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Valparaiso University

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**THE EFFECT OF STANDARDIZED PATIENT ENCOUNTERS ON
UNDERGRADUATE NURSING STUDENT EMPATHY AND SELF-EFFICACY IN
THERAPEUTIC COMMUNICATION**

by

ALANA M. URNESS, BSN, RN

EVIDENCE-BASED PRACTICE PROJECT REPORT

Submitted to the College of Nursing and Health Professions

of Valparaiso University,

Valparaiso, Indiana

in partial fulfillment of the requirements

For the degree of

DOCTOR OF NURSING PRACTICE

2016

Alana Urness 4/25/16
Student Date

Christine P. Kutz 4/25/16
Advisor Date

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ALANA M. URNESS

2016



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DEDICATION

I would like to dedicate this project to my parents. Thank you for your never-ending support and encouragement, particularly in my more unconventional life choices. Thank you for fostering my independence and motivating me to seek a greater understanding of the world and all that it has to offer. Most importantly, thank you for your unconditional love.

ACKNOWLEDGMENTS

I would like to thank my faculty advisor, Dr. Christine Kurtz, DNP, PMHCNS-BC, for her guidance and patience throughout this project. Without her vision, expertise, and suggestions, this project would not have been possible. In addition, I would like to thank Dr. Lauren Winkler, DNP, RN, FNP-BC and Dr. Jeffrey Coto, DNP, MS, RN-BC, CNS, CCRN for their input and support. I would also like to thank my incredible classmates for sharing their experiences and support. They are truly some of the most amazing women I have ever known. Thank you to my sister, Claire, for being a great roommate and puppy-sitter during the long hours that I spent in clinic or in the library. Finally, I would like to acknowledge the wonderful patients and co-workers that I have had the privilege of working with over the past six years who have influenced my life and career.

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ABSTRACT

Therapeutic communication between the nurse and patient is an essential component of optimal nursing care. Current evidence supports the use of standardized patient (SP) encounters to assist students in learning therapeutic communication skills. In addition to offering students an opportunity to practice in an environment free of clinical consequence, SP encounters have been shown to increase clinical knowledge and skill, improve diagnostic reasoning, and improve communication skills and interviewing skills. The purpose of this evidence-based practice project was to assess the effect of SP encounters on undergraduate nursing student empathy and self-efficacy related to therapeutic communication. Secondary outcomes included participant satisfaction and evaluation of the learning method. Sophomore-level nursing students participated in a brief SP encounter with junior-level nursing students acting as SPs. Feelings of empathy and self-efficacy related to therapeutic communication were assessed immediately prior to and one week following the intervention using a Likert-style tool developed by the project manager. A Wilcoxon Matched-Pairs Signed-Rank test was completed within each group of participants to evaluate the median difference of scores during the pre-intervention and post-intervention periods. Testing conducted within the junior-level participants revealed statistically significant post-intervention improvements related to awareness of body posture during patient interaction ($p = 0.021$), comfort using silence when interacting with a patient ($p = 0.014$), and comfort summarizing a conversation prior to closure of a discussion with a patient ($p = 0.011$). In addition, statistically significant findings were noted related to the ability of junior-level students to put themselves in the patient's shoes ($p = 0.020$), the belief that empathy is an important component of health care ($p = 0.025$), and the perception that emotional connection with patients may be detrimental to patient care ($p = 0.046$). No statistically significant results were found in the sophomore intervention group. A Mann-Whitney U test was used to compare the median scores and mean ranks between the sophomore intervention and sophomore comparison groups, as well as the sophomore intervention and

junior participant groups. A significant difference was noted between intervention and comparison sophomore participants, in that intervention sophomores were more likely to perceive lack of empathy as a hindrance to patient care ($p = 0.015$). In addition, sophomore students who participated in the intervention were less likely to perceive an emotional connection with a patient as detrimental to patient care ($p = 0.018$). A Mann-Whitney U test comparing junior participants and sophomore intervention participants revealed several statistically significant findings. Junior participants were found to have a greater belief that they were able to put themselves in a patient's shoes while providing care ($p = 0.042$), were better able to understand a patient's non-verbal cues and body language ($p = 0.004$), and had an increased perception that non-verbal communication was an important aspect of patient care ($p = 0.003$). In addition, junior students were significantly more comfortable using open-ended questions ($p = 0.042$) and summarizing a conversation ($p = 0.043$) than sophomore students. These findings support the conclusion that SP encounters improve empathy and self-efficacy related to therapeutic communication, particularly for those students acting as the SPs.

Keywords: therapeutic communication, empathy, self-efficacy, standardized patient, undergraduate education, simulation, nursing

CHAPTER 1

INTRODUCTION

Evidence-based practice (EBP), as outlined by Melnyk and Fineout-Overholt (2011) is a key component in the delivery of high quality patient care. The advanced practice nurse (APN) is prepared to synthesize current research, evidence-based theories, clinical expertise, and patient preference and values to guide clinical decision-making. In addition to improved patient health, the utilization of EBP has been shown to improve safety, cost-effectiveness, and decrease patient morbidity and mortality.

Background

Effective communication between the nurse and patient is an essential component of optimal nursing care. Communication is vital in the exchange of information related to health promotion and education, prevention of illness, and treatment options. In addition, effective communication promotes professional and patient satisfaction. Therapeutic communication is an ongoing process involving verbal and non-verbal cues. The nurse must understand and explore these cues in a way that demonstrates sincerity, courtesy, and kindness in order to deliver high quality, individualized nursing care (Kourkouta & Papathanasiou, 2014). In addition, communication is included in the Joint Commission National Patient Safety Goals as well as one of the four fundamental processes noted by the National Council of State Boards of Nursing (The Joint Commission [JCO], 2015; Puppe & Neal, 2014).

Statement of the Problem

Data from the Literature

It has been well established that suboptimal communication leads to clinical consequences. Eid, Petty, Hutchins, and Thompson (2009) noted the influence of quality communication on patient outcomes, satisfaction, and compliance. In addition, the authors noted that clear and effective communication influences patients' healthcare decision-making.

Lin, Chen, Chao, and Chen (2013) reiterated this claim stating that poor communication skills result in “inadequate relationships between clients and care providers, increased dissatisfaction and complaints, malpractice claims, poor treatment adherence, and negative health outcomes” (p. 677). Therefore, the development of sound communication skills is imperative in nursing education.

Due to the complex nature of the current health system, undergraduate nursing students are expected to master a variety of clinical and cognitive skills in a timely manner (Oh, Jeon, & Koh, 2015). However, time and resource constraints greatly influence teaching methods utilized in undergraduate nursing programs (Miles, Mabey, Leggett, & Stansfield, 2014). Teaching of communication skills is typically conducted in a didactic manner, with information presented in written and lecture format. While this teaching method may increase students’ knowledge and performance on objective tests, it does not allow students to practice and refine their skills (Lin et al., 2013). In addition, didactic education lacks the component of active learning, in which the learner addresses an objective based on acquired knowledge while continuously searching for additional knowledge to strengthen decision-making (Rickles, Tieu, Myers, Galal, & Chung, 2009).

Current teaching approaches are often focused on the development of clinical skills and may not result in the development of adequate communication skills. Alternative learning opportunities, including peer role play and standardized patients (SPs), have been used to prepare students for clinical practice (Bosse et al., 2012; Lin et al., 2013). During peer role play, students have the opportunity to act as the patient and the physician during a simulated encounter. This interaction allows students to better understand the communication process between the health care provider and patient and may promote feelings of empathy. However, many educators remain skeptical about peer role play, as the benefits are often mitigated as a result of poor planning and implementation (Bosse et al., 2012). Many medical, nursing, and allied health institutions have implemented SPs encounters as an educational tool to promote

effective communication skills. SPs are individuals prepared to portray specific clinical cases or characteristics. In addition to offering students an opportunity to practice their skills in an environment free of clinical consequence, SP encounters have been shown to increase clinical knowledge and skill, improve diagnostic reasoning, and improve communication and interviewing skills (Lin et al., 2013).

Data from the Clinical Agency

The undergraduate nursing program targeted for this EBP project offers a variety of cutting-edge topics and learning methods with an emphasis on optimal patient care. In addition, the college offers a state-of-the-art virtual learning center utilizing high-fidelity mannequins to aid in the development of clinical skills. These mannequins can be programmed to demonstrate a variety of clinical findings and are helpful in performing examinations and procedures. Through the use of this simulation-based learning, students are able to refine their skills in a non-threatening environment, in turn increasing their competence and confidence.

Despite the many advantages associated with the use of high-fidelity mannequins, alternative learning methods are warranted to promote quality communication. Communication involves both verbal and non-verbal cues. While verbal responses can be programmed, it is extremely difficult to accurately demonstrate non-verbal cues when utilizing high-fidelity mannequins. This finding has been reported by several students and instructors within the college. The use of alternative simulation-based techniques, including the use of SPs, may fill the gap regarding communication education.

In the institutional setting chosen for this EBP project, the teaching of therapeutic communication skills begins at the sophomore level. Specifically, teaching begins in the NUR 201: Professional Role in Nursing course. At this level, students complete assigned readings and receive information from the professor via PowerPoint slides. In addition, students receive handouts regarding specific therapeutic and nontherapeutic communication techniques. Finally, students complete therapeutic communication exercises designed to develop students' ability to

identify and utilize communication techniques (L. Winkler, personal communication, August 20, 2015). Therapeutic communication is revisited in the NUR 341: Psychiatric Mental Health Nursing course. At this time, students receive additional information in traditional lecture format followed by video demonstrations of therapeutic and nontherapeutic communication. In addition, students at this level participate in a group therapy role play simulation in which students are instructed to lead a group therapy session in the mental health setting. While the simulation was initially developed to promote group therapy leadership skills, improvements in therapeutic communication skills proved to be a positive secondary outcome. Finally, therapeutic communication skills are continually reinforced during experiences in the clinical setting, beginning the spring semester of the sophomore year (C. Kurtz, personal communication, August 31, 2015).

Currently, communication skills are taught in a largely didactic manner but are not refined until students enter the clinical arena. However, given the limited time available in the clinical environment, students should be given an opportunity to practice these skills prior to their first clinical experience. SP encounters provide a controlled, non-threatening environment in which students can practice and refine their communication skills.

Purpose of the Project

Clinical Question

The compelling clinical question prompting the development of this EBP project was, “What is the most effective way to improve communication skills among undergraduate nursing students?” The purpose of this EBP project was to assess the effect of SP encounters on undergraduate nursing student empathy and self-efficacy related to therapeutic communication. Secondary outcomes included student learning satisfaction.

PICOT

Clinical questions are often asked in a PICOT (patient population (P), intervention or issue of interest (I), comparison intervention or group (C), outcome (O), and time frame (T))

format in an effort to streamline research findings and collect relevant information (Melnyk & Fineout-Overholt, 2011). The PICOT question developed for this EBP project was: In second-year undergraduate nursing students (P), how does a SP program (I) compared to traditional educational methods (C) influence empathy and self-efficacy related to therapeutic communication skills (O) within one week (T)?

Significant of the Project

Quality communication is a fundamental component of nursing care. Evidence has demonstrated that poor communication skills may result in poor patient-provider relationships, low levels of patient satisfaction, poor treatment compliance, and ultimately, negative health outcomes (Eid et al., 2009). In addition, the importance of effective communication has been emphasized by JCO and the National Council of State Boards of Nursing (JCO, 2015; Puppe & Neal, 2014). Undergraduate nursing institutions have incorporated communication skills into nursing curricula, but education is largely didactic in nature. It has been well established that creative alternative teaching methods are necessary to foster the active learning of these communication skills (Bosse et al., 2012; Rickles et al., 2009). Additional effort is needed to explore alternative learning methods. Research has demonstrated that student encounters with SPs help reinforce and refine communication skills, promote feelings of confidence, and result in increased learning satisfaction (Hill, Davidson, & Theodoros, 2010).

CHAPTER 2

THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

Theoretical Framework: Patricia Benner's From Novice to Expert

Patricia Benner's From Novice to Expert model was adapted from the Dreyfus Model of Skill Acquisition and has been applied to the nursing profession. The model describes five levels of nursing expertise. The level of expertise an individual accomplishes reflects changes in two aspects of skill performance. The first is the movement from reliance on abstract concepts to the use of concrete experiences to guide nursing actions and decision-making. The second is a change in the perception and understanding of a situation, allowing the nurse to appropriately prioritize and determine relevance. When utilized in the practice setting, years of experience and supervisor judgment are typically used to determine level of nursing expertise (Benner, 1982).

Level I: Novice

Beginning nurses or nursing students have no experience with the particular nursing task at hand. Often, this level of skill performance includes the acquisition of new nursing skills. In order to promote an understanding of new skills and experiences, individuals should be taught in objective attributes. This level is characterized by the inability to use discretionary judgment, thus following a predetermined set of rules or guidelines is imperative in successful task performance. Furthermore, these individuals demonstrate difficulty prioritizing tasks or clinical findings, as the ability to prioritize is more intuitive in nature (Benner, 1982).

Level II: Advanced Beginner

Individuals occupying this level may demonstrate marginally successful skill performance, as these individuals have had enough educational or clinical experience to detect the recurrent themes of practice. These individuals are able to develop guidelines based on attributes noted through previous experience. While these guidelines integrate many attributes,

they often disregard differential importance, thereby inhibiting the performer's ability to appropriately prioritize (Benner, 1982).

Level III: Competent

Competent nurses begins to see their actions in the broader context of a long-term outcome. Nurses are able to determine relevance and prioritize actions in a way that fosters the accomplishment of desired outcomes. Level III is characterized by a feeling of mastery of skills and ability to cope and accommodate to a variety of clinical variations. In addition, individuals assuming the role of the competent nurse are often noted to be highly efficient and organized (Benner, 1982).

Level IV: Proficient

Proficient nurses are able to perceive the clinical situation as a whole, rather than in terms of individual aspects or attributes. Nurses are able to efficiently recognize if a clinical situation varies from normal expectations and they begin to develop the intuitive sense necessary to anticipate and correct these variations (Benner, 1982).

Level V: Expert

Expert performers no longer rely on rules or guidelines to guide their understanding of a situation. These individuals possess a deep, intuitive understanding of the situation and their actions are guided by this intuitive understanding, rather than specific attributes or maxims (Benner, 1982).

Application of Patricia Benner's From Novice to Expert Model

Patricia Benner's From Novice to Expert model can be utilized in a variety of nursing applications, particularly related to nursing education. Benner's theory serves as the theoretical underpinning for this EBP project because it can be applied to knowledge and skill acquisition of the undergraduate nursing population. Undergraduate nurses who have limited clinical experience can be assumed to occupy the novice level of Benner's theory, as they have little to no experience with the situation in which they are expected to participate (Benner, 1982). In

reference to the current EBP project, the second-year undergraduate nursing students with limited clinical exposure are considered novice, in terms of Benner's definitions. Third-year undergraduate nursing students are considered advanced beginners, as they have received education and participated in clinical experiences aimed at fostering therapeutic communication skills. However, these students have not yet reached the level of a competent nurse, as they are unable to view their individual actions in the broader context of patient care. The use of SP encounters in nursing education allows students to improve communication and interpersonal skills in a neutral, non-threatening environment. Students are encouraged to learn from their mistakes and integrate feedback into future practice (Hill et al., 2010). The project is not intended to accelerate the second-year student's transition to expert clinician, but is intended to ease the transition from novice to advanced beginner prior to exposure to hospitalized patients. In reference to third-year students, the project aims to further improve therapeutic communication skills, aiding in the transition from advanced beginner to competent nurse.

Strengths and Limitations of Benner's Model

Patricia Benner's From Novice to Expert model provides a clear, concise framework of understanding related to knowledge and skill acquisition among nursing students and professionals. Benner's model provides a logical framework in which to view nursing education. Benner's model was further operationalized in the context of nursing education by Nicol, Fox-Hiley, Bavin, and Sheng (1996). The authors acknowledged that competency, proficiency, and expert understanding often take years to advance and they developed a set of independent skill levels, termed Levels of Skill Acquisition, related to both communication and technical skills in nursing students. These additional levels address the psychomotor, cognitive, and affective domains of skill development. As the student becomes more comfortable and practiced in the clinical environment, "the psychomotor domain becomes increasingly autonomous, less directly subject to cognitive control and less subject to interference from other ongoing activities" (Nicol et al., 1996, p. 177). Level A indicates a foundational understanding of communication skills and

represents the first exposure to the skill. Traditional student learning, including lectures and textbook readings, would be considered Level A skills. Level B indicates accurate and safe performance, as these communication skills are practiced prior to entering the clinical setting. Student interaction with SPs would be considered Level B skills. Level C refers to the safe and accurate performance of communication skills under direct supervision in the clinical setting and Level D indicates safe and accurate communication without direct supervision. Finally, Level E refers to skill mastery as a result of experience and increased knowledge gained through reflection. As junior-level nursing students have participated in a variety of clinical experiences, it can be assumed that these students have progressed through levels A, B, C, and D. Ideally, these students have progressed to level E, though skill mastery may not be accomplished until the student graduates and enters the workplace environment. This operationalization allows students and educators to better understand skill development during the early stages of Benner's model.

A primary limitation of the model involves the discontinuity reported between the competent, proficient, and expert levels of expertise. While experience is necessary to propel a nurse through these levels, it should be noted that time spent in the nursing setting does not necessarily create competence. In response to this discontinuity, it has been proposed that "years of experience may provide fluidity and flexibility but not the complete reflexive thinking that has been hypothesized to be an important component of clinical nursing expertise" (McHugh & Lake, 2010, p. 3). Rather, the authors noted that education, both individual and aggregate hospital staff education, demonstrate a greater influence on expertise. Though no hypothesis was presented explaining the findings, this information may be useful in developing hiring procedures and employee incentives (McHugh & Lake, 2010).

Critics have testified that Benner's model is too simplistic in terms of assigning nurses to stages. Gobet and Chassy (2008) speculated that the criteria used to assign stages (experience and supervisor's judgment) may not be reliable and may not actually correlate with expertise in

a particular task. Furthermore, the authors noted that “it is well known from research in developmental psychology that empirically establishing the reality of stages is a difficult matter, requiring complex mathematics such as catastrophe theory and a wealth of quantitative data, which are lacking” (Gobet & Chassy, 2008, p. 131). In addition, the authors noted that the emphasis on intuition in the expert level may underestimate analytical and conscious problem solving also experienced at this level (Gobet & Chassy, 2008).

EBP Model: ACE Star Model

The Academic Center for Evidence-Based Practice (ACE) Star Model of EBP describes the cycle of knowledge transformation used to guide clinicians in promoting the use of EBP. Receiving its influence from Imogene King, the ultimate goal of the five-step model includes incorporating research into practice to improve care, patient outcomes, and patient safety. The ACE Star Model depicts the relationship between the various stages of knowledge transformation as new knowledge is implemented into practice (Stevens, 2012; Stevens, 2013).

