simulation experience from the classroom to the simulation laboratory. Simulation components of the SP experience evaluated as either no assistance, satisfactory assistance, or high assistance on a scale of 0–10. Nursing students rated on a scale of 0–10 with 0 meaning “no assistance” and 10 meaning “high assistance”. The majority of the responses to these components were rated as either satisfactory or high assistance. The simulation components with the highest assistance noted by the nursing students were facilitated debriefing and reflection (96%), interacting with the patient's voice (94%), active participation in the simulation (94%). Further areas noted as satisfactory to high assistance by the nursing students were participation in the simulation review session (81%), briefing and orientation to the simulation (78%), observing others and making notes (78%), and participating in the simulation skills review session (81%). The lowest scoring component of the simulation experience was watching the preparatory film (50%).

### 5. Discussion

Findings noted several areas of student nurse self-reported improvement: increased confidence in caring for patients in the simulated experience, increased satisfaction in overall simulation experience, and the degree to which the simulation experience provided preparation for the clinical environment. The use of SP's has created active learning through the construction of new knowledge in the simulated laboratory. In addition, the SP simulated experience increased perceived learning of the nursing therapeutic communication process. Practical experience with therapeutic communication with an SP allowed the student nurse to ask and discuss communication skills and identify areas for improvement during the debriefing. As suggested by this part of the study, confidence increased as a result of the SP experience and promoted an active learning archetype.

The results further suggested that students perceived learned therapeutic communication skills would contribute to their confidence when engaging with patients in a similar situation. Confidence in caring for a mental health patient was noted, students were found to have greater confidence in preparing for the clinical experience. The mental health scenario was specific to therapeutic communication with a depressed mental health patient. The results suggest that the use of SP's for learning this specific acute mental health condition can be applied to other mental health scenarios. Practiced therapeutic communication skills can crossover into varied patient specific communication situations. Additionally, the participants noted their overall satisfaction with the simulated experience and noted using a real person was an effective way to learn therapeutic communication techniques.

Areas highly regarded by the participants included active participation in the simulation, interacting with a patient, and debriefing and reflection after the standardized simulation experience. Lastly, the addition of a standardized patient program enabled the undergraduate nursing program to implement more realistic simulated experiences focused on the therapeutic communication process with mental health patients. Nursing student learned therapeutic communication skills are significant components to becoming an operational nurse. Therapeutic communication skills taught in the undergraduate nursing classroom need practical application of the learned process. As with most new skills application, the learner can feel overwhelmed when asked to speak to a mental health patient in a clinical setting. The SP experience in the simulation laboratory provided an avenue for each

undergraduate nursing student to apply therapeutic communication through a controlled environment.

#### 5.1. Discussion of results in relation to the literature

The literature has limited studies that describe the use of SP to improve student nurse learning of therapeutic communication. Areas of the SP simulated experience from a pilot study noted student nurse outcomes improved their confidence, level of engagement, and the sense of realism (Alexander and Dearsley, 2013). Further, studies that evaluated therapeutic communication skills of students noted improved student nurse interactions with mental health patients; suggested that the learning process was improved; allowed the student to practice in a safe environment on a high-risk low volume types of patients (Doolen et al., 2014; Martin and Chandra, 2016; Webster, 2014; Williams et al., 2017). Lastly the literature further states that the addition of varied simulation modalities to the simulation process needed to be further explored (Sarikoc et al., 2017; Williams et al., 2017). The SP simulated experience has been noted to improve student learning and allows for an emphasis on improving therapeutic communication skills in general of high-risk mental health patients in a controlled environment (Doolen et al., 2014).

### 6. Limitations

The limitations noted were the total number of student nurse participants and nursing programs. Both could limit generalization of results to all nursing programs. A larger sample size and additional undergraduate nursing programs may contribute to a more robust data set and would have validated the findings to a greater degree. Furthermore, a control group and stronger outcomes would add to the generalizability. Lastly, the scenario was limited to one per student nurse due to time constraints needed for each nursing student to complete the prebrief through debriefing process.

### 7. Supplementary standardized patient protocol data

The nursing simulation program was given the opportunity to review an implementation plan for SP integration for simulated experiences. Initial phasing of the program strategy was to review literature and SP programs in the state area (Decker et al., 2013; Sando et al., 2013). Faculty with similar undergraduate nursing programs were contacted and visited. A strategic plan was then formulated by the simulation committee. The SP program development included a three-pronged approach. The three-pronged approach focused on three key areas of SP program management: recruitment, orientation, and retention.