Knowledge transformation is described as the conversion of primary research findings into evidence-based care methods (Stevens, 2012). Stevens outlined the following assumptions related to knowledge transformation: a) knowledge transformation is necessary prior to the use of research results in clinical decision-making, (b) knowledge can be derived from a variety of sources, (c) the most stable, concrete, and generalizable knowledge is discovered through systematic analyses that have controlled for potential bias, (d) evidence can be classified by its strength and can be categorized in a hierarchical manner, (e) knowledge exists in multiple forms, and (f) the form in which knowledge is developed influences its use in clinical practice. Stevens developed five steps to aid the clinician in developing and promoting EBP.

Step I: Research Discovery

During the first stage of knowledge transformation, new research is generated through traditional research methods. This is considered primary research development, the findings of which serve as the basis for EBP guideline development (Melnyk & Fineout-Overholt, 2011;

Stevens, 2012; Stevens, 2013). While primary research is not the aim of the current project, the utilization of primary research is imperative in developing the most current, comprehensive guidelines related to the use of SP methods in nursing education.

Step II: Evidence Summary

Prior to developing an EBP guideline, a review of the most current, comprehensive evidence must be completed. The evidence summary is also considered a form of knowledge generation and helps to differentiate EBP from research utilization (Melnyk & Fineout-Overholt, 2011; Stevens, 2012; Stevens, 2013). In reference to the current project, a literature review and appraisal of evidence was completed related to the use of SP methods to improve student learning of communication and interpersonal skills. The review included a variety of studies, which were rated using Melnyk and Fineout-Overholt's (2011) Hierarchy of Evidence.

Step III: Translation to Guidelines

During the third step of knowledge transformation, the appraised evidence is combined with clinical expertise to produce clinical recommendations. In addition, research evidence is combined with other knowledge sources and contextualized to the target population. The evidence is translated into practice recommendations, often in the form of clinical practice guidelines, and integrated into practice (Melnyk & Fineout-Overholt, 2011; Stevens, 2012; Stevens, 2013). While clinical practice guidelines will not be developed during the current project, a statement of best practice and program guidelines were developed to guide the implementation of the SP program.

Step IV: Practice Integration

Following the development of practice guidelines, guidelines are activated and incorporated into practice. This change in practice requires multiple changes on the individual and organizational level and may require change through formal in informal channels (Melnyk & Fineout-Overholt, 2011; Stevens, 2012; Stevens, 2013). It is during the practice integration step that the SP program was implemented in the target undergraduate nursing population.

Step V: Process, Outcome Evaluation

Simply stated, desired outcomes are assessed during the final stage of the knowledge transformation process. This outcome evaluation allows the researcher to draw conclusions related to the findings, as well as identify areas for further research. Ultimately, outcome evaluation verifies the success of EBP (Melnik & Fineout-Overholt, 2011; Stevens, 2012; Stevens, 2013). In the context of the EBP project, outcomes will be evaluated related to student empathy and self-efficacy related to communication skills. These findings will be scrutinized and utilized to further improve the SP program in the future.

Literature Search**Melnik and Fineout-Overholt's Hierarchy of Evidence**

Melnik and Fineout-Overholt (2011) articulated a rating system for the evaluation of evidence-based literature. Evidence can be conceptualized in a hierarchical manner with strongest evidence receiving higher value than weaker evidence. Melnik and Fineout-Overholt's rating system consists of seven levels. Level I evidence includes evidence obtained from a systematic review or meta-analysis of randomized controlled trials (RCT). Level II evidence is derived from a single, well-designed RCT and Level III from a single, well-designed controlled trial without randomization. Level IV evidence consists of results of a case-control or cohort study design. A systematic review of qualitative and descriptive studies results in Level V evidence, while evidence from a single qualitative or descriptive study is considered Level VI evidence. Finally, Level VII evidence consists of expert opinion or expert committee reports.

Search Engines and Key Words

A comprehensive literature search of several databases was conducted to explore the effects of SP interaction on student communication skills. Six databases were utilized in the search process: a) National Guidelines Clearinghouse, (b) Cochrane Library, (c) Joanna Briggs Institute EBP Database (JBI), (d) Cumulative Index to Nursing and Allied Health Literature (CINAHL), (e) MEDLINE (via EBSCO), and (f) ProQuest Nursing and Allied Health Literature.

After several preliminary searches and revisions, a set of representative keywords were established. These terms included (“*standardized patient*” or “*standardised patient*” or “*patient simulation*” or “*programmed patient*” or “*patient actor*”) and (“*communicat*” or “*interpersonal*” or “*nurse-patient relations*”).

Inclusion and Exclusion Criteria

Inclusion and exclusion criteria were applied to each search in an effort to further promote a sample representative of the established project topic. Inclusion criteria included: a) English language, (b) peer-reviewed and/or scholarly journals, and (c) published between January 2008 and May 2015. Exclusion criteria included: a) studies involving high-fidelity simulation and (b) studies that involved SP encounters as an assessment tool, rather than an educational method. Studies involving high-fidelity simulation were excluded because the use of high-fidelity simulation typically involves the use of mannequins paired with vocal simulation, rather than SPs.

Search Results

National Guidelines Clearinghouse was searched using the keywords “standardized patient” OR “patient simulation*.” This search yielded four results, none of which were deemed relevant to the project topic. Studies were deemed not relevant due to their lack of intervention involving SP teaching methods.

The Cochrane Library database was searched utilizing the terms “standardized patient” OR “standardised patient” OR “patient simulation” OR “programmed patient” OR “patient actor” AND *communicat** OR *interpersonal* OR “nurse-patient relations.” Fifty-four results met the inclusion and exclusion criteria. Titles and abstracts of all results were reviewed and two studies were reviewed in full. Both of the results were ultimately deemed irrelevant to the project topic, as one of the results served as a protocol for a systematic review and the other described the use of SPs in terms of an assessment tool, rather than an educational intervention.

A search of the JBI database was conducted using the keywords “standardized patient*” OR “standardised patient*” OR “patient simulation*” OR “programmed patient*” OR “patient actor*” AND communicat* OR interpersonal OR “nurse-patient relations.” The search produced seven results and titles and abstracts for all results were reviewed. One study was reviewed in full and was deemed irrelevant, as the study mentioned the use of SPs in communication training but lacked any quantitative or qualitative data to support their use.

The search of CINAHL utilized the search terms “standardized patient*” OR “standardised patient*” OR “patient simulation*” OR “programmed patient*” OR “patient actor*” AND communicat* OR interpersonal OR “nurse-patient relations.” Three hundred and sixty-six results met the inclusion and exclusion criteria. A title and abstract review was completed for all results and twelve studies were reviewed in full. Ultimately, ten studies were selected for inclusion into the review of literature (ROL). The included studies consisted of one meta-analysis (Oh et al., 2015), three RCTs (Bosse et al., 2012; Lin et al., 2013; Schlegel, Woermann, Shaha, Rethans, & van der Vleuten, 2012), one ROL (Hill et al., 2010), one systematic review of qualitative studies (Mesquita et al., 2010), one pilot study (Eid et al., 2009), and three qualitative studies (McKenna, Innes, French, Streitberg, & Gilmour, 2011; Miles et al., 2014; Owen & Ward-Smith, 2014).

The MEDLINE database was searched using the keywords “standardized patient*” OR “standardised patient*” OR “patient simulation*” OR “programmed patient*” OR “patient actor*” present in the abstract. In addition, the keywords communicat* OR interpersonal OR “nurse-patient relations” were searched anywhere in the text. After the application of the inclusion and exclusion criteria, four hundred and one results were displayed. The titles and abstracts were reviewed for all results and six studies were found to be duplicate results from the CINAHL search. Ten additional studies were reviewed in full and five studies were included in the ROL. These studies included two RCTs (Crofts et al., 2008; Moulton et al., 2009), one mixed

method/nonexperimental study (Rickles et al., 2009), one pilot study (Anderson et al., 2014), and one qualitative study (Kowitlawakul, Chow, Salam, & Ignacio, 2015).

Finally, a search of the ProQuest database was conducted with the search terms “standardized patient*” OR “standardised patient*” OR “patient simulation*” OR “programmed patient*” OR “patient actor*” present in the abstract. An additional keyword, communicat*, was added to the search and was required to be present in the abstract. Ninety-three publications resulted from the search, twelve of which were duplicate results from the CINAHL and MEDLINE searches. The ProQuest search yielded no additional studies for inclusion.

Ultimately, fifteen studies were selected for inclusion in this EBP project. Studies include one meta-analysis (Oh et al., 2015), five RCTs (Bosse et al., 2012; Crofts et al., 2008; Lin et al., 2013; Moulton et al., 2009; Schlegel et al., 2012), two pilot studies (Anderson et al., 2014; Eid et al., 2009), one mixed method study (Rickles et al., 2009), one review of literature (Hill et al., 2010), one systematic review of qualitative studies (Mesquita et al., 2010), and four qualitative studies (Kowitlawakul et al., 2015; McKenna et al., 2011; Miles et al., 2014; Owen & Ward-Smith, 2014). A description and key findings of the included studies can be viewed in Table 2.1.

Table 2.1

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Anderson, H. A., Young, J., Marrelli, D., Black, R., Lambreghts, K., & Twa, M. D. (2014). Training students with patient actors improves communication: A pilot study	<p>Pilot study</p> <p>Participants were assigned to an enrichment or comparison group.</p> <p>Enrichment group participated in five interviews with patient-actors, receiving instructor and actor feedback following each encounter.</p> <p>Comparison group participated in two interviews with patient-actors, receiving no feedback.</p> <p>Outcomes included subjective rating of performance (by participants, instructors and actors), actor recommendation of student and scores on questions from the American Board of Internal Medicine (ABIM) examination.</p> <p>Outcomes were measured following initial and final patient-actor encounter.</p>	<p>Student clinicians following the second year at the University of Houston College of Optometry.</p> <p>Students were invited to participate via email. The first ten students to respond were included.</p> <p>Enrichment group = 6 participants</p> <p>Comparison group = 4 participants</p>	<p>Subjective performance of the enrichment group significantly improved per masked examiners (+18 vs. -11%; ANOVA, $F = 4.59$, $df = 1$, $p = 0.04$) and participant ratings (+27 vs. +79%; ANOVA, $F = 11.64$, $df = 1$, $p = 0.009$), but not by actor ratings.</p> <p>The proportion of students recommended (via the question “would you recommend this doctor to a family member or friend?”) significantly increased per masked examiner ratings (61% vs. 94%; $p < 0.001$), but not by actor ratings (100% vs. 83%).</p> <p>No significant difference was noted between enrichment and comparison group ABIM scores.</p>	<p>Level VI</p> <p>JBI-MAStARI: 84%</p>

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Bosse, H. M., Schultz, J. H., Nickel, M., Lutz, T., Moltner, A., Junger, J.,... Nikendei, C. (2012). The effect of using standardized patients or peer role play on ratings of undergraduate communication training: A randomized controlled trial	RCT	Participants included fifth year medical students from the University of Heidelberg.	Self-efficacy ratings ($p < 0.05$) and OSCE scores (role play $p < 0.001$, Cohen's d 1.48; standardized patient $p < 0.006$, Cohen's d 0.63) significantly improved in both the role play and standardized patient groups compared to the control group.	Level II
	Participants were randomly assigned to a role play group, standardized patient group, or control group.	Total participants = 103		
	Participants in the role play group participated in three role play scenarios, alternating between the roles of physician, patient, and family member.	Role play group = 34 participants		A greater benefit resulted from the role play group compared to the standardized patient group, particularly due to higher performance in the domain of <i>understanding the parents' perspective</i> ($p < 0.021$).
	Participants in the standardized patient group participated in three simulated scenarios acting as the physician.	Standardized patient group = 35 participants		
	Participants in the control group received traditional seminar education.	Control group = 34 participants		Both role play and standardized patients were found to be effective in improving communication skills as evidenced by OSCE scores. Role play may be more effective in promoting empathy, especially when addressing parental concerns.
	Participant self- efficacy was assessed using a 24- question Likert-style questionnaire. For objective assessment, the Objective Structured Clinical Examination (OSCE) was evaluated by blinded evaluators.			

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Crofts, J. F., Bartlett, C., Ellis, D., Winter, C., Donald, F., Hunt, L. P., & Draycott, T. J. (2008). Patient-actor perception of care: A comparison of obstetric emergency training using manikins and patient-actors	RCT Aimed to assess and compare the effectiveness of obstetric emergency training methods on patient-actor perception of communication, safety, and respect. Participants were randomly assigned to one of four training groups: 1-day course at local hospitals; 1- day course at a simulation center; 2- day course including teamwork training at local hospitals; or 2- day course including teamwork training at a simulation center. Local hospital courses utilized patient-actors, while simulation center courses utilized high- fidelity manikins. Three weeks before and after the intervention, all participants participated in three simulated obstetric emergencies. Patient-actors scored the care received after each simulation with a standardized tool.	Participants included doctors and midwives in six UK hospitals. <i>N</i> = 140 1-day course at local hospital = 35 participants 1-day course at simulation center = 35 participants 2-day course at local hospital = 34 participants 2-day course at simulation center = 36 participants	Significant improvements were noted among all training groups ($p = <$ 0.001-0.007). Perception of communication and safety during a post- partum hemorrhage simulation was noted to have significantly improved after training with patient-actors compared to manikins (communication $p =$ 0.035, safety $p =$ 0.048). Additional teamwork training (as offered in the 2-day course) did not offer significant score improvements.	Level II JBI- MAStARI: 72%

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Eid, A., Petty, M., Hutchins, L., & Thompson, R. (2009). "Breaking bad news": Standardized patient intervention improves communication skills for hematology-oncology fellows and advanced practice nurses	Pilot study The authors developed the "Breaking Bad News Standardized Patient Intervention" (BBNSPI) to improve communication skills of hematology-oncology fellows (HOF) and advanced practice nurses (APN).	Six HOFs and two APNs participated in baseline testing and an educational program, including standardized patient interactions, aimed at improving communication skills. Five HOFs and one APN participated in the post-intervention assessment.	Average scores on the "Breaking Bad News Checklist" improved from 56.6% on pre-intervention assessment to 68.8% on post-intervention assessment. This was found to be statistically significant ($p < 0.005$). All participants felt that the intervention improved their communication skills related to delivering bad news. Overall participant feedback was positive.	Level VI JBI-MAStARI: 80%

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Hill, A. E., Davidson, B. J., Theodoros, D. G. (2010). A review of standardized patients in clinical education: Implications for speech- language pathology programs	Review of literature A review of current literature (number of references not reported) related to the use of standardized patients in clinical education was completed and implications for speech-language pathology programs were discussed.	The review presented a comparison of standardized patients with alternative teaching approaches as well as presented the use of standardized patients in nursing and allied health education programs, recruitment and training issues, and benefits of standardized patient use.	The use of standardized patients is a valuable addition to traditional teaching methods as evidenced by medical, nursing and allied science literature. Reports from various disciplines can be utilized to develop standardized patient programs specific to speech-language pathology courses. The authors concluded that standardized patients are effective in developing communication skills, are generally accurate in portraying patient issues, and are well- accepted by students.	Level V CASP: 80%

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Kowitlawakul, Y., Chow, Y. L., Salam, Z. H., A., & Ignacio, J. (2015). Exploring the use of standardized patients for simulation-based learning in preparing advanced practice nurses	Qualitative The study aimed to explore the perceptions of advanced practice nursing (APN) students related to the use of standardized patient methods in clinical education. A semi-structured interview with open-ended questions was completed and findings synthesized.	Participants included students of a university in Singapore who were enrolled in the Acute Care Track of the Master of Nursing program during the 2012-2013 academic year. <i>N</i> = 7 students	Use of standardized patients reportedly added value to APN education. Students felt that standardized patient methods were particularly useful and realistic for developing communication and history-taking skills. However, students felt that standardized patients were unable to demonstrate clinical signs and symptoms adequately.	Level VI CASP: 92%

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Lin, E. C., Chen, S. L., Chao, S. Y., & Chen, Y. C. (2013). Using standardized patients with immediate feedback and group discussion to teach interpersonal and communication skills to advanced practice nursing students	RCT The study compared the effects of using standardized patient with feedback and group discussion compared to standardized patients alone in nursing education. Interpersonal and communication skills were assessed before and after the study via interviews with standardized patients. Student learning satisfaction was assessed at the end of the study.	Participants included 26 first-year APN students attending a university in Taiwan. Experimental group (standardized patients with feedback and group discussion) = 14 participants Control group (standardized patients without feedback and group discussion) = 12 participants	All participants in both experimental and control groups showed significant improvements in interviewing ($p =$ 0.025), counseling (p $= 0.004$) and interpersonal and communication skills ($p = 0.005$) after the intervention. However, no statistical difference was found between the experimental and control group. Expressed student learning satisfaction was high and students provided overall positive feedback.	Level II JBI- MAStARI: 90%

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
McKenna, L., Innes, K., French, J., Streitberg, S., & Gilmour, C. (2011). Is history taking a dying skill? An exploration using a simulated learning environment	Qualitative The study aimed to explore the perceived value of video- recorded standardized patient encounters (including feedback) in relation to nursing students' history-taking abilities. Students participated in video-taped standardized patient encounters. Students and instructors then participated in a debriefing session to discuss missed cues and areas for improvement.	Nine third-year Bachelor of Nursing students participated (university characteristics not specified).	During the focus group discussion, students reportedly found the experience valuable in developing history- taking and communication skills. The self-evaluation and instructor feedback (based on thematic analysis of videotaped encounters) enhanced active participation, learning retention and learning from one's errors.	Level VI CASP: 88%

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Mesquita, A. R., Lyra, D. P., Brito, G. C., Balisa-Rocha, B. J., Aguiar, P. M., & de Almeida Neto, A. C. (2010). Developing communication skills in pharmacy: A systematic review of the use of simulated patient methods	Systematic Review The authors aimed to review the current literature related to standardized patient methods and communications skills in an effort to improve the use of these methods in pharmacy education.	15 studies published from 1980 to 2008, written in English and involved the use of standardized patient methods in pharmacy education were included.	A majority of the selected studies utilized standardized patient methods as an assessment tool, rather than an educational tool. In instances where standardized patient methods were utilized as an educational tool, standardized patient encounters were found helpful in transferring communication skills from the educational to clinical setting. In addition, when used as an educational tool, immediate performance and corrective feedback from patients or instructors was found to be useful in shaping communication.	Level V CASP: 82%

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Miles, L. W., Mabey, L., Leggett, S., Stansfield, K. (2014). Teaching communication and therapeutic relationship skills to Baccalaureate nursing students – a peer mentorship approach	Qualitative Second-semester undergraduate nursing students participated in video- recorded standardized patient encounters. Senior nursing students acted as the standardized patients. Following the interaction, senior students provided feedback on the use of therapeutic communication based on a feedback guide developed by researchers. Video recordings were reviewed by the instructor and additional feedback was provided.	117 second- semester nursing students participated in the standardized patient experience. The number of senior nursing students (teaching assistants) was not specified.	Overall feedback from students suggest that the intervention was useful. Feedback was positive. Themes identified include the impact of seeing oneself (via videotape), significance in practice, getting below the surface in communication and moving from insight to goal setting.	Level VI CASP: 80%

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Moulton, C. A., Tabak, D., Kneebone, R., Nestel, D., MacRae, H., & LeBlanc, V. R. (2009). Teaching communication skills using the integrated procedural performance instrument (IPPI): A randomized controlled trial	RCT Subjects were randomized into an experimental group (those receiving standardized patient feedback) and a control group (those not receiving standardized patient feedback). All participants participated in two videotaped standardized patient scenarios. The experimental group received feedback based on their performance, while the control group received no feedback. All participants then participated in two additional standardized patient scenarios. As a secondary outcome, the authors aimed to determine if improved communication skills compromised technical skills due to dual-tasking. Videotapes were scored by two blinded raters using validated assessment scales to measure communication and technical skills.	16 fourth-year medical students and 16 junior surgical residents at the end of their first postgraduate year at a Canadian university participated in the study. Participants were stratified based on level of training prior to randomization to ensure equal distribution among the groups. Experimental group = 16 participants Control group = 16 participants	The study assessed the effectiveness of an IPPI instrument including standardized patients encounters and feedback as a teaching method of communication skills. Communication scores of the experimental group were significantly improved after standardized patient feedback compared to the control group ($p < 0.05$). No significant changes were noted related to technical skills scores. An IPPI program including standardized patient experiences can be considered and effective communication education tool.	Level II JBI- MAStARI: 88%

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Oh, P. J., Jeon, K. D., & Koh, M. S. (2015). The effects of simulation-based learning using standardized patients in nursing students: A meta-analysis	Meta-analysis	18 studies (4 randomized and 14 non-randomized designs) were included in the meta-analysis. Included studies were published from the earliest publication date within each database through June 2014. The included studies were written in English or Korean.	Overall, simulation-based learning was found to be beneficial in the cognitive, affective and psychomotor realms of nursing education. Specifically, the use of standardized patient interventions demonstrated significant effects on knowledge acquisition ($p = 0.05$), communication skills ($p < 0.001$), self-efficacy ($p < 0.001$), learning motivation ($p < 0.001$) and clinical competence ($p < 0.001$). However, no statistically significant improvements were noted in the categories of critical thinking and learning satisfaction.	Level I CASP: 86%

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Owen, A. M., & Ward-Smith, P. (2014). Collaborative learning in nursing simulation: Near-peer teaching using standardized patients	Qualitative The publication describes the development of a standardized patient program utilizing upperclassmen as patient-actors.	152 first-semester students and 18 upper-level students of a Texas nursing program participated in the program.	Student (both first-semester and upper-level) feedback was largely positive (negative feedback comprising < 5%). Students found that the standardized patient encounter was realistic, constructive and provided a positive alternative learning method.	Level VI CASP: 80%

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Rickles, N. M., Tieu, P., Myers, L., Galal, S., & Chung, V. (2009). The impact of a standardized patient program on student learning of communication skills	Mixed method	127 second- year PharmD students	Students demonstrated progressively higher Communication Skills Assessment Form (CSAF) scores between baseline, midpoint and final evaluations ($p <$ 0.001).	Level VI
	Retrospective analysis was conducted to assess communication scores by evaluating baseline, midpoint and final tapes of standardized patient interviews.	109 students were included in baseline and final evaluations (decreased sample due to technical difficulties).	Students demonstrated significantly higher scores in all subsets of CSAF between baseline and final evaluations ($p <$ 0.05).	JBI- MAStARI: 84%
	Qualitative data was also collected from students and standardized patients.	107 students were included in baseline, midpoint and final evaluations (decreased sample due to incomplete data)	Students and standardized patients provided positive feedback related to the standardized patient program in pharmacy education.	

Table 2.1 (con't)

Evidence Data Table

Reference	Study Design	Sample	Results	Level of Evidence/ Appraisal
Schlegel, C., Woermann, U., Shaha, M., Rethans, J. J., & van der Vleuten, C. (2012). Effects of communication training on real practice performances: A role-play module versus a standardized patient module	RCT The study compared the effectiveness of a communication skills training program utilizing peer role-play and a communication skills training program utilizing standardized patient interactions.	55 first-year students of a nursing program in Berne, Switzerland, participated in the baseline assessment of self-efficacy. Intervention group (standardized patient) = 26 students Control group (peer role- play) = 29 students Many participants were not available for follow-up assessment due to ethical and IRB concerns. Intervention group follow up = 12 students Control group follow up = 14 students	No significant differences were found between the intervention and control groups regarding self- efficacy and patient perception of communication. However, clinical supervisors rated the communication scores of those in the intervention group significantly higher than those in the control group (<i>t</i> test = 5.71; <i>p</i> < 0.0001).	Level II JBI- MAStARI: 86%

Appraisal of Evidence

Meta-analyses, systematic reviews and ROLs were appraised using the Critical Appraisal Skills Programme (CASP) Systematic Review Checklist (Critical Appraisal Skills Programme [CASP], 2013a). The tool consists of ten questions aimed at addressing the validity, result content, and applicability of a review. A 5-point Likert scale was assigned to address each question and a percentage was calculated upon completion of each critique. A percentage of 90% or greater was considered a very strong reference, 80-89% was considered strong, 70-79% was considered fair, and a percentage under 70% was considered a poor reference. In addition, qualitative studies were appraised using the CASP (2013b) Qualitative Checklist, with a percentage value calculated at the end of each critique.

The JBI-MAStARI Appraisal Instrument (Joanna Briggs Institute [JBI], 2011) was used to appraise RCTs, pilot studies, and mixed method studies. The JBI-MAStARI checklist for RCTs consists of ten questions addressing randomization, blinding, group comparison, and outcomes. The JBI-MAStARI checklist for descriptive studies was used to appraise pilot studies and mixed method studies. This tool is composed of nine questions addressing random assignment, inclusion criteria, confounders, outcomes, and statistical analysis. Similar to the CASP (2013a, 2013b) tool, a 5-point Likert scale as utilized to evaluate each question and a percentage was calculated at the end of each appraisal using the same parameters noted in the CASP description.

The first piece of evidence was a meta-analysis conducted by Oh et al. (2015) to evaluate the effect of simulation-based learning utilizing SP methodology on cognitive, affective, and psychomotor domains of learning in nursing students. The CASP Systematic Review Checklist (CASP, 2013a) was utilized for appraisal of this meta-analysis. The study received a score of 86% and was deemed a strong reference. The review addressed the proposed question and the population, intervention, and outcomes were clearly articulated (Likert score: 5). The authors included RCT studies but the majority of the included studies were of a non-

randomized nature. However, no lower level evidence was included in the review, contributing to its validity (Likert score: 4). It is unclear whether all relevant studies were included in the review. A description of searched databases and citation chasing was addressed. Studies written in English and Korean were included, but other languages were excluded. Finally, the authors noted that unpublished studies were not searched, limiting the pool of relevant evidence (Likert score: 3). In addition, the rigor of included studies was not explicitly addressed. A comprehensive review of each study was included in table format, but it cannot be assumed that each study received a comprehensive critique (Likert score: 3). Results of the reviewed studies were largely consistent and combined appropriately (Likert score: 5). The overall results of the review were clearly delineated and expressed statistically (Likert score: 5), with precise results presented in both verbal and table format (Likert score: 5). The studies included both undergraduate and graduate nursing students, increasing generalizability (Likert score: 4). However, student demographics were not expressed and this factor may influence applicability to other populations (Likert score: 4). Finally, it appears that the benefits outweighed the costs in the reviewed studies. Results were largely positive and positive feedback was reported in many studies (Likert score: 5). The authors noted several additional limitations. The studies lacked consistent evaluation tools and the evidence for determining an optimal tool was inconsistent. In addition, concealment and blinding status was often not adequately described. Finally, many of the included studies utilized a nonequivalent control group and post-test only design, making them subject to selection bias.

Bosse et al. (2012) conducted a RCT comparing the effects of role play and SP educational methodologies on communication competencies compared to a control group. The JBI-MAStARI Appraisal Instrument (JBI, 2011) was utilized for the reference appraisal. While the authors reported random group assignment, the method of randomization was not specified (Likert score: 4). Due to the nature of the study design, participants and allocators were not able to be blinded to treatment allocation (Likert scores: 1, 1). It was noted that six participants

dropped out after initial group randomization due to study abroad commitments. Their withdrawal was not shown to affect the demographics or outcomes of the study (Likert score: 5). While the tutors and evaluators providing feedback during the small group training sessions were not blinded to treatment allocation, those evaluating the final OSCE interactions were blinded (Likert score: 5). Demographics among the three groups were found to be comparable and the groups appeared to be treated equally, with the exception of the interventions (Likert scores: 5, 5). Outcomes were measured identically for all participants, with the use of the self-efficacy scale and OSCE interaction and evaluation (Likert score: 5). While the outcomes of all groups utilized the same scales, it was noted that decreased inter-rater reliability during the final OSCE encounter had the potential to influence outcomes (Likert score: 4). Finally, appropriate statistical analysis was described and presented in the publication (Likert score: 5). However, the researchers reported several limitations of the study design. OSCE inter-rater reliability was not addressed, making it difficult to ensure that all OSCE performances were consistently assessed. In addition, there was no assessment of long-term practice change. Finally, due to the nature of the study, blinding and group concealment could not be completed. This may have influenced student motivation and behavior, particularly if students were aware of the hypothesis. This reference received a score of 80%, deeming the study of good quality.

The effect of obstetric emergency training on perceptions of communication, safety, and respect were explored in a RCT conducted by Crofts et al. (2008), which was appraised using the JBI-MAStARI Appraisal Instrument (JBI, 2011). While the authors reported random assignment to intervention groups, the method of randomization was not specified (Likert score: 4). Treatment group allocation could not be concealed from participants or researchers due to the nature of the study (Likert scores: 1, 1). Demographics and impact on outcomes of those who withdrew from the study were displayed and the authors noted that the withdrawals did not have a significant impact on measured outcomes (Likert score: 5). While those assessing outcomes were blinded to treatment group allocation, pre- and post-intervention blinding was

not possible (Likert score: 4). Demographics of all intervention groups were comparable at the start of the study, but it is difficult to completely eliminate confounders related to education and work experience (Likert score: 4). The study methods suggest that the groups were treated identically other than the intervention, but it is difficult to determine the effect of extracurricular activities on study outcomes (Likert score: 4). Outcomes were measured in an identical manner using the same SPs and the same evaluation scales (Likert score: 5). However, there was no mention of validity or reliability of the scales (Likert score: 3). Finally, the outcomes were presented in an appropriate, statistical manner with findings displayed in verbal and table format (Likert score: 5). Multiple methodological limitations were noted in the study. In an effort to reduce inter-rater variability, SPs assessed the same participants before and after intervention. However, this technique also eliminated blinding related to intervention timing, though the SP could still be blinded to intervention group allocation. In addition, it is difficult to directly attribute the noted improvements to the intervention, as no control group was present in the study. Finally, the study does not address improvements in clinical management of obstetric emergencies. The study received a score of 72% and is considered a fair study.

The JBI-MAStARI Appraisal Tool (JBI, 2011) was also used to appraise the RCT conducted by Lin et al. (2013). The aim of this RCT was to explore the effectiveness of SP encounters including feedback in teaching interpersonal communication skills in graduate nursing students. Group assignment was found to be truly random, with the authors noting block randomization and allocation ratio (Likert score: 5). While participant blinding was not possible (Likert score: 1), group assignment was completed by an independent evaluator and the list of group assignments sealed (Likert score: 5). An explanation of withdrawn participants was presented (Likert score: 5). While the SPs completing the interpersonal communication skills assessment were not blinded to a participant's treatment group, the independent evaluators assessing student performance via videotape were blinded to group allocation (Likert score: 4). The control and experimental group were found to be comparable at initiation of the study and

were treated identically, with the exception of the intervention (Likert scores: 5, 5). Outcomes were measured consistently among groups, with the interpersonal skills assessment tool and student learning satisfaction tool being utilized (Likert score: 5). These tools had been previously used and their validity and reliability assessed (Likert score: 5). Finally, statistical analysis was deemed appropriate (Likert score: 5). The authors noted several limitations in the study design. While the study design did include a control group that did not receive SP feedback, there was no control group that did not receive SP encounters. Therefore, it is difficult to determine whether the improvements in interpersonal communication skills were attributed to SP encounters or feedback. In addition, information exchange among groups and compensatory rivalry may have compromised the outcomes. The small sample size may have limited the effect magnitude and generalizability. Finally, there was no follow up to determine long-term effects of the intervention. The study received a score of 90%, deeming it a very strong study.

The effectiveness of SPs was also examined in a RCT conducted by Moulton et al. (2009), which was appraised utilizing the JBI-MASARI Appraisal Tool (JBI, 2011). The groups were determined to be truly random, as the authors reported participant stratification based on level of training prior to randomization (Likert score: 5). Similarly to other related RCT studies, participants were not blinded to treatment group allocation (Likert score: 1). It is unclear whether or not treatment group allocation was concealed from the allocators, but it should be noted that the allocators did not complete the student evaluations (Likert score: 3). It was noted that no participants withdrew from the study and, therefore, had no effect on outcomes (Likert score: 5). The expert surgeons who were assigned to evaluate outcomes were blinded to participant treatment group allocation, as well as the timing of the videos (pre- or post-intervention) (Likert score: 5). The control and experimental groups were deemed comparable at study initiation as a result of appropriate randomization techniques (Likert score: 5) and the treatment groups appeared to be treated identically, with the exception of the SP feedback intervention (Likert score: 5). Outcomes were measured consistently among groups with the use of the technical

skills checklist, technical skills global rating scale, and communication global rating scale (Likert score: 5). The authors noted that all tools had been validated prior to inclusion in the study (Likert score: 5). Finally, appropriate statistical analysis was demonstrated and outlined in the publication (Likert score: 5). The study received a calculated score of 88% and is considered strong in nature.

An RCT by Schlegel et al. (2012) compared the effectiveness of a communication skills training program utilizing SPs with peer role play. An appraisal utilizing the JBI-MASARI Appraisal Tool (JBI, 2011) resulted in a score of 86% and the study was considered strong. It appears that assignment to treatment groups was truly random, as computer software was used to allocate participants (Likert score: 5). While participants were not blinded to intervention group (Likert score: 1), it is important to note that each intervention took place on a different campus, limiting exchange of information or exposure to participants in alternative groups. While computer software distributed the patients, it is unclear whether the distribution was concealed from the study investigators (Likert score: 3). An explanation of those withdrawn from the study was provided but outcomes of these participants were not assessed (Likert score: 4). However, considering the groups were comparable at baseline (Likert score: 5) and there was consistent withdrawal between groups, it can be assumed that the intervention groups remained comparable throughout the study. The patients and supervisors evaluating student communication skills were blinded to participant allocation (Likert score: 5). While the interventions took place at different campuses, the coursework and clinical work between the campuses was consistent (Likert score: 5). Outcomes were measured consistently among all participants (Likert score: 5) and the researchers used previously established tools, increasing validity and reliability (Likert score: 5). Appropriate statistical analysis was used throughout the study and the findings disseminated (Likert score: 5).

Hill et al. (2010) completed an ROL related to the use of SPs in clinical education. The CASP (2013b) assessment tool for qualitative data was utilized to appraise this ROL. The aim of

the review was clearly delineated and the relevance to clinical practice discussed (Likert score: 5). While the reviewed studies included both qualitative and quantitative designs, the qualitative methodology was deemed appropriate for the review, as no statistical analysis was offered or discussed (Likert score: 5). While a ROL is not typically associated with a specific research design, the authors did not discuss their search method or how they selected the included articles (Likert score: 3). Similarly, recruitment was not discussed, as the researchers did not conduct original research (Likert score: 3). While included findings appeared to address the research issue, a review of how the data was collected or deemed appropriate for inclusion was not discussed (Likert score: 2). The relationship between the researcher and participant was clearly assumed, as the researcher had no involvement in the actual research studies (Likert score: 5). While ethical concerns were not directly discussed, it can be assumed that these considerations were addressed within each individual study (Likert score: 4). Thematic analysis was used to portray the information in a clear manner, though no implications regarding rigor were discussed in the publication (Likert score: 3). Findings were clearly outlined and included a review of the use of SPs in clinical education, methodological issues, benefits, and challenges associated with the SP methodology (Likert score: 5). Finally, the review was deemed valuable and offered an inclusive view of SPs in clinical education (Likert score: 5). The ROL received a score of 80% and is considered strong in nature.

Mesquita et al. (2010) conducted a systematic review of qualitative literature related to the use of patient simulation methods to improve communication skills of pharmacists. The CASP (2013a) tool for systematic reviews was used to critique this work. The review clearly addressed the goal of exploring the use of SPs to improve pharmacist communication skills (Likert score: 5). While RCTs and quantitative data was not included, the authors searched for appropriate qualitative literature to answer the proposed question (Likert score: 5). However, it is possible that relevant studies may have been missed as the English language served as an inclusion criteria. In addition, the authors did not note any citation chasing or search for

unpublished literature (Likert score: 4). While the authors stated that a full critique was completed for each work, critique procedures or tools were not discussed (Likert score: 4). The results were combined appropriately in text and table format (Likert score: 5). The overall results were clearly delineated and recommendations for future practice discussed (Likert score: 5). Statistical analysis was not performed, as the review was qualitative in nature. Therefore, no statistical results were presented (Likert score: 2). The review included primarily practicing pharmacists. While the authors aimed to transfer the findings to the student population, this may be problematic due to confounders including work experience and previous education of the practicing pharmacists (Likert score: 3). While the outcomes appeared to be adequately considered, more thematic analysis would have been appreciated (Likert score: 3). Though not explicitly discussed, the benefits of SP education appears to be worth the harms and costs, particularly if the program is well-developed (Likert score: 5). This review was considered strong, with a calculated score of 82%.

A pilot study by Anderson et al. (2014) evaluated the use of SP encounters to train optometric students. JBI-MAStARI Appraisal Instrument (JBI, 2011) was utilized to appraise the presented literature. While it was stated that participants were randomly assigned to the enrichment or comparison groups, no method of randomization was disclosed (Likert score: 4). Participants were unable to be blinded to their group allocation and this was noted by the authors as a potential confounder (Likert score: 1). It was unclear if allocation was concealed from the allocators but it should be noted that the allocators were not involved in evaluations or data collection (Likert score: 3). There was no need for analysis of withdrawn participants as nobody withdrew from the pilot study (Likert score: 5). Those assessing outcomes were blinded to group association (Likert score: 5). The groups were found to be comparable at baseline (Likert score: 5) and were treated identically, with the exception of the intervention (Likert score: 5). Outcomes were measured similarly for both groups with three identical tools used (Likert score: 5). However, it was unclear if these tools had been previously used or validated, though it

can be assumed that the ABIM questions were reliable (Likert score: 4). Appropriate statistical analysis was used and displayed visually and in text (Likert score: 5). Because performance was evaluated only at the initial and final encounter, it is not possible to determine at which point the student's communication skills began to improve. It is speculated that patient-actors were hesitant to rate students poorly due to the potential influence on the student's grade. In addition, a lack of participant blinding may have served as a confounder, as students were aware that their communication skills were being assessed. Finally, the small sample size may limit the observed magnitude of improvement. This pilot study received a score of 84%, deeming it strong evidence.