*SP recruitment* is the process of identifying all available resources to establish a pool of individuals to become SP candidates. The nursing program in this study chose to recruit from various sources such as drama/theater departments within the college, retired persons previously affiliated with the university, persons known to faculty and staff in the School of Nursing, advertising in the college newspaper, community volunteers, retirement communities, and local churches. Recruitment focused on persons who could represent clients from all backgrounds and across the lifespan.

*SP orientation* includes collaboration between the SP and the simulation team. The program should identify an individual whose primary role is to coordinate SP's for the simulation program. Role titles for the coordinator position vary based on the human resource nomenclature for the parent institution. Once an individual is identified to assume the coordination of SP's, the recruitment and orientation process can begin. Initial contact with an SP candidate would include a review of the SP role, SP responsibilities, objectives and purpose of the SP in the simulation based experience (SBE), and a hands-on role playing of the simulations with the SP candidate. Additional areas of preparation for the

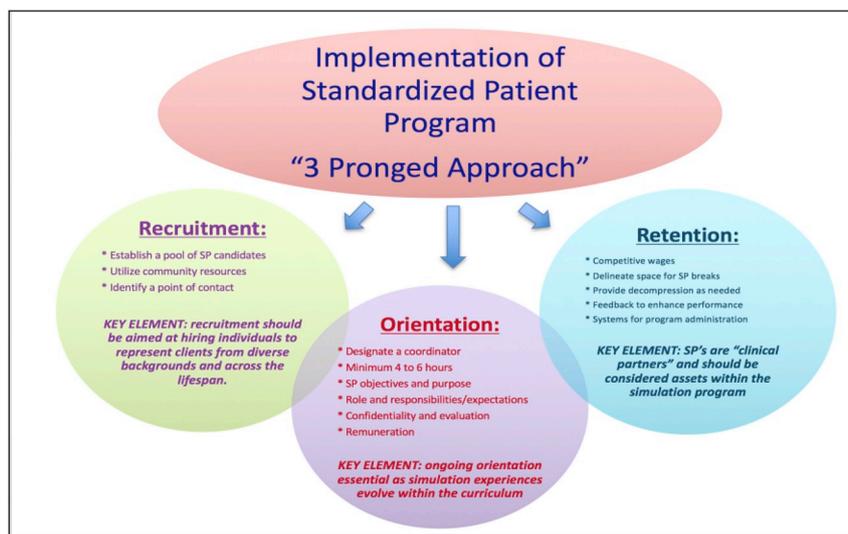


Fig. 2. Strategic key elements of standardized patient program implementation.

SP candidate include understanding confidentiality agreements, professional and role expectations, the payment process, and attendance/punctuality guidelines.

SP retention should include the designation of an SP coordinator as the point of contact for the program. Additional measures to increase SP retention include offering the SP competitive wages; evaluating SP's on a regular basis and providing feedback to enhance performance, supporting the SP with an appropriate space to decompress after an SP experience, and ensuring frequent breaks during a demanding SBE schedule. Additional retention concerns address SP documentation to include using a tracking system on SP's who have been hired, creating a scheduling system to identify multiple SP's needed, and ensuring SP's are paid in a timely manner. The “Three-Pronged Approach” is a practical matrix for implementing an SP program in the context of International Nursing Association for Clinical Simulation and Learning (INACSL) Standards of Best Practice (INACSL Standards Committee, 2013). Key elements of each prong are identified in Strategic Key Elements of the SP Program Implementation in Fig. 2.

## 8. Conclusion

As undergraduate nursing programs move purposefully toward the use of standardized patients within their simulation program, it is essential to understand the extent the standardized patient complements student learning. The review of the standardized patient process reinforced a planned standardized patient care scenario that engaged nursing students through the practical execution of therapeutic communication skills. The interaction between the standardized patient and student increased psychological fidelity to a greater degree than an interaction with a manikin. In addition, the nursing student was able to interact individually with the standardized patient and add to their understanding of the communication process and further develop individual therapeutic communication skills. Undergraduate nursing programs that are systematic and deliberate when implementing standardized patient experiences as part of the simulation program result in the promotion of a more realistic and positive outcome for students.

## Conflicts of interest

The authors declare no conflicts of interest.

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