A pilot study by Eid et al. (2009) assessed the effectiveness of a SP educational intervention on improving communication skills of hematology-oncology fellows (HOFs) and advanced practice nurses (APNs). JBI-MAStARI (2011) was utilized to appraise this pilot study. While the program was required for all HOFs and APNs in the practice, there is no way of knowing if the sample is representative of HOFs and APNs as a whole (Likert score: 3). However, the participants appeared to be at a similar point in training, increasing their homogeneity (Likert score: 5). Selection bias was minimized by requiring all HOFs and APNs to participate (Likert score: 5). Confounding factors were identified and strategies to offset them in future studies were outlined, particularly related to sample size and study design (Likert score: 4). Due to the nature of the intervention, outcomes were subjective in nature (Likert score: 2), though follow up appeared to take place after a sufficient time period (Likert score: 5). Those who withdrew from the study were analyzed and were not found to significantly alter outcomes (Likert score: 5). While the SPIKES (setting, perception, invitation, knowledge, empathy, strategy and summary) methodology was utilized to assess participant performance, it was unclear if the tool had been previously validated (Likert score: 4). Finally, appropriate statistical analysis was used, though the magnitude of the effect may have been limited by small sample size (Likert score: 5). Multiple limitations were outlined in the publication. The small sample size

diminishes the power of the study and reduces the magnitude of the positive result. In addition, the authors noted that improvement may have resulted from repeated exposure to similar SP scenarios. Finally, the authors were unable to determine any clinical significance as a result of the pilot study. The pilot study received a calculated score of 80%, deeming it a strong source.

Kowitlawakul et al. (2015) conducted a qualitative study with the intent of exploring the perceptions of APN students related to the use of SP methodology in clinical education. The CASP (2013b) qualitative appraisal tool was used to appraise the study. The aims of the study were clearly outlined and relevance discussed in the introduction (Likert score: 5). A qualitative methodology was determined to be appropriate, as the study aimed to explore the perceptions of APN students regarding SP encounters in clinical education (Likert score: 5). The authors did not explicitly articulate how the research design was chosen, but it can be implied based on the qualitative nature of the research question (Likert score: 3). A purposive sample was utilized and all students in a particular nursing course agreed to participate (Likert score: 5). The method of data collection was clearly outlined. Sample questions were provided and the researchers reported partaking in data collection until saturation was reached (Likert score: 5). The relationship between the researcher and participant was unclear and was not discussed in the publication (Likert score: 3). Ethical issues were considered and IRB approval was received prior to study initiation (Likert score: 5). Data analysis was found to be rigorous and the authors directly discussed the ideas of credibility, dependability, confirmability, and transferability (Likert score: 5). A clear statement related to study findings was outlined in text and table format (Likert score: 5) and the study was deemed valuable in its ability to transfer knowledge to similar populations (Likert score: 5). The appraised study received a calculated score of 92%, deeming it very strong in nature.

The perceived value of video-recorded SP encounters and feedback in relation to nursing students' history-taking skills was studied by McKenna et al. (2011). The CASP (2013b) qualitative appraisal tool presented a score of 88% and the study was considered strong in

nature. The research goal related to student perception of SP encounters was clearly outlined (Likert score: 5). Given the proposed research topic, a qualitative methodology was deemed appropriate (Likert score: 5). While the authors did not explicitly justify the research design, they did justify the use of SPs in nursing education (Likert score: 4). Students in their third year of a Bachelor of Nursing program were offered the opportunity to participate in the study. Due to the voluntary nature of the study, motivated learners may have been drawn to participate, potentially impacting study outcomes (Likert score: 4). Data collection methods were explicitly outlined in the form of a focus group (Likert score: 5). However, the relationship between the researcher and the participants was not directly addressed (Likert score: 3). Ethical issues appear to have been considered, as IRB approval was obtained. However, the specific ethical issues considered were not described adequately (Likert score: 4). While data analysis, coding, and thematic analysis were adequately described, the concepts of credibility, dependability, confirmability, and transferability were not directly addressed (Likert score: 5). Findings were clearly disseminated (Likert score: 5) and implications for similar populations were addressed (Likert score: 5).

A qualitative study conducted by Miles et al. (2014) describes a SP program in undergraduate nursing education. The CASP (2013b) qualitative appraisal tool was utilized for appraisal of the study. The goal of the research was clearly outlined within the study (Likert score: 5). A qualitative methodology was deemed appropriate, as the authors sought qualitative responses regarding the perception of a SP program (Likert score: 5). Program development was justified and supported by relevant literature (Likert score: 5). All second-semester undergraduate nursing students participated in the study and no students opted out (Likert score: 5). Data was collected via evaluations, though focus group discussions may have added value to the findings (Likert score: 4). The researchers also appeared to be course instructors, which may have biased results. However, the researchers noted that participation in the study had no influence on a student's grade (Likert score: 5). Ethical concerns appear to have been

addressed during the IRB process, but specific ethical considerations were not discussed in the publication (Likert score: 4). While thematic analysis appeared to be in-depth and conclusive, the credibility, dependability, confirmability, and transferability of data was not addressed (Likert score: 4). Findings were clearly outlined (Likert score: 5) and findings appear to be valuable and transferrable to other student populations (Likert score: 5). The study received a score of 94%, deeming it of very strong quality.

Owen and Ward-Smith (2014) described the development of a SP program utilizing upperclassmen as patient-actors. Study appraisal was completed utilizing the CASP (2013a) qualitative appraisal tool. The goal of the research was clearly stated (Likert score: 5) and a qualitative methodology was determined to be appropriate based on the desire to obtain student feedback (Likert score: 5). Program development was adequately supported by research and the study design was justified (Likert score: 5). Though voluntary, all first-semester students participated in the program and no withdrawals were reported (Likert score: 5). Data was collected in a written manner in the form of an open-ended questionnaire, but no verbal data collection took place (Likert score: 4). The relationship between the researchers and the participants was unclear and potential biases were not addressed (Likert score: 3). No ethical considerations were discussed by the authors and there was no mention of IRB approval, though approval can be assumed (Likert score: 1). Written data was sufficiently collected but no thematic analysis was completed, potentially limiting the impact of the results (Likert score 3). Findings were explicitly discussed (Likert score: 5) but additional information, particularly related to thematic analysis, would improve the value of the study (Likert score: 4). A grade of 80% was calculated for the study and the study was considered of strong quality.

The qualitative and quantitative value regarding the effect of SP encounters on student communication skills was assessed by Rickles et al. (2009). The JBI-MAStARI Appraisal Tool (2011) was utilized in the study appraisal. The sample was randomly selected from the entire second-year PharmD class and was found to be representative of the population (Likert score:

5). All of the student participants were in the same semester of their educational program (Likert score: 5). Selection bias was minimized through randomization (Likert score: 3) but confounding factors were not explicitly addressed (Likert score: 3). Both objective and subjective data resulted from the study, but it should be noted that student evaluation with the CSAF tool is subjective in nature (Likert score: 4). Follow up was carried out over an appropriate time period, with evaluations occurring at midterm and final periods (Likert score: 5). Outcomes of those withdrawn from the study were assessed and were determined to not have a significant impact on study outcomes (Likert score: 5). The primary reasons for study withdrawal included technical difficulties and incomplete data collection. It is unclear if data was measured in a reliable manner, as the researchers noted that more study into the validity and reliability of the Communication Skills Assessment Form (CSAF) tool is necessary (Likert score: 5). Finally, appropriate statistical analysis was used to disseminate the study results (Likert score: 5). A score of 84% was calculated and the study was deemed of strong quality.

Construct EBP

Synthesis of Literature

Oh et al. (2015) conducted a meta-analysis in an effort to evaluate the effect of simulation-based learning utilizing a SP methodology on cognitive, affective, and psychomotor domains of learning in nursing students. Eighteen studies were included in the analysis (four randomized and fourteen non-randomized studies), with a total of 1,326 undergraduate and graduate nursing students assessed. The primary outcomes included knowledge acquisition and improvements in clinical skill performance. Secondary outcomes consisted of learning outcomes including problem solving ability, critical thinking, and confidence. For this purpose of this meta-analysis, simulation learning was defined as “an educational strategy that replaces or amplifies experiences that replicate aspects of the real world in an interactive fashion” (Oh et al., 2015, p. e7). The authors included studies utilizing a SP methodology and excluded other

simulation methods, including high-fidelity simulation or other methods utilizing computer simulation.

Within the cognitive domain of learning, improvements in knowledge acquisition and communication skills were found to be statistically significant ($p = 0.05$ and $p < 0.001$, respectively). However, improvements in critical thinking ($p = 0.75$) and problem solving capacity ($p = 0.14$) were not statistically significant. Statistically significant ($p < 0.001$) improvement was found in the overall category of affective domain of learning. Subgroup analysis revealed that increases in self-efficacy and learning motivation were found to be statistically significant ($p < 0.001$ and $p < 0.001$), while increased learning satisfaction was not ($p = 0.43$). Finally, improvements in the psychomotor domain of learning and clinical competence were found to be statistically significant ($p < 0.001$ and $p < 0.001$). The authors concluded that simulation-based learning utilizing SP methodology may improve students' knowledge acquisition, communication skills, clinical skill acquisition, learning motivation, and self-efficacy. However, significant improvements were not found in critical thinking, problem-solving, or learning satisfaction (Oh et al., 2015).

Use of Standardized Patients

Hill et al. (2010) completed a thorough ROL related to the use of SPs in clinical education. The authors defined SPs as “actors or real patients who are carefully trained to accurately portray a patient or an aspect of a patient’s illness according to educational need” (Hill et al., 2010, p. 260) and these patients are trained to “faithfully reproduce the psychological, emotional, historical and physical manifestations of a patient on observation, interview and communication” (p. 260-261). The ROL revealed that SPs are primarily utilized to improve communication and interviewing skills, history collection, and focused physical examination.

Reviews comparing SP methods to traditional methods of communication education have been mixed. While some studies do not demonstrate significant skill improvements as a result of SPs, this educational method is more often reported to be beneficial, realistic, and a

positive complementary learning option. In addition, several studies have demonstrated improvements in communication skills upon examination. Collectively, the reviewed studies support the inclusion of SP encounters into education for nursing and allied health students to improve communication and interpersonal skills (Hill et al., 2010).

Hill et al. (2010) discussed several methodological issues plaguing the use of SP methodology. Sources of measurement error, including variability of the assigned task and scoring instrument, serve as a primary issue in SP education. In an effort to increase reliability of SPs, it is recommended that training be accurate and consistent in nature. In addition, valid and reliable tool development for evaluation of student communication skills is imperative in developing an effective program.

The benefits of a SP education program are many. This method offers standardization of experience, as experiences in the clinical setting often vary. The authors noted that SP experiences are more valuable when patients are trained consistently and students are exposed to a variety of clinical cases of varying complexity. In addition, this methodology provides students a safe learning environment associated with less stress, anxiety, and embarrassment. Students were able to make mistakes in a neutral, controlled environment, and therefore learn from their mistakes without fear of injuring a patient. This may improve students' confidence in their skills and ease the transition into clinical practice. Finally, immediate, real-time feedback has been cited as a major benefit of the use of SPs in clinical education. SPs are often trained to provide verbal and written feedback with emphasis on communication skills. This may aid the student in improving patient interaction in the clinical setting (Hill et al., 2010).

Despite the many positive aspects of SPs in education, several challenges have been noted related to the development of a strong program (Hill et al., 2010). The authors noted the extensive time and organizational commitment required to develop a beneficial program. While financial requirements may be problematic, the authors prompted readers to explore alternative patient options, including upperclassmen. In addition, the limited repertoire of scenarios that

SPs are able to demonstrate may also be problematic. However, utilizing SPs in education aimed at improving communication skills has been found to be largely beneficial.

Mesquita et al. (2010) conducted a systematic review of qualitative literature related to the use of SP methods to improve communication skills of pharmacists. Search procedures were outlined including a description of inclusion and exclusion criteria. Nineteen studies were critiqued in full and fifteen were found to fulfill the inclusion and exclusion criteria. While feedback regarding SPs in pharmacy is largely positive, the authors noted several issues in the data surrounding their use. Oftentimes, the terminology applied to SPs is inconsistent. Similarly, there is an inconsistent definition of communication and this definition is often left to the conceptualization of the researcher. The authors also noted that many studies lacked immediate feedback from SPs, which has been found to be an integral component of a successful SP program. It was concluded that the use of SPs as an educational tool has been demonstrated to be beneficial in transferring communication skills from the educational setting to the practice setting. However, in an effort to promote reliability of this method, consistency in feedback, tool development, and reporting should be promoted.

The effect of obstetric emergency training on perceptions of communication, safety, and respect were explored in a RCT conducted by Crofts et al. (2008). Participants included doctors and midwives in six hospitals located in the United Kingdom. Of the 240 staff members who were invited to participate, 158 consented to the study. Due to 18 staff members who withdrew from the study, ultimately 140 doctors and midwives participated.

Participants were randomly assigned to one of four training groups: a) one-day course held at a local hospital ($n = 35$), (b) one-day course held at a simulation center ($n = 35$), (c) two-day course held at a local hospital ($n = 34$) or (d) two-day course held at a simulation center ($n = 36$). All of the courses provided a learning platform for participants to improve their skills related to the management of obstetric issues with the two-day course including teamwork training. Courses held at local hospitals utilized SPs while those held at simulation centers utilized high-

fidelity mannequins as patients. Prior to the intervention, all participants managed three standardized simulated obstetric emergencies – eclampsia, postpartum hemorrhage, and shoulder dystocia. The SPs then completed evaluations related to communication, respect, and safety using a Likert-style tool designed by the researchers. Three weeks following the intervention, participants managed the same obstetric emergencies followed by evaluations using the same tool (Crofts et al., 2008).

Following the intervention, a statistically significant improvement was noted in every aspect of the SP's perceptions of care, regardless of intervention group ($p = < 0.001 - 0.007$). Specifically, in the post-partum hemorrhage scenario, communication and safety scores were significantly higher for participants who received training with SPs compared to those who received training with high-fidelity mannequins (communication $p = 0.035$, safety $p = 0.048$). A non-significant improvement was also noted in terms of respect ($p = 0.077$). However, SP perceptions of communication, safety, and respect did not differ significantly for the groups who received additional teamwork training compared to those who did not. Crofts et al. (2008) speculated that this may be related to the method of teamwork training, which focused primarily on team communication rather than communication between the provider and the patient. The authors concluded that perceptions of communication, safety, and respect may be improved with professional education utilizing SPs or high-fidelity mannequins, with greater advantages associated with SPs. It was speculated that this improvement may be attributed to a lack of non-verbal cues portrayed by high-fidelity mannequins (Crofts et al., 2008).

A pilot study assessing the effectiveness of a SP educational intervention for improving communication skills of hematology-oncology fellows (HOF) and APNs was conducted by Eid et al. (2009). Six HOFs and two APNs specializing in cancer care participated in the pre-intervention test consisting of an encounter with a SP. Participant performance was evaluated utilizing a checklist based on the SPIKES (setting, listening skills; patient's perception; invite patient to share information; knowledge transmission; explore emotions and empathize;

summarize and strategize) methodology of breaking bad news. After the encounter, participants were given a 45-minute interactive lecture followed by both role play and SP encounters to practice the learned skills. One week following the intervention, participants took part in a final SP interview. The initial and final encounters were videotaped and reviewed retrospectively. Evaluations were again completed utilizing the SPIKES methodology checklist. Evaluations were completed by the SP, by an instructor watching the real-time interview via computer screen, and by a blinded instructor retrospectively. Five months following the intervention, participants were asked to complete a long-term post-intervention survey.

The average class score on the evaluation checklist improved from 56.6% prior to the intervention to 68.8% following the intervention. This was found to be a statistically significant improvement ($p < 0.005$). Short-term perception of the usefulness of the program, based on a subjective perception survey administered one week following the intervention, was positive but was not found to be statistically significant. However, the long-term post-intervention perception survey, completed five months following the intervention, found that 100% of participants found the intervention to be helpful (Eid et al., 2009).

Kowitlawakul et al. (2015) conducted a qualitative study with the intent of exploring the perceptions of APN students related to the use of SP methodology in clinical education. Participants included students of a university in Singapore enrolled in the Acute Care track of a Master of Nursing program during the 2012 to 2013 year. Seven students participated in the study. The authors utilized a semi-structured interview format with open-ended questions and interviews concluded when researchers felt that data saturation had been reached. Interviews lasted approximately 60 minutes.

Findings were sorted into three thematic categories: a) usefulness, (b) clinical limitation, and (c) realism. All participants reported that SP encounters were helpful in developing communication skills, particularly related to history taking. However, students often reported difficulties related to clinical limitations of SPs. Students found it difficult to accurately formulate

differential diagnoses when signs and symptoms of a disease process were not well demonstrated. Despite these reports, participants felt that SPs acted like real patients and experiences were similar to those encountered in the clinical setting (Kowitlawakul et al., 2015).

McKenna et al. (2011) studied the perceived value of video-recorded SP encounters and feedback in relation to nursing students' history-taking skills. Nine third-year Bachelor of Nursing students participated in the SP encounters. Analyses of the video-recordings were completed by the research team, students were allowed to view video-recordings of their own performance, and a focus group was conducted. Thematic analysis demonstrated three areas of interest: a) interpersonal skills, (b) questioning, and (c) missed cues. The researchers found that students were not effectively opening and closing encounters with patients. Specifically, students lacked eye contact, did not introduce themselves, and had difficulties bringing the interview to a close. In addition, many students failed to ask open-ended questions and relied heavily on clinical paperwork to guide the interview process. Finally, students missed a variety of verbal cues that may have impacted the type of patient information collected (for example, mobility issues in a patient with arthritis). During the focus group session, student feedback regarding the experience was largely positive. It was reported that the experience enabled students to view a patient as a whole being. The students also valued the opportunity to evaluate their own performance. It was postulated that self-evaluation has the potential to assist with active learning, learning retention, and the ability to learn from one's errors. The authors concluded that encounters with SPs offer a realistic opportunity to develop interpersonal and communication skills in undergraduate nursing students (McKenna et al., 2011).

A mixed method study by Rickles et al. (2009) provided an assessment of the quantitative and qualitative value regarding the effect of SP encounters on student communication skills. One hundred and twenty-seven second-year PharmD students participated in video-taped SP encounters. Thirty SPs were recruited for the study. A retrospective analysis was conducted to assess communication scores by evaluating baseline,

midpoint, and final encounter videotapes. Evaluators utilized a communication skills assessment form (CSAF) addressing the opening of an interaction, assessment, verbal skills, non-verbal skills, issue management, the closing of an encounter, and additional skills.

One hundred and nine students were included in the baseline and final evaluations and 107 students were included in baseline, midpoint, and final evaluations. The decreased numbers of participants were related to technical difficulties and incomplete data collection. Students demonstrated significantly higher scores on CSAF evaluations between baseline, midterm, and final evaluations ($p < 0.001$). Upon subset analysis, students were found to have demonstrated significantly higher scores on all subsets of the CSAF evaluations between baseline and final evaluation ($p < 0.05$). Qualitative feedback provided by both students and SPs was positive and students found the experience to be helpful and realistic (Rickles et al., 2009).

Despite the apparent benefits of the SP program, the lack of a comparison group makes it difficult to determine if the improved CSAF scores are directly related to the intervention. The authors conducted a blinded post-hoc analysis comparing the study population to a similar population receiving traditional communication education and found higher CSAF scores among students who participated in the SP program ($p < 0.001$). However, direct comparison in a controlled study would be beneficial (Rickles et al., 2009).

Use of upperclassmen as standardized patients. Cost is often cited as a barrier to the implementation of a SP program in clinical education. In an effort to decrease the costs associated with such programs, several researchers have utilized upperclassmen as SPs. A qualitative study conducted by Miles et al. (2014) describes a SP program in undergraduate nursing education. Second-semester undergraduate nursing students ($N = 117$) participated in video-recorded SP encounters. Senior nursing students (quantity unspecified) acted as the SPs. Following the interaction, the SPs provided feedback regarding the use of therapeutic communication utilizing a researcher-developed evaluation tool. The videotapes were reviewed

by the undergraduate students and instructors and additional feedback was provided.

Evaluations of the program were completed at the end of the program.

Overall feedback from students suggest that the intervention was helpful in developing communication skills. Feedback was largely positive. Students valued the ability to view their performance and felt that the experience increased their self-awareness and insight. The opportunity to practice communication skills prior to encountering actual patients boosted self-confidence, as reported via an open-ended questionnaire administered following the intervention. Self-evaluation made students more aware of their strengths and areas in need of improvement. Students felt the experience made them more aware of specific communication strategies and their influence on interpersonal communication. In addition, students greatly valued upperclassmen input related to patient communication. Upperclassmen reported a “greater understanding of the symptoms of mental health disorders and a heightened sense of empathy as they internalized the experience” (Miles et al., 2014, p. 39). Additionally, therapeutic use of self and communication skills among upperclassmen were reportedly enhanced (Miles et al., 2014).

Owen and Ward-Smith (2014) described the development of a SP program utilizing upperclassmen as patient-actors. One hundred and fifty-two first-semester undergraduate nursing students participated in the study with 18 upper-level nursing students who acted as SPs. Written comments were provided and verbal debriefing based on program learning objectives took place after the encounters. Both first-semester nursing students and upperclassmen reported that the feedback was helpful (negative feedback related to the experience comprised less than 5%). Students found that the SP program was realistic, particularly in reference to patient communication and assessment, constructive, and provided a positive alternative learning method. Specifically, first-semester students reported that the experience aided in prioritization, increased their confidence in caring for patients, and helped them better care for patients. While upperclassmen reflected positively on the experience,

specific findings related to upperclassmen were not discussed. The authors concluded that near-peer teaching utilizing SP methodology was successful in meeting the cognitive and skill development objectives of all students.

Use of Standardized Patients versus Role Play

A RCT conducted by Bosse et al. (2012) compared the effects of role play and SP educational methodologies on communication competencies compared to a control group. Participants included fifth-year medical students at the University of Heidelberg ($N = 103$). Participants were randomly assigned to a role play group ($n = 31$), SP group ($n = 33$) or the control group ($n = 34$).

Nineteen SPs received training to act as parents of sick children. Training included self-study, collaboration with an instructor, and numerous practice scenarios. The actors were trained to portray nine common cases encountered in pediatric medicine – fainting, urticaria, diarrhea, abdominal pain, fever, crying baby, meningitis symptoms, febrile seizure, and dyspnea (Bosse et al., 2012).

Participants in all three groups attended weekly seminars and completed course assignments. Three small group training sessions were attended by those in either intervention group. Participants in the role play group rotated between the roles of physician, parent, and observer, while participants in the SP group rotated between the roles of physician and observer. Following each encounter, tutors and those in the observer role evaluated the student's performance and immediate feedback was provided (Bosse et al., 2012).

Outcomes included student self-efficacy and performance on Objective Structured Clinical Examination (OSCE) questions related to patient communication. Self-efficacy was assessed using a 24-question Likert-style questionnaire that was completed by all participants after the intervention period was complete. The Calgary-Cambridge Referenced Observation Guide was used to rate student performance on OSCE interactions (Bosse et al., 2012).

Overall self-efficacy scores improved regardless of group affiliation ($p < 0.05$), though participants in the role play and SP groups demonstrated higher scores than those in the control group. However, the self-efficacy scores between participants in the role play and SP groups did not differ. Participants in the role play and SP groups demonstrated higher overall scores on OSCE performance when compared to control group participants (role play $p < 0.001$, Cohen's $d = 1.48$; SP $p < 0.006$, Cohen's $d = 0.63$). Contrary to the researcher's hypothesis, a greater benefit was noted after role play training compared to SP training ($p < 0.021$), specifically due to significantly higher performance in the subgroup domain of *understanding the patients' perspective* ($p < 0.001$). The findings suggest that both role play and SP methodologies have a significant beneficial effect on student self-efficacy and OSCE performance. It is hypothesized that role play may foster a more empathetic approach to patient interaction, as the student actively explores the role of the patient. However, the authors noted that, if not used well, role play can be largely ineffective due to a lack of realism. SPs, however, often demonstrate more consistent, reliable performances, though the domain of *understanding the patients' perspective* may be compromised (Bosse et al., 2012).

Fifty-five first-year nursing students in Berne, Switzerland, served as participants in a RCT conducted by Schlegel et al. (2012) comparing the effectiveness of a communication skills training program utilizing SPs with peer role play. The participants were randomized into a SP group ($n = 26$) and a peer role play group ($n = 29$). Those in the SP group participated in an individualized 20-minute interview with a SP followed by feedback, while those in the peer role play group were divided into groups of three with each participant allowed twenty minutes to act in the role of patient, nurse, and observer. Mutual feedback was provided following each role play.

Measured outcomes included student self-efficacy, hospitalized patient perceptions of communication, and clinical supervisor assessment of communication. Student self-efficacy was assessed using the European Donor Hospital Education Programme Self-Efficacy

Questionnaire. The perception of communication by hospitalized patients was assessed using the Art of Medicine Survey scale and supervisor perception of communication was assessed using the Work Samples and Situation-Related Questions to Measure Workplace-Related Competencies scale (Schlegel et al., 2012).

Due to ethical and IRB concerns, 12 participants in the SP group and 14 participants in the peer role play group were available to participate in the second phase of data collection. During the second phase of data collection, student communication skills were assessed by hospitalized patients in the hospital setting. No statistically significant differences were noted between groups related to student self-efficacy and hospitalized patient perceptions of communication. However, clinical supervisor perceptions of communication demonstrated statistically significant improvements among the SP group participants compared to the peer role play group participants, with a *t* test result of 5.71 ($p < 0.0001$) (Schlegel et al., 2012).

The authors concluded that the consistent increase in self-efficacy scores indicated that students felt equally prepared for patient interaction. The consistently high patient ratings may indicate a hesitance among hospitalized patients to score students poorly, perhaps due to concerns about the student's academic grade. The authors also considered that patients in the hospital setting may be unaware of ideal bedside manners. However, supervisors appeared to be stricter in their rating of student performance, likely due to their education, background knowledge, and ability to differentiate between surface knowledge and in-depth understanding of communication skills (Schlegel et al., 2012).

Effectiveness of Feedback

Lin et al. (2013) conducted a RCT to explore the effectiveness of SP encounters including feedback in teaching interpersonal communication skills in graduate nursing students. Participants included 26 first-year APN students in Taiwan. Six volunteer undergraduate nursing students acted as SPs. Participants were randomly assigned to an experimental group ($n = 14$) or control group ($n = 12$). Participants in both groups received a 2-hour class regarding

interpersonal communication skills and were assessed during a SP interview before and after the class. Those in the experimental group received SP feedback following the first SP interview and a group-led discussion prior to the second interview (Lin et al., 2013).

The researchers assessed interpersonal communication skills and learning satisfaction. An interpersonal skills assessment tool was used to assess skills related to interviewing and collecting information, developing rapport, counseling and delivering information, and personal manner. SPs evaluated students following each interview and a blinded instructor rated the encounters via videotape. The student learning satisfaction scale consisted of nine dichotomous questions and was completed following the final interview (Lin et al., 2013).

Mann-Whitney *U* tests were performed to evaluate the outcomes. All participants in both the control and experimental groups demonstrated statistically significant improvements in total interpersonal communication skills ($p = 0.005$) and the subsections *interviewing and collecting information* and *counseling and delivering information* ($p = 0.025$ and $p = 0.004$, respectively). However, no significant difference was found for total interpersonal communication skills or any subsections between the control and experimental group at baseline or post-intervention assessment. Consistent improvements in total interpersonal communication scores in both groups did not support the hypothesis that SP feedback and group discussion improves interpersonal communication skills in APN students. All participants expressed high student learning satisfaction with control group participants expressing slightly higher levels, though the difference was not statistically significant. Ultimately, the authors concluded that the use of SPs improves learning satisfaction and significantly improves student communication skills. However, the study demonstrated that SP feedback and group discussion did not result in significant differences between the groups (Lin et al., 2013).

The effectiveness of feedback by SPs was also examined in a RCT conducted by Moulton et al. (2009). Participants included 16 fourth-year medical students and 16 first-year postgraduate junior surgical residents. Subjects were randomized into an experimental group (n

= 16) receiving SP feedback and a control group ($n = 16$) receiving no feedback. All subjects participated in two videotaped SP encounters assessing both technical and communication skills (scenarios included wound closure and urinary catheterization). Feedback was then provided to experimental group participants in a 30-minute video review and discussion. All participants then completed two additional SP encounters (that involved application of a cast and skin lesion removal).

Both technical and communication outcomes were assessed through the evaluation of the SP encounters. Technical skills were assessed by a 26-item task-specific checklist and a 5-item global rating scale. Communication skills were assessed using a 5-item global rating scale addressing verbal and non-verbal expression, cohesion, and empathy. Immediately following the two initial encounters, the SPs completed the communication assessment scale and recorded additional notes related to performance. This served as the foundation for feedback provided to the student. All videotaped encounters for all participants were evaluated by blinded expert surgeon reviewers who assessed technical and communication skills (Moulton et al., 2009).

The researchers determined that communication skills of participants in the experimental group were significantly improved compared to those in the control group ($p < 0.05$). In addition, those in the experimental group outperformed those in the control group on the specific items of verbal expression (78% vs. 66%), non-verbal expression (79% vs. 67%), cohesion (81% vs. 68%), and empathy (75% vs. 45%). However, the checklist and global rating scales related to technical skills did not show significant improvements between the experimental group and control group for any of the scenarios. The authors ultimately concluded that those students who received SP feedback related to communication skills outperformed those who did not receive feedback. While the authors did not note many study limitations, a lack of long-term outcome assessment was discussed (Moulton et al., 2009).

A pilot study conducted by Anderson et al. (2014) evaluated the use of SP encounters to train optometric students. Participants included students from the University of Houston College of Optometry following their second year of school. Participants were invited via email and the first 10 respondents were included in the study. Three actors from the University of Houston School of Theater and Dance served as SPs. Participants were randomly assigned to an enrichment group ($n = 6$) or a comparison group ($n = 4$). Participants in the enrichment group participated in five interviews with SPs, receiving 20 minutes of feedback including strengths and weaknesses, patient notes, and strategies for improvement. Those in the comparison group participated in two interviews and received no feedback regarding their performance. All encounters were videotaped and reviewed by blinded instructors for additional evaluation.

Outcomes included subjective rating of performance, SP recommendations for the student, and scores on a subset of questions based on the American Board of Internal Medicine (ABIM). Students and masked clinical instructors evaluated subjective rating of performance at the initial and final interview using a visual analog scale (VAS). SPs evaluated students by answering the dichotomous question, "Would you recommend this doctor to a friend or family member?" The evaluation from the ABIM included questions regarding disclosure of information, warmth, respect, genuineness, listening skills, encouraging questions, involving the patient in decision-making, use of lay language, and appropriate patient education (Anderson et al., 2014).

Student performance was assessed during the initial and final encounter. Students in the enrichment group were rated much improved compared to those in the comparison group when rated by masked instructors (+18 vs. -11%). A two-way repeated measures ANOVA showed statistically significant differences between groups ($F = 4.59$, $df = 1$, $p = 0.04$). Self-rated improvement was noted in both groups, with significantly greater improvements in the enrichment group (+27 vs. +79%, ANOVA, $F = 11.64$, $df = 1$, $p = 0.009$). No significant difference was found in SP ratings between the groups. Finally, a trend of positive change on

ABIM questions was noted for both groups. However, this improvement in scores did not reach statistical significance. The researchers concluded that interviews with SPs followed by feedback may significantly improve communication skills, particularly as evaluated by instructors (Anderson et al., 2014).

Findings related to SP feedback have been mixed. While Lin et al. (2013) noted an overall improvement in interpersonal communication skills following a SP intervention, the authors did not report improved interpersonal communication skills for the group that received SP feedback compared to the group that did not receive SP feedback. However, Moulton et al. (2009) found that participants who received SP feedback outperformed participants who did not receive feedback in the realms of verbal expression, non-verbal expression, cohesion, and empathy. Finally, Anderson et al. (2014) concluded that SP feedback may positively influence student performance, particularly when evaluated by instructors.

Several studies have demonstrated beneficial improvements in student communication skills as a result of SP interaction (Anderson et al., 2014; Eid et al., 2009; Kowitlawakul et al., 2015; Lin et al., 2013; McKenna et al., 2011; Mesquita et al., 2010; Moulton et al., 2009; Rickles et al., 2009). In addition, studies comparing SP and role play methodologies demonstrate comparable results (Bosse, et al., 2012; Schlegel et al., 2012) or results in favor of SP use (Crofts et al., 2008; Oh et al., 2015; Schlegel et al., 2012). Despite the variability in study design and outcome measurements, four primary commonalities were identified in the synthesis of the literature:

1. Improvements in student communication skills served as a common theme among the reviewed studies. While a variety of assessment tools were utilized in the evaluation of student performance, improvements in communication and interpersonal skills remained a central finding (Anderson et al., 2014; Bosse et al., 2012; Crofts et al., 2008; Eid et al., 2009; Lin et al., 2013; Moulton et al., 2009; Oh et al., 2015; Rickles et al., 2009; Schlegel et al., 2012).

2. Student perceptions of SP programs in clinical education were largely positive. Specifically, students found the experience useful and realistic. In addition, improvements in student self-efficacy and learning satisfaction were reported (Bosse et al., 2012; Eid et al., 2009; Kowitlawakul et al., 2015; Lin et al., 2013; McKenna et al., 2011; Mesquita et al., 2010; Miles et al., 2014; Owen & Ward-Smith, 2014; Rickles et al., 2009).
3. Performance feedback by SPs, blinded evaluators, or instructors served as a valuable component of SP education (Anderson et al., 2014; Hill et al., 2010; Lin et al., 2013; Moulton et al., 2009). In addition, self-evaluation can aid in active learning, learning retention, and learning from mistakes (McKenna et al., 2011).
4. The use of peers as SPs may reduce program cost and promote sustainability. Additionally, studies have demonstrated that acting as a SP can reinforce learned skills and was viewed positively by SPs (Miles et al., 2014; Owen & Ward-Smith, 2014).

Best Practice Recommendation

After analyzing and synthesizing the findings of relevant studies, a best practice recommendation was developed. Studies have demonstrated the beneficial role of SPs in clinical education. The best practice recommendation for this EBP project included the implementation of a SP program for second-year undergraduate nursing students with the aim of increasing interpersonal communication skills. The program utilized upperclassmen nursing students as SPs. Prior to the SP encounter, students' feelings of empathy and self-efficacy related to therapeutic communication were assessed utilizing a researcher-developed scale. Empathy and self-efficacy were also assessed in a comparable group of second-year undergraduate students not participating in the SP encounter. Finally, these values were evaluated in the upperclassman participants. Immediately following the SP encounter, feedback related to student communication was provided by the SPs in a standardized format. One week

following the intervention, empathy and self-efficacy was reassessed in all sophomore and junior-level participants. Finally, student evaluation of learning satisfaction and learning methodology was collected from both second-year undergraduate students and upperclassmen.

Answering the Clinical Question

The PICOT question for this project was, “In second-year undergraduate nursing students (P), how does a SP program (I) compared to traditional educational methods (C) influence empathy and self-efficacy related to therapeutic communication (O) within one week (T)?” A review of relevant literature was completed and best practices were analyzed. A SP program was developed for this EBP project and outcomes related to empathy, self-efficacy, learning satisfaction, and evaluation of the learning methods were assessed.

CHAPTER 3

IMPLEMENTATION OF PRACTICE CHANGE

Participants and Setting

The setting for this EBP project was a private collegiate educational institution located in northwest Indiana. The project took place in the College of Nursing and Health Professions, which offers a variety of undergraduate and graduate degrees in nursing, public health, physician assistant, healthcare leadership, and health administration coursework. Specifically, the intervention was incorporated into the undergraduate nursing curriculum.

The target population for this project included a convenience sample of sophomore-level undergraduate nursing students enrolled in the NUR 201: Professional Role in Nursing course. The intervention took place during one class discussion group on Monday, October 12, 2015 from 1:30pm to 2:20pm, and included 21 sophomore-level student participants. Twenty-three students in a different discussion group taking place during the same time period served as a comparison group. In addition, 22 junior-level nursing students enrolled in NUR 341: Psychiatric and Mental Health Nursing acted as SPs or recorders during the intervention period. The junior students were prepared to act as both the SP, as well as a recorder of therapeutic communication techniques utilized.

Outcomes

The primary outcomes measured in this EBP project related to feelings of empathy and self-efficacy in therapeutic communication. These outcomes were measured using the Empathy and Self-Efficacy in Therapeutic Communication Scale, a tool designed by the project manager to assess several components of therapeutic communication (Appendix A). The tool was designed utilizing class readings and assignments related to therapeutic communication and the role of the professional nurse. As this tool was developed by the project manager, there was no information regarding reliability and validity available prior to the intervention. The tool was

administered to the 21 sophomore-level participants, as well as 23 comparable sophomore-level students who did not participate in the intervention. The tool was also administered to 22 junior-level participants acting as SPs or recorders. The tool was administered immediately prior to the intervention and one week following the intervention. In addition, data related to learning satisfaction and an evaluation of the SP learning method were collected. The Learning Satisfaction and Learning Method Evaluation Scale (Appendix B), a project manager-modified tool, was administered to all sophomore and junior students who participated in the experience. The tool was administered one week following the intervention.

Intervention

Prior to the intervention, sophomore and junior-level participants were provided with background information related to the EBP project and were informed of the purpose and voluntary nature of the project by the project manager. Immediately prior to the SP encounter, all sophomore and junior-level participants (44 sophomore students and 22 junior students) were again reminded of the voluntary and confidential nature of the intervention and were asked to complete informed consent (Appendix C) and demographic documents (Appendix D). The Empathy and Self-Efficacy in Therapeutic Communication Scale was then completed by all sophomore and junior-level participants.

Students in one NUR 201 discussion group ($n = 21$) participated in SP encounters with junior students acting as SPs and recorders of communication techniques. Each encounter lasted approximately 15 to 20 minutes with five to seven minutes allocated to communication between the sophomore students and the SP and seven to ten minutes allocated to SP feedback. Each encounter included one sophomore student and two junior students, one to act as the SP and the other to serve as a recorder of specific therapeutic communication techniques utilized. Feedback was provided based on the points outlined in the Standardized Patient Feedback Guide (Appendix E). Two SP encounter sessions took place during the

discussion period, with 11 sophomore students participating in the first and 10 sophomore students participating in the second session.

One week following the intervention, all participants were again asked to complete the Empathy and Self-Efficacy in Therapeutic Communication Scale. In addition, all participants were asked to complete the Learning Satisfaction and Learning Method Evaluation Scale, an project manager-modified tool designed to evaluate student learning satisfaction. The completion of these tools signaled the conclusion of the intervention period.

Planning

Planning began approximately five months prior to project implementation. A comprehensive literature search and evidence appraisal was completed resulting in a best practice recommendation related to the use of SP encounters in undergraduate education. Evidence supporting the use of upperclassmen as SPs was included in the literature review. The project manager contacted the instructors of NUR 201: The Professional Role in Nursing and NUR 341: Psychiatric and Mental Health Nursing to discuss the implementation of a SP program utilizing junior-level students as SPs. It was ultimately decided that students in two NUR 201 discussion groups would participate in the EBP project, with one group participating in the SP intervention and the other group serving as a comparison population. Ultimately, this included 44 sophomore students. In addition, 22 junior students enrolled in NUR 341 were recruited to act as SPs and recorders.

A convenience sample of sophomore-level students comprised the intervention and comparison groups. The SP intervention was offered as an alternative learning experience for the junior-level students and recruitment was completed on a first come, first serve basis. Ultimately, 21 sophomore students participated in the SP intervention, 23 sophomore students served as a comparison group, and 22 junior students acted as SPs and recorders. Each SP encounter involved one sophomore student and two junior students, with one junior acting as the SP, and the other junior acting as a recorder.

Much of the planning associated with this EBP project was related to tool and program development. Two scales, the Empathy and Self-Efficacy in Therapeutic Communication Scale and the Learning Satisfaction and Learning Method Evaluation Scale, were developed to assess the desired outcomes. In addition, a feedback tool, the Standardized Patient Feedback Guide, was developed to aid the junior students in providing constructive feedback.

SP training information (Appendix F) was developed and presented to the junior-level participants in both written and narrated PowerPoint format. In addition, a Standardized Patient Case Guide (Appendix G) was developed to provide students with adequate patient background information. These documents were distributed to junior-level participants one to two weeks prior to the intervention date. Students were instructed to review the material, memorize the case information, and practice acting out the case with a friend. Instruction related to providing SP feedback was included in the training information and students were asked to review these points. Finally, junior-level students were provided with a copy of the Standardized Patient Feedback Guide to review.

Data

Reliability and Validity. During the planning phase of this EBP project, two tools were developed to evaluate the desired outcomes related to empathy and self-efficacy in therapeutic communication. The Empathy and Self-Efficacy in Therapeutic Communication Scale is an project manager-developed Likert-style tool addressing a variety of aspects related to therapeutic communication. The tool was developed based on NUR 201 class readings and activities. Due to the unestablished nature of the tool, no psychometric evaluation had been performed prior to the intervention.

The Learning Satisfaction and Learning Method Evaluation Scale was modified from the National League of Nursing (NLN) Simulation Design Scale (NLN, 2015c), Educational Practices Questionnaire (NLN, 2015a), and Student Satisfaction and Self-Confidence in Learning tool (NLN, 2015b). The Simulation Design Scale is a 20-item Likert-style scale

addressing the features of objectives and information, support, problem solving, feedback, and fidelity. Reliability testing using Cronbach's alpha revealed 0.92 for presence of features and 0.96 for importance of features (NLN, 2015c). The Educational Practices Questionnaire is a 16-item Likert-style tool designed to evaluate educational practices present in simulation and the importance of each practice to the student. Again, reliability was determined using Cronbach's alpha, resulting in 0.86 for presence of specific practices, and 0.91 for importance of specific practices (NLN, 2015a). Finally, the Student Satisfaction and Self-Confidence in Learning tool is a 13-item Likert-style tool developed to measure student satisfaction and self-confidence in learning. Cronbach's alpha revealed 0.94 for satisfaction and 0.87 for self-confidence (NLN, 2015b).

The Standardized Patient Feedback Guide was derived from the Calgary Cambridge Guide (Kurtz, Silverman, Benson, & Draper, 2003; Kurtz, Silverman, & Draper, 2005; Silverman, Kurtz, & Draper, 2013). The Calgary Cambridge Guide has been used extensively in undergraduate medical education as a teaching guide, as well as an evaluation tool of communication skills. Simmenroth-Nayda, Heinemann, Nolte, Fischer, and Himmel (2014) performed a psychometric assessment related to the use of the tool in undergraduate medical education. The authors noted a reasonable distribution of scores for most items. In addition, the authors reported good test-retest reliability ($r = 0.75$, $p < 0.0001$) and construct validity, with 74.1% of the whole variance explained by a 5-factor solution.

Collection. Measures of empathy and self-efficacy were obtained through participant completion of the Empathy and Self-Efficacy in Therapeutic Communication Scale. This scale was completed by all sophomore and junior-level participants immediately prior to the intervention and one week following the intervention. Demographic information was collected for all sophomore and junior-level participants immediately prior to the intervention. Data related to the evaluation of learning methods and learning satisfaction was collected through the

completion of the Learning Satisfaction and Learning Method Evaluation Scale. This scale was completed by all sophomore and junior-level participants one week following the intervention.

Management and Analysis. The SPSS-22 statistical analysis program was utilized for the analysis of the collected data. Descriptive statistics, including means and percentages, were calculated to present participant demographics. In addition, descriptive statistics, including mean, percentage, and standard deviation, were calculated to determine participant learning satisfaction and evaluation of the learning method.

A Wilcoxon Matched-Pairs Signed-Rank test was completed on the Empathy and Self-Efficacy in Therapeutic Communication scale within each group of participants. The Wilcoxon Matched-Pairs Signed-Rank test is a nonparametric test using ordinal data to evaluate the median difference of scores between paired data sets. In reference to this project, the test was used to evaluate differences in scores within each group of participants independently. A significance level for this test was set at $p < 0.05$.

A Mann-Whitney U test was performed to compare the mean scores of two independent populations. For this project, a Mann-Whitney U test was used to compare the median scores and mean ranks between the sophomore intervention and comparison group, as well as the median scores and mean ranks between the sophomore intervention and the junior participant groups. Scores were calculated for the pretest and posttest for each question. A significant level of $p < 0.05$ was established for this test

Chronbach's alpha was determined to assess the reliability of the Empathy and Self-Efficacy in Therapeutic Communication scale. Finally, the open ended questions included in the Learning Satisfaction and Learning Method Evaluation Scale were reviewed and thematic analysis completed to identify any common qualitative trends.

Protection of Human Subjects

Prior to the intervention, the EBP project manager and faculty advisor both completed the National Institute of Health (NIH) training and all ethical principles were integrated within the

planning and implementation of this EBP project. In addition, approval was received from the Valparaiso University Institutional Review Board (IRB). Students were assigned code numbers so that participant names were not recorded on any tool. A list of student names and code numbers were stored in a locked computer file. Upon completion of the aforementioned scales, students were instructed to return the forms face down to a designated area in the classroom for collection. Following collection, the tools were transported directly to the project manager's place of residence. The tools were then transferred to a locked drawer to which only the project manager had access. For the purpose of statistical analysis, the data was transferred to a password-protected computer file on a password-protected computer. Following data entry, the hard copies of the scales were returned to the locked drawer at the project manager's residence. Other than the project manager, no individuals had access to the data or the list of student participants.

CHAPTER 4

FINDINGS

The purpose of this EBP project was to assess the effect of SP encounters on undergraduate nursing students' feelings of empathy and self-efficacy related to therapeutic communication. The target population included sophomore-level nursing students, with junior-level nursing students acting as the SPs. Feelings of empathy and self-efficacy of all students were evaluated by an project manager-developed tool immediately prior to the intervention and one week following the intervention. In addition, data related to learning satisfaction and an evaluation of the teaching method were collected one week following the intervention. Descriptive statistics and nonparametric testing was conducted using SPSS 22 statistical software.

Participant Characteristics

Participants included sophomore-level nursing students enrolled in one NUR 201 discussion group and selected junior-level nursing students acting as SPs. In addition, data was collected for a comparable group of sophomore-level students who did not partake in the intervention and served as a comparison. In total, data was collected for 42 sophomore-level students – 19 sophomores who participated in the SP experience and 23 sophomores who served as a comparison – and 20 junior-level students. One participant in the sophomore comparison group failed to complete the one-week follow up evaluation due to class absence. Demographics and pre-intervention data for this participant was included in analysis.

Size and Characteristics

As anticipated, a larger number of sophomore students ($n = 42$) participated in this EBP project than junior students ($n = 20$). The majority of participants reported an age of 19 (32.3%) or 20 (35.5%) years. The sample was found to be predominantly female (93.5%) and Caucasian (82.3%). Finally, a majority of the participants were not found to have a previous college degree

(82.3%) or previous work experience in the healthcare field (58.1%), including work as a Certified Nursing Assistant (CNA), Emergency Medical Technician (EMT), or Paramedic. A complete representation of participant demographics can be viewed in Table 4.1.

Chi-Square Testing

A chi-square test of independence was calculated to compare baseline characteristics of the sophomore intervention and sophomore comparison groups. This test was used to determine the homogeneity of the two samples and determine any differences that may confound the findings of this project. A significance level was set at $p = 0.05$. A chi-square test of independence was calculated comparing the age of participants in each group. No significant difference was found ($X^2 (3) = 0.237, p > 0.05$). In addition, a chi-square test of independence was calculated comparing the ethnicity of participants in the sophomore intervention and sophomore comparison groups, with no significant difference resulting ($X^2 (3) = 0.196, p > 0.05$). The sophomore intervention group consisted of one male and 18 female participants. The sophomore comparison group included two male and 21 female participants. Chi-square testing for independence comparing the gender of participants revealed no significant difference between the groups ($X^2 (1) = 0.667, p > 0.05$). A chi-square test of independence was calculated to compare previous education of the sophomore intervention and comparison groups (Table 4.2). No significant difference was found ($X^2 (2) = 0.819, p > 0.05$). Finally, previous healthcare work experience of participants in each group was evaluated (Table 4.3). Chi-square testing of independence found no significant difference between the groups regarding previous healthcare work experience ($X^2 (3) = 0.359, p > 0.05$). Ultimately, the sophomore intervention and sophomore comparison groups were found to be largely homogeneous.

Table 4.1

Participant Demographics

	<i>n</i> (%)
Grade	
Sophomore	42 (67.7)
Junior	20 (32.3)
Age	
19 years	20 (32.3)
20 years	22 (25.8)
21 years	4 (6.5)
Over 21 years	16 (25.8)
Gender	
Male	4 (6.5)
Female	58 (93.5)
Ethnicity	
White/Caucasian	51 (82.3)
Hispanic/Latino	5 (8.1)
Black/African American	1 (1.6)
Asian/Pacific Islander	1 (1.6)
Other	4 (6.5)
Previous Education	
First degree	51 (85.0)
Previous healthcare degree	6 (10.0)
Previous non-healthcare degree	3 (5.0)

Table 4.1 (con't)

Participant Demographics

	<i>n</i> (%)
<hr/>	
Previous Work Experience	
No previous healthcare experience	36 (58.1)
Previous experience as a nurse	1 (1.6)
Previous experience as a CNA	15 (24.2)
Previous experience as an EMT/paramedic	1 (1.6)
Other previous healthcare work	9 (14.5)

Table 4.2

Participant Previous Education

Previous Education	Intervention Sophomores <i>n</i> (%)	Comparison Sophomores <i>n</i> (%)
First degree	14 (74)	17 (74)
Previous healthcare degree	2 (11)	4 (17)
Previous non-healthcare degree	1 (5)	2 (9)
No response	2 (11)	0 (0)
Total	19 (100)	23 (100)

Table 4.3

Participant Work Experience

Previous Work Experience	Intervention Sophomores <i>n</i> (%)	Comparison Sophomores <i>n</i> (%)
No previous healthcare experience	12 (63)	16 (70)
Previous experience as a nurse	0 (0)	1 (4)
Previous experience as a CNA	6 (32)	3 (13)
Previous experience as an EMT/Paramedic	0 (0)	0 (0)
Other previous healthcare work	1 (5)	3 (13)
Total	19 (100)	23 (100)

Outcomes

Statistical Testing

Statistical analysis of the data was completed using SPSS 22 statistical software program. Feelings of empathy and self-efficacy related to therapeutic communication were assessed immediately prior to, and one week following the SP program. These concepts were evaluated using the Empathy and Self-Efficacy in Therapeutic Communication tool – a Likert-style tool designed by the project manager evaluating several components of therapeutic communication. To evaluate the median difference of scores within each group between the pre-intervention and post-intervention periods, a Wilcoxon Matched-Pairs Signed-Rank test was conducted for the sophomore intervention, the sophomore comparison, and the junior participant groups independently. The significance level for this test was set at $p < 0.05$. A Mann-Whitney U test was utilized to compare the median scores and degree of deviation of scores from the median of the groups. A Mann-Whitney U test was completed to compare the sophomore intervention and sophomore comparison groups, as well as the sophomore intervention and junior groups. A significance level of $p < 0.05$ was set. A change in p value from an insignificant finding ($p > 0.05$) during the pre-intervention period to a significant finding ($p < 0.05$) during the post-intervention period was considered a significant change resulting from the SP encounter intervention. However, if the p value was found to be insignificant ($p > 0.05$) or significant ($p < 0.05$) for both the pre-intervention and post-intervention scores, it was determined that no significant change resulted from the intervention.

Wilcoxon Matched-Pairs Signed-Rank Testing

A Wilcoxon Matched-Pairs Signed-Rank test was calculated using pre- and post-intervention data collected from each group of participants independently. This test is designed to determine if there is a significant change in median values in the same group of participants following an intervention. A Wilcoxon Matched-Pairs Signed-Rank test was conducted for each

question to determine whether or not the intervention resulted in a significant change in the participants' responses regarding specific aspects of therapeutic communication.

Junior participant Wilcoxon findings. A Wilcoxon Matched-Pairs Signed-Rank test conducted within the junior-level participants revealed statistically significant ($p < 0.05$) findings for several questions (see Table 4.4). Following the intervention, participants felt that they were better able to put themselves in a patient's shoes while providing care ($Z = -2.333$, $p = 0.020$). The median response associated with this question increased from 3.00 to 4.00 and the mean response increased from 3.40 to 3.73 following the intervention. A significant change was noted related to the student's belief related to empathy as an important component of health care ($Z = -2.236$, $p = 0.025$). Though the median score for this question did not increase (median score was 4.00 during pre-intervention and post-intervention period), the mean score did increase from 3.70 to 3.91 following the intervention. A marginally significant change was noted related to the presumption that an emotional connection with a patient may be detrimental to the nurse's ability to provide unbiased care ($Z = -1.998$, $p = 0.046$). The mean score for this question decreased from 1.30 to 0.77, though the median remained constant at 1.00. The scoring for this question was opposite that of the majority of the other questions, with a score of 0.00 a positive response and a score of 4.00 a negative response. The decrease in mean scores indicates that students further disagreed with the statement following the intervention. Junior-level students also reported being more comfortable using silence as a therapeutic communication technique following the intervention ($Z = -2.449$, $p = 0.014$). The mean score increased from 3.05 to 3.33, though the median score remained 3.00 during both the pre-intervention and post-intervention periods. A significant improvement was also noted regarding comfort summarizing a conversation prior to ending a discussion with a patient ($Z = -2.530$, $p = 0.011$). The median scores associated with this question remained constant at 3.00 but the mean scores increased from 3.30 to 3.68. Finally, median scores related to awareness of body posture during communication with a patient increased from 3.00 to 4.00 following the intervention. The mean

Table 4.4

Junior Participant Wilcoxon Signed-Rank Test

Evaluation Statement	Median	Mean	SD	Z-score	p value
"I feel that I am able to put myself in a patient's shoes while providing care"					
Pre-intervention	3.00	3.40	0.502		
Post-intervention	4.00	3.73	0.455	-2.333	0.020
"I feel that I am able to understand my patient's non-verbal cues and body language"					
Pre-intervention	3.50	3.45	0.604		
Post-intervention	4.00	3.68	0.476	-1.667	0.096
"I consider the understanding of non-verbal communication to be an important aspect of patient care"					
Pre-intervention	4.00	3.75	0.444		
Post-intervention	4.00	3.91	0.294	-1.732	0.083
"I believe that empathy is an important component of providing quality health care"					
Pre-intervention	4.00	3.70	0.470		
Post-intervention	4.00	3.91	0.294	-2.236	0.025
"I feel that lack of empathy would hinder my ability to provide quality care"					
Pre-intervention	4.00	3.75	0.444		
Post-intervention	4.00	3.68	0.476	-0.378	0.705

Table 4.4 (con't)

Junior Participant Wilcoxon Signed-Rank Test

Evaluation Statement	Median	Mean	SD	Z-score	p value
"I feel that an emotional connection to my patient may be detrimental to my ability to provide optimal/unbiased care"					
Pre-intervention	1.00	1.30	1.031		
Post-intervention	1.00	0.77	0.751	-1.998	0.046
"I try to remain objective and distance myself from a patient's emotions during patient interactions"					
Pre-intervention	1.00	1.60	1.095		
Post-intervention	1.00	1.27	1.202	-1.732	0.083
"I feel comfortable using silence during a conversation with a patient"					
Pre-intervention	3.00	3.05	0.825		
Post-intervention	3.00	3.33	0.795	-2.449	0.014
"I feel comfortable giving recognition/acknowledging a patient's feelings of distress"					
Pre-intervention	3.00	3.30	0.656		
Post-intervention	4.00	3.54	0.509	-1.265	0.206

Table 4.4 (con't)

Junior Participant Wilcoxon Signed-Rank Test

Evaluation Statement	Median	Mean	SD	Z-score	p value
"I feel comfortable using open-ended questions during a conversation with a patient"					
Pre-intervention	4.00	3.40	0.994		
Post-intervention	4.00	3.73	0.455	-1.265	0.206
"I feel comfortable using humor during a conversation with a patient"					
Pre-intervention	3.00	3.25	0.851		
Post-intervention	3.50	3.41	0.666	-0.500	0.617
"I feel comfortable using touch to comfort a patient"					
Pre-intervention	3.00	2.95	0.887		
Post-intervention	3.00	3.18	0.853	-1.184	0.236
"I feel comfortable summarizing a conversation with a patient prior to closure of the conversation"					
Pre-intervention	3.00	3.30	0.801		
Post-intervention	3.00	3.68	0.477	-2.530	0.011

Table 4.4 (con't)

Junior Participant Wilcoxon Signed-Rank Test

Evaluation Statement	Median	Mean	SD	Z-score	p value
"I feel confident that the facial expressions utilized during a conversation with a patient appropriately mirror the emotion the patient is attempting to verbalize"					
Pre-intervention	3.50	3.30	0.865		
Post-intervention	4.00	3.50	0.913	-0.632	0.527
"I am aware of my body posture (open stance, uncrossed arms, etc.) during communication with a patient"					
Pre-intervention	3.00	3.15	0.671		
Post-intervention	4.00	3.59	0.590	-2.309	0.021

scores associated with this question increased from 3.15 to 3.59. Following the intervention, junior participants were significantly more likely to feel that they were aware of body posture during interaction with a patient ($Z = -2.309, p = 0.021$).

Sophomore participant Wilcoxon findings. A Wilcoxon Matched-Pairs Signed-Rank test conducted within the sophomore-level intervention group did not reveal any statistically significant ($p < 0.05$) findings following the intervention (see Table 4.5). However, a Wilcoxon Matched-Pairs Signed-Rank test evaluating changes within the sophomore comparison group did reveal two statistically significant ($p < 0.05$) results (see Table 4.6). Significant findings were calculated regarding the students' intention to remain objective and distance themselves from a patient's emotions during patient interaction ($Z = -2.486, p = 0.013$). The median scores for this question decreased from 3.00 to 2.00 and the mean scores decreased from 2.64 to 2.14. This question was reverse-scored and a decrease in scores is assumed to be a positive response. Additionally, significant results were noted relating to comfort with the use of silence during patient interactions ($Z = -2.714, p = 0.007$). Mean scores associated with use of silence increased from 2.43 to 2.83 and the median score increased from 2.00 to 3.00.

Mann-Whitney *U* Testing

Sophomore intervention and comparison participant findings. A Mann-Whitney *U* test was utilized to compare the effects of the intervention between the sophomore intervention and the sophomore comparison groups (see Table 4.7). Following the intervention, a significant change was noted regarding the perceived hindrance that lack of empathy may have on patient care. It was found that those students who participated in the SP encounter demonstrated a post-intervention median and mean of 4.00 and 3.53 respectively, compared to students who did not participate in the encounters and presented a post-intervention median and mean of 3.00 and 3.09. Students who participated in the SP encounter had a significantly greater (M place = 25.32) perception that a lack of empathy may hinder their ability to provide high quality patient care (M place = 17.27, $U = 127.0, p = 0.015$). In addition, students who did not

Table 4.5

Sophomore Intervention Participant Wilcoxon Signed-Rank Test

Evaluation Statement	Median	Mean	SD	Z-score	p value
"I feel that I am able to put myself in a patient's shoes while providing care"					
Pre-intervention	3.00	3.42	0.507		
Post-intervention	3.00	3.37	0.597	-0.378	0.705
"I feel that I am able to understand my patient's non-verbal cues and body language"					
Pre-intervention	3.00	3.21	0.631		
Post-intervention	3.00	3.05	0.780	-1.134	0.257
"I consider the understanding of non-verbal communication to be an important aspect of patient care"					
Pre-intervention	4.00	3.74	0.452		
Post-intervention	3.00	3.47	0.513	-1.890	0.059
"I believe that empathy is an important component of providing quality health care"					
Pre-intervention	4.00	3.79	0.419		
Post-intervention	4.00	3.68	0.478	-1.414	0.157
"I feel that lack of empathy would hinder my ability to provide quality care"					
Pre-intervention	4.00	3.42	0.692		
Post-intervention	4.00	3.53	0.612	-0.513	0.608

Table 4.5 (con't)

Sophomore Intervention Participant Wilcoxon Sign-Rank Test

Evaluation Statement	Median	Mean	SD	Z-score	p value
"I feel that an emotional connection to my patient may be detrimental to my ability to provide optimal/unbiased care"					
Pre-intervention	2.00	1.63	1.116		
Post-intervention	1.00	1.05	0.911	-1.872	0.061
"I try to remain objective and distance myself from a patient's emotions during patient interactions"					
Pre-intervention	2.00	2.37	0.831		
Post-intervention	2.00	2.05	1.268	-1.097	0.273
"I feel comfortable using silence during a conversation with a patient"					
Pre-intervention	3.00	3.00	1.202		
Post-intervention	3.00	3.26	0.872	-0.586	0.558
"I feel comfortable giving recognition/acknowledging a patient's feelings of distress"					
Pre-intervention	3.00	3.32	0.582		
Post-intervention	3.00	3.37	0.597	-0.577	0.564

Table 4.5 (con't)

Sophomore Intervention Participant Wilcoxon Signed-Rank Test

Evaluation Statement	Median	Mean	SD	Z-score	p value
"I feel comfortable using open-ended questions during a conversation with a patient"					
Pre-intervention	3.00	3.47	0.513		
Post-intervention	3.00	3.37	0.597	-1.000	0.317
"I feel comfortable using humor during a conversation with a patient"					
Pre-intervention	3.00	3.21	0.787		
Post-intervention	3.00	3.05	0.780	-1.342	0.180
"I feel comfortable using touch to comfort a patient"					
Pre-intervention	3.00	3.21	0.787		
Post-intervention	3.00	3.21	0.855	-1.000	0.317
"I feel comfortable summarizing a conversation with a patient prior to closure of the conversation"					
Pre-intervention	3.00	3.37	0.597		
Post-intervention	3.00	3.21	0.787	-1.000	0.317

Table 4.5 (con't)

Sophomore Intervention Participant Wilcoxon Signed-Rank Test

Evaluation Statement	Median	Mean	SD	Z-score	p value
"I feel confident that the facial expressions utilized during a conversation with a patient appropriately mirror the emotion the patient is attempting to verbalize"					
Pre-intervention	3.00	2.95	0.911		
Post-intervention	3.00	3.21	0.918	-1.667	0.096
"I am aware of my body posture (open stance, uncrossed arms, etc.) during communication with a patient"					
Pre-intervention	3.00	3.16	0.688		
Post-intervention	3.00	3.26	0.653	-1.000	0.317

Table 4.6

Sophomore Comparison Participant Wilcoxon Signed-Rank Test

Evaluation Statement	Median	Mean	SD	Z-score	p value
"I feel that I am able to put myself in a patient's shoes while providing care"					
Pre-intervention	3.00	3.18	0.588		
Post-intervention	3.00	3.27	0.550	-0.447	0.655
"I feel that I am able to understand my patient's non-verbal cues and body language"					
Pre-intervention	3.00	3.13	0.626		
Post-intervention	3.00	3.09	0.526	-0.378	0.705
"I consider the understanding of non-verbal communication to be an important aspect of patient care"					
Pre-intervention	4.00	3.65	0.573		
Post-intervention	4.00	3.64	0.492	-0.333	0.739
"I believe that empathy is an important component of providing quality health care"					
Pre-intervention	4.00	3.65	0.573		
Post-intervention	4.00	3.68	0.568	0.000	1.000
"I feel that lack of empathy would hinder my ability to provide quality care"					
Pre-intervention	3.00	3.27	0.703		
Post-intervention	3.00	3.09	0.526	-1.155	0.248

Table 4.6 (con't)

Sophomore Comparison Participant Wilcoxon Signed-Rank Test

Evaluation Statement	Median	Mean	SD	Z-score	p value
"I feel that an emotional connection to my patient may be detrimental to my ability to provide optimal/unbiased care"					
Pre-intervention	2.00	1.83	1.154		
Post-intervention	2.00	1.77	0.869	-0.577	0.564
"I try to remain objective and distance myself from a patient's emotions during patient interactions"					
Pre-intervention	3.00	2.64	0.790		
Post-intervention	2.00	2.14	0.834	-2.486	0.013
"I feel comfortable using silence during a conversation with a patient"					
Pre-intervention	2.00	2.43	0.728		
Post-intervention	3.00	2.86	0.774	-2.714	0.007
"I feel comfortable giving recognition/acknowledging a patient's feelings of distress"					
Pre-intervention	3.00	3.09	0.417		
Post-intervention	3.00	3.27	0.550	-1.633	0.102

Table 4.6 (con't)

Sophomore Comparison Participant Wilcoxon Signed-Rank Test

Evaluation Statement	Median	Mean	SD	Z-score	p value
"I feel comfortable using open-ended questions during a conversation with a patient"					
Pre-intervention	3.00	3.35	0.573		
Post-intervention	3.00	3.36	0.581	0.000	1.000
"I feel comfortable using humor during a conversation with a patient"					
Pre-intervention	3.00	2.91	0.793		
Post-intervention	3.00	3.00	0.690	-0.707	0.480
"I feel comfortable using touch to comfort a patient"					
Pre-intervention	3.00	3.05	0.653		
Post-intervention	3.00	3.09	0.526	-0.258	0.796
"I feel comfortable summarizing a conversation with a patient prior to closure of the conversation"					
Pre-intervention	3.00	3.27	0.631		
Post-intervention	3.00	3.29	0.463	0.000	1.000

Table 4.6 (con't)

Sophomore Comparison Participant Wilcoxon Signed-Rank Test

Evaluation Statement	Median	Mean	SD	Z-score	p value
"I feel confident that the facial expressions utilized during a conversation with a patient appropriately mirror the emotion the patient is attempting to verbalize"					
Pre-intervention	3.00	3.05	0.950		
Post-intervention	3.00	3.14	0.640	-0.264	0.792
"I am aware of my body posture (open stance, uncrossed arms, etc.) during communication with a patient"					
Pre-intervention	3.00	3.14	0.834		
Post-intervention	3.00	3.18	0.588	-0.108	0.914

Table 4.7

Sophomore Intervention and Comparison Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean Rank	Mann-Whitney <i>U</i>	Z-score	<i>p</i> value	
<hr/>							
"I feel that I am able to put myself in a patient's shoes while providing care"	Pre-intervention			167.0	-1.282	0.200	
	Intervention	3.00	3.42	23.21			
	Comparison	3.00	3.18	19.09			
	Post-intervention				189.5	-0.588	0.556
	Intervention	3.00	3.37	22.03			
	Comparison	3.00	3.27	20.11			
"I feel that I am able to understand my patient's non- verbal cues and body language"	Pre-intervention			204.0	-0.419	0.675	
	Intervention	3.00	3.21	22.26			
	Comparison	3.00	3.13	20.87			
	Post-intervention				206.0	-0.094	0.925
	Intervention	3.00	3.05	21.16			
	Comparison	3.00	3.09	20.86			

Table 4.7 (con't)

Sophomore Intervention and Comparison Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean Rank	Mann-Whitney <i>U</i>	Z-score	<i>p</i> value
"I consider the understanding of non-verbal communication to be an important aspect of patient care"						
Pre-intervention				207.0	-0.370	0.712
Intervention	4.00	3.74	22.11			
Comparison	4.00	3.65	21.00			
Post-intervention				175.0	-1.034	0.301
Intervention	3.00	3.47	19.21			
Comparison	4.00	3.64	22.55			
"I believe that empathy is an important component of providing quality health care"						
Pre-intervention				196.0	-0.744	0.457
Intervention	4.00	3.79	22.68			
Comparison	4.00	3.65	20.52			
Post-intervention				203.0	-0.198	0.843
Intervention	4.00	3.68	20.68			
Comparison	4.00	3.68	21.27			

Table 4.7 (con't)

Sophomore Intervention and Comparison Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean Rank	Mann-Whitney U	Z-score	p value
<hr/>						
"I feel that lack of empathy						
would hinder my ability to						
provide quality care"						
Pre-intervention				184.0	-0.718	0.473
Intervention	4.00	3.42	22.32			
Comparison	3.00	3.27	19.86			
Post-intervention				127.0	-2.436	0.015
Intervention	4.00	3.53	25.32			
Comparison	3.00	3.09	17.27			
"I feel that an emotional						
connection to my patient may						
be detrimental to my ability to						
provide optimal/unbiased						
care"						
Pre-intervention				204.0	-0.380	0.704
Intervention	2.00	1.63	20.74			
Comparison	2.00	1.83	22.13			
Post-intervention				122.5	-2.369	0.018
Intervention	1.00	1.05	16.45			
Comparison	2.00	1.77	24.93			

Table 4.7 (con't)

Sophomore Intervention and Comparison Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean Rank	Mann-Whitney <i>U</i>	Z-score	<i>p</i> value
"I try to remain objective and distance myself from a patient's emotions during patient interactions"						
Pre-intervention				177.0	-0.913	0.362
Intervention	2.00	2.37	19.32			
Comparison	3.00	2.64	22.45			
Post-intervention				189.5	-0.532	0.595
Intervention	2.00	2.05	19.97			
Comparison	2.00	2.14	21.89			
"I feel comfortable using silence during a conversation with a patient"						
Pre-intervention				129.0	-2.377	0.017
Intervention	3.00	3.00	26.21			
Comparison	2.00	2.43	17.61			
Post-intervention				164.5	-1.758	0.079
Intervention	3.00	3.26	24.29			
Comparison	3.00	2.86	18.16			

Table 4.7 (con't)

Sophomore Intervention and Comparison Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean	Mann- Rank Whitney <i>U</i>	Z-score	<i>p</i> value
<hr/>						
"I feel comfortable giving						
recognition/acknowledging a						
patient's feelings of distress"						
Pre-intervention				170.5	-1.538	0.124
Intervention	3.00	3.32	24.03			
Comparison	3.00	3.09	19.41			
Post-intervention				189.5	-0.588	0.556
Intervention	3.00	3.37	22.03			
Comparison	3.00	3.27	20.11			
"I feel comfortable using open-						
ended questions during a						
conversation with a patient"						
Pre-intervention				195.5	-0.668	0.504
Intervention	3.00	3.47	22.71			
Comparison	3.00	3.35	20.50			
Post-intervention				207.5	-0.045	0.964
Intervention	3.00	3.37	21.08			
Comparison	3.00	3.36	20.93			
<hr/>						

Table 4.7 (con't)

Sophomore Intervention and Comparison Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean Rank	Mann-Whitney <i>U</i>	Z-score	<i>p</i> value
"I feel comfortable using humor during a conversation with a patient"						
Pre-intervention				175.0	-1.180	0.238
Intervention	3.00	3.21	23.79			
Comparison	3.00	2.91	19.61			
Post-intervention				200.5	-0.241	0.810
Intervention	3.00	3.05	21.45			
Comparison	3.00	3.00	20.61			
"I feel comfortable using touch to comfort a patient"						
Pre-intervention				174.5	-1.010	0.238
Intervention	3.00	3.21	22.82			
Comparison	3.00	3.05	19.43			
Post-intervention				176.0	-0.981	0.327
Intervention	3.00	3.21	22.74			
Comparison	3.00	3.09	19.50			

Table 4.7 (con't)

Sophomore Intervention and Comparison Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean	Mann- Rank Whitney <i>U</i>	Z-score	<i>p</i> value
"I feel comfortable summarizing a conversation with a patient prior to closure of the conversation"						
Pre-intervention				193.0	-0.472	0.637
Intervention	3.00	3.37	21.84			
Comparison	3.00	3.27	20.27			
Post-intervention				196.5	-0.091	0.927
Intervention	3.00	3.21	20.34			
Comparison	3.00	3.29	20.64			
"I feel confident that the facial expressions utilized during a conversation with a patient appropriately mirror the emotion the patient is attempting to verbalize"						
Pre-intervention				191.5	-0.506	0.613
Intervention	3.00	2.95	20.08			
Comparison	3.00	3.05	21.80			
Post-intervention				185.5	-0.667	0.505
Intervention	3.00	3.21	22.24			
Comparison	3.00	3.14	19.93			

Table 4.7 (con't)

Sophomore Intervention and Comparison Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean Rank	Mann-Whitney <i>U</i>	Z-score	<i>p</i> value
"I am aware of my body posture (open stance, uncrossed arms, etc.) during communication with a patient"						
Pre-intervention				205.5	-0.100	0.921
Intervention	3.00	3.16	20.82			
Comparison	3.00	3.14	21.16			
Post-intervention				193.0	-0.478	0.633
Intervention	3.00	3.26	21.84			
Comparison	3.00	3.18	20.27			

participate in the intervention were more likely (M place = 24.93) to perceive an emotional connection with a patient as detrimental to care (M place = 16.45, $U = 122.5$, $p = 0.018$). In reference to the detriment of emotional connection with a patient, participants who did not take part in the intervention reported a post-intervention median score of 2.00 and a mean of 1.77, while students who participated in the intervention reported a post-intervention median score of 1.0 and mean of 1.05. The decrease in median and mean were considered a positive response due to reverse-coding of the question. Comfort level related to the use of silence as a communication technique during patient interaction was assessed. Students who partook in the SP encounter demonstrated a post-intervention median score of 3.0 and mean of 3.26, compared to students who did not participate in the SP encounter and demonstrated a post-intervention median score of 3.0 and mean of 2.86. Interestingly, the difference related to the use of silence during patient interaction was significant prior to the intervention, with the intervention group reporting greater (M place = 26.21) comfort levels than the comparison group (M place = 17.61, $U = 129.0$, $p = 0.017$). Following the intervention, however, the difference between groups was found to be insignificant ($U = 164.5$, $p = 0.079$).

Sophomore intervention and junior participant findings. A Mann-Whitney U test comparing junior participants and sophomore intervention participants revealed multiple statistically significant ($p < 0.05$) findings. Junior participants were found to have a greater ($Mdn = 4.00$, $M = 3.73$, M place = 24.05) belief that they were able to put themselves in a patient's shoes while providing care when compared to the sophomore-level students ($Mdn = 3.00$, $M = 3.37$, M place = 17.47, $U = 142.0$, $p = 0.042$). In addition, junior students felt that they were better (M place = 25.45) able to understand a patient's non-verbal cues and body language than sophomore students (M place = 15.84, $U = 111.0$, $p = 0.004$). Junior participants demonstrated post-intervention median and mean scores of 4.00 and 3.68, respectively, while sophomore participants demonstrated post-intervention median and mean scores of 3.0 and 3.05. In reference to the perceived importance of understanding non-verbal communication, junior

participants reported a post-intervention median score of 4.00 and mean score of 3.91, compared to sophomore participants who reported a median score of 3.00 and mean score of 3.47. Following the intervention, junior students were also found to have an increased (M place = 25.14) perception of non-verbal communication as an important aspect of patient care (M place = 16.21, U = 118.0, p = 0.003). Finally, junior students had a significantly increased (Mdn = 4.00, M = 3.73, M place = 24.05) comfort level with using open-ended questions compared to sophomore-level students (Mdn = 3.00, M = 3.37, M place = 17.47, U = 142.0, p = 0.042), as well as an increased (Mdn = 3.00, M = 3.68, M place = 24.11) comfort level related to summarization of a conversation with a patient (Mdn = 3.00, M = 3.21, M place = 17.39, U = 140.5, p = 0.043) (see Table 4.8).

Table 4.8

Sophomore Intervention and Junior Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean Rank	Mann-Whitney <i>U</i>	Z-score	<i>p</i> value
"I feel that I am able to put myself in a patient's shoes while providing care"						
Pre-intervention				186.0	-0.132	0.895
Juniors	3.00	3.40	19.80			
Sophomores	3.00	3.42	20.21			
Post-intervention				142.0	-2.036	0.042
Juniors	4.00	3.73	24.05			
Sophomores	3.00	3.37	17.47			
"I feel that I am able to understand my patient's non-verbal cues and body language"						
Pre-intervention				151.5	-1.212	0.225
Juniors	3.50	3.45	21.93			
Sophomores	3.00	3.21	17.97			
Post-intervention				111.0	-2.865	0.004
Juniors	4.00	3.68	25.45			
Sophomores	3.00	3.05	15.84			

Table 4.8 (con't)

Sophomore Intervention and Junior Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean Rank	Mann-Whitney <i>U</i>	Z-score	<i>p</i> value
"I consider the understanding of						
understanding of non-verbal						
communication to be an						
important aspect of patient						
care"						
Pre-intervention				187.5	-0.093	0.926
Juniors	4.00	3.75	20.13			
Sophomores	4.00	3.74	19.87			
Post-intervention				118.0	-3.018	0.003
Juniors	4.00	3.91	25.14			
Sophomores	3.00	3.47	16.21			
"I believe that empathy is an						
important component of						
providing quality health care"						
Pre-intervention				173.0	-0.631	0.528
Juniors	4.00	3.70	19.15			
Sophomores	4.00	3.79	20.89			
Post-intervention				162.0	-1.790	0.074
Juniors	4.00	3.91	23.14			
Sophomores	4.00	3.68	18.53			

Table 4.8 (con't)

Sophomore Intervention and Junior Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean Rank	Mann-Whitney U	Z-score	p value
"I feel that lack of empathy would hinder my ability to provide quality care"						
Pre-intervention				142.5	-1.586	0.113
Juniors	4.00	3.75	22.38			
Sophomores	4.00	3.42	17.50			
Post-intervention				184.0	-0.778	0.436
Juniors	4.00	3.68	22.14			
Sophomores	4.00	3.53	18.53			
"I feel that an emotional connection to my patient may be detrimental to my ability to provide optimal/unbiased care"						
Pre-intervention				150.5	-1.160	0.246
Juniors	1.00	1.30	18.03			
Sophomores	2.00	1.63	22.08			
Post-intervention				174.5	-0.961	0.337
Juniors	1.00	0.77	19.43			
Sophomores	1.00	1.05	22.82			

Table 4.8 (con't)

Sophomore Intervention and Junior Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean Rank	Mann-Whitney <i>U</i>	Z-score	<i>p</i> value
"I try to remain objective and distance myself from a patient's emotions during patient interactions"						
Pre-intervention				105.5	-2.470	0.013
Juniors	1.00	1.60	15.78			
Sophomores	2.00	2.37	24.45			
Post-intervention				136.0	-1.969	0.049
Juniors	1.00	1.27	17.68			
Sophomores	2.00	2.05	24.84			
"I feel comfortable using silence during a conversation with a patient"						
Pre-intervention				177.5	-0.377	0.707
Juniors	3.00	3.05	19.38			
Sophomores	3.00	3.00	20.66			
Post-intervention				193.0	-0.193	0.847
Juniors	3.00	3.33	20.81			
Sophomores	3.00	3.26	20.16			

Table 4.8 (con't)

Sophomore Intervention and Junior Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean Rank	Mann-Whitney <i>U</i>	Z-score	<i>p</i> value
"I feel comfortable giving recognition/acknowledging a patient's feelings of distress"						
Pre-intervention				190.0	0.000	1.000
Juniors	3.00	3.30	20.00			
Sophomores	3.00	3.32	20.00			
Post-intervention				178.0	-0.925	0.355
Juniors	4.00	3.55	22.41			
Sophomores	3.00	3.37	19.37			
"I feel comfortable using open-ended questions during a conversation with a patient"						
Pre-intervention				176.0	-0.447	0.655
Juniors	4.00	3.40	20.70			
Sophomores	3.00	3.47	19.26			
Post-intervention				142.0	-2.036	0.042
Juniors	4.00	3.73	24.05			
Sophomores	3.00	3.37	17.47			

Table 4.8 (con't)

Sophomore Intervention and Junior Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean	Mann- Rank Whitney <i>U</i>	Z-score	<i>p</i> value
<hr/>						
"I feel comfortable using humor						
during a conversation with a						
patient"						
Pre-intervention				181.0	-0.273	0.785
Juniors	3.00	3.25	20.45			
Sophomores	3.00	3.21	19.53			
Post-intervention				156.0	-1.500	0.134
Juniors	3.50	3.41	23.41			
Sophomores	3.00	3.05	18.21			
"I feel comfortable using touch						
to comfort a patient"						
Pre-intervention				158.5	-0.981	0.327
Juniors	3.00	2.95	18.43			
Sophomores	3.00	3.21	21.66			
Post-intervention				204.5	-0.127	0.899
Juniors	3.00	3.18	20.80			
Sophomores	3.00	3.21	21.24			
<hr/>						

Table 4.8 (con't)

Sophomore Intervention and Junior Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean Rank	Mann-Whitney <i>U</i>	Z-score	<i>p</i> value
"I feel comfortable summarizing a conversation with a patient prior to closure of the conversation"						
Pre-intervention				189.5	-0.016	0.987
Juniors	3.00	3.30	19.98			
Sophomores	3.00	3.37	20.03			
Post-intervention				140.5	-2.024	0.043
Juniors	3.00	3.68	24.11			
Sophomores	3.00	3.21	17.39			
"I feel confident that the facial expressions utilized during a conversation with a patient appropriately mirror the emotion the patient is attempting to verbalize"						
Pre-intervention				145.5	-1.364	0.173
Juniors	3.50	3.30	22.25			
Sophomores	3.00	2.95	17.63			
Post-intervention				164.5	-1.317	0.188
Juniors	4.00	3.50	23.02			
Sophomores	3.00	3.21	18.66			

Table 4.8 (con't)

Sophomore Intervention and Junior Participant Mann-Whitney U Test

Evaluation Statement	Median	Mean	Mean Rank	Mann-Whitney <i>U</i>	Z-score	<i>p</i> value
"I am aware of my body posture (open stance, uncrossed arms, etc.) during communication with a patient"						
Pre-intervention				185.5	-0.047	0.963
Juniors	3.00	3.15	19.93			
Sophomores	3.00	3.16	20.08			
Post-intervention				151.0	-1.701	0.089
Juniors	4.00	3.59	23.64			
Sophomores	3.00	3.26	17.95			

Cronbach Alpha Testing

Cronbach's alpha was used to measure internal consistency of the Empathy and Self-Efficacy in Therapeutic Communication tool utilized in this project. Reliability data was evaluated pre-intervention and at one week post-intervention. The pre-intervention Cronbach's alpha was found to be 0.752 while the post-intervention Cronbach's alpha was found to be 0.828. In addition, an Inter-Item Correlational Matrix was developed, demonstrating low correlational values, indicating a well-weighted evaluation tool.

Teaching Method and Learning Satisfaction

In addition to feelings of empathy and self-efficacy related to therapeutic communication, data related to evaluation of the teaching method and learning satisfaction were collected one week following the intervention. Data was collected from all three groups – the sophomore intervention group, the sophomore comparison group, and the junior participant group. Analysis of the data included all groups and each group independently (Table 4.9). Ultimately, a majority of the participants found the experience helpful, responding “agree” (55.0%) or “strongly agree” (30.0%) to the statement “the teaching methods utilized during this class session were helpful and effective.” In addition, participants reported that the activity fostered active learning and aided in the development of appropriate clinical skills, as evidenced by a response of “agree” (44.3%; 46.7%) or “strongly agree” (42.6%; 33.3%) for the statements “I had the opportunity to actively participate in the learning activity” and “I am confident that the learning experience has helped me develop the skills necessary to be successful in the clinical setting,” respectively. Finally, the majority of participants found the experience to be an enjoyable alternative learning resource (“agree” 53.3%; “strongly agree” 36.7%).

Sophomore Participant Qualitative Responses

Following the intervention, all participants were offered the opportunity to provide qualitative feedback regarding the experience. Feedback provided was largely positive. Two

Table 4.9

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	<i>n</i> (%)
"The teaching methods utilized during this class session were helpful and effective"	
Juniors	
Neutral/Not Sure	3 (15.0)
Agree	10 (50.0)
Strongly Agree	7 (35.0)
Sophomore – Intervention	
Disagree	3 (16.7)
Neutral/Not Sure	1 (5.6)
Agree	9 (50.0)
Strongly Agree	5 (27.8)
Sophomore – Comparison	
Neutral/Not Sure	2 (9.1)
Agree	14 (63.6)
Strongly Agree	6 (27.3)
All Groups	
Disagree	3 (5.0)
Neutral/Not Sure	6 (10.0)
Agree	33 (55.0)
Strongly Agree	18 (30.0)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	<i>n</i> (%)
"The learning activity provided me with a variety of alternative materials"	
Juniors	
Disagree	1 (4.8)
Neutral/Not Sure	6 (28.6)
Agree	8 (38.1)
Strongly Agree	6 (28.6)
Sophomore – Intervention	
Disagree	3 (17.6)
Neutral/Not Sure	3 (17.6)
Agree	8 (47.1)
Strongly Agree	3 (17.6)
Sophomore – Comparison	
Disagree	1 (4.8)
Neutral/Not Sure	4 (19.0)
Agree	13 (61.9)
Strongly Agree	3 (13.0)
All Groups	
Disagree	5 (8.5)
Neutral/Not Sure	13 (22.0)
Agree	29 (49.2)
Strongly Agree	12 (20.3)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	<i>n</i> (%)
<i>"The activity was taught/conducted in a way that was conducive to learning"</i>	
Junior	
Strongly Disagree	1 (4.8)
Disagree	1 (4.8)
Neutral/Not Sure	4 (19.0)
Agree	12 (57.1)
Strongly Agree	3 (14.3)
Sophomore – Intervention	
Disagree	1 (5.6)
Neutral/Not Sure	4 (22.2)
Agree	9 (50.0)
Strongly Agree	4 (22.2)
Sophomore – Comparison	
Disagree	1 (4.5)
Neutral/Not Sure	2 (9.1)
Agree	14 (63.6)
Strongly Agree	5 (22.7)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	<i>n</i> (%)
"The activity was taught/conducted in a way that was conducive to learning"	
All Groups	
Strongly Disagree	1 (1.6)
Disagree	3 (4.9)
Neutral/Not Sure	10 (16.4)
Agree	35 (57.4)
Strongly Agree	12 (19.4)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	<i>n</i> (%)
"I enjoyed the learning activity"	
Junior	
Agree	12 (57.1)
Strongly Agree	9 (42.9)
Sophomore – Intervention	
Disagree	2 (11.1)
Neutral/Not Sure	1 (5.6)
Agree	7 (38.9)
Strongly Agree	8 (44.4)
Sophomore – Comparison	
Neutral/Not Sure	3 (14.3)
Agree	13 (61.9)
Strongly Agree	5 (23.8)
All Groups	
Disagree	2 (3.3)
Neutral/Not Sure	4 (6.7)
Agree	32 (53.3)
Strongly Agree	22 (36.7)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	<i>n</i> (%)
"I am confident that the learning experience has helped me develop the skills necessary to be successful in the clinical setting"	
Junior	
Neutral/Not Sure	3 (14.3)
Agree	11 (52.4)
Strongly Agree	7 (33.3)
Sophomore – Intervention	
Neutral/Not Sure	5 (27.8)
Agree	6 (33.3)
Strongly Agree	7 (38.9)
Sophomore – Comparison	
Neutral/Not Sure	4 (19.0)
Agree	11 (52.4)
Strongly Agree	6 (28.6)
All Groups	
Neutral/Not Sure	12 (20.0)
Agree	28 (46.7)
Strongly Agree	20 (33.3)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	n (%)
"I had the opportunity to actively participate in the learning activity"	
Juniors	
Neutral/Not Sure	1 (4.8)
Agree	10 (47.6)
Strongly Agree	10 (47.6)
Sophomore – Intervention	
Neutral/Not Sure	1 (5.6)
Agree	7 (38.9)
Strongly Agree	10 (55.6)
Sophomore – Comparison	
Disagree	1 (4.5)
Neutral/Not Sure	5 (22.7)
Agree	10 (45.5)
Strongly Agree	6 (27.3)
All Groups	
Disagree	1 (1.6)
Neutral/Not Sure	7 (11.5)
Agree	27 (44.3)
Strongly Agree	26 (42.6)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	n (%)
"I learned from the comments made by the professor and/or peers during the activity"	
Juniors	
Neutral/Not Sure	3 (14.3)
Agree	11 (52.4)
Strongly Agree	7 (33.3)
Sophomore – Intervention	
Neutral/Not Sure	1 (5.6)
Agree	7 (38.9)
Strongly Agree	10 (55.6)
Sophomore – Comparison	
Neutral/Not Sure	1 (4.5)
Agree	14 (63.6)
Strongly Agree	7 (31.8)
All Groups	
Neutral/Not Sure	5 (8.2)
Agree	32 (52.5)
Strongly Agree	24 (39.3)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	<i>n</i> (%)
"There was enough information provided prior to the learning experience to provide direction and foster learning"	
Juniors	
Strongly Disagree	3 (13.6)
Disagree	9 (40.9)
Neutral/Not Sure	3 (13.6)
Agree	4 (18.2)
Strongly Agree	3 (13.6)
Sophomore – Intervention	
Strongly Disagree	4 (22.2)
Neutral/Not Sure	6 (33.3)
Agree	5 (27.8)
Strongly Agree	3 (16.7)
Sophomore – Comparison	
Disagree	1 (4.5)
Neutral/Not Sure	5 (22.7)
Agree	10 (45.5)
Strongly Agree	6 (27.3)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	<i>n</i> (%)
“There was enough information provided prior to the learning experience to provide direction and foster learning”	
All Groups	
Strongly Disagree	7 (11.3)
Disagree	10 (16.1)
Neutral/Not Sure	14 (22.6)
Agree	19 (30.6)
Strongly Agree	12 (19.4)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	n (%)
"Independent problem-solving was facilitate during the learning opportunity"	
Juniors	
Neutral/Not Sure	4 (18.2)
Agree	12 (54.5)
Strongly Agree	6 (27.3)
Sophomore – Intervention	
Neutral/Not Sure	2 (11.1)
Agree	8 (44.4)
Strongly Agree	8 (44.4)
Sophomore – Comparison	
Disagree	1 (4.5)
Neutral/Not Sure	4 (18.2)
Agree	14 (63.6)
Strongly Agree	3 (13.6)
All Groups	
Disagree	1 (1.6)
Neutral/Not Sure	10 (16.1)
Agree	24 (54.8)
Strongly Agree	17 (27.4)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	<i>n</i> (%)
"The learning experience allowed me to analyze my own behavior and actions"	
Juniors	
Neutral/Not Sure	4 (18.2)
Agree	9 (40.9)
Strongly Agree	9 (40.9)
Sophomore – Intervention	
Agree	8 (44.4)
Strongly Agree	10 (55.6)
Sophomore – Comparison	
Neutral/Not Sure	2 (9.1)
Agree	14 (63.6)
Strongly Agree	6 (27.3)
All Groups	
Neutral/Not Sure	6 (9.7)
Agree	31 (50.0)
Strongly Agree	25 (40.3)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	<i>n</i> (%)
"I feel that the learning experience was realistic (real life factors, situations, and variables were built into the experience"	
Junior	
Disagree	3 (13.6)
Neutral/Not Sure	2 (9.1)
Agree	11 (50.0)
Strongly Agree	6 (27.3)
Sophomore – Intervention	
Disagree	1 (5.3)
Agree	11 (57.9)
Strongly Agree	7 (36.8)
Sophomore – Comparison	
Disagree	1 (4.5)
Neutral/Not Sure	2 (9.1)
Agree	14 (63.6)
Strongly Agree	5 (22.7)
All Groups	
Disagree	5 (7.9)
Neutral/Not Sure	4 (6.3)
Agree	36 (57.1)
Strongly Agree	18 (28.6)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	n (%)
"As a result of this learning experience, I feel that I am better able to understand things from a patient's perspective"	
Juniors	
Neutral/Not Sure	6 (27.3)
Agree	9 (40.9)
Strongly Agree	7 (31.8)
Sophomore – Intervention	
Disagree	1 (5.3)
Neutral/Not Sure	3 (15.8)
Agree	9 (47.4)
Strongly Agree	6 (31.6)
Sophomore – Comparison	
Neutral/Not Sure	3 (13.6)
Agree	14 (63.6)
Strongly Agree	5 (22.7)
All Groups	
Disagree	1 (1.6)
Neutral/Not Sure	12 (19.0)
Agree	32 (50.8)
Strongly Agree	18 (28.6)

Table 4.9 (con't)

Learning Satisfaction and Learning Method Evaluation Descriptive Statistics

Evaluation Statement	<i>n</i> (%)
"I feel that the learning experience will help me translate my skills into clinical practice"	
Juniors	
Neutral/Not Sure	2 (9.1)
Agree	13 (59.1)
Strongly Agree	7 (31.8)
Sophomore – Intervention	
Neutral/Not Sure	2 (10.5)
Agree	11 (57.9)
Strongly Agree	6 (31.6)
Sophomore – Comparison	
Neutral/Not Sure	3 (13.6)
Agree	16 (72.7)
Strongly Agree	3 (13.6)
All Groups	
Neutral/Not Sure	7 (11.1)
Agree	40 (63.5)
Strongly Agree	16 (25.4)

(11%) sophomore students who participated in the intervention reported that the experience was beneficial because they were able to think independently and practice their therapeutic communication skills in real-time, rather than through standard evaluation methods (i.e. multiple choice questions). In addition, seven (37%) students reported the impromptu nature of the intervention to be beneficial because it simulated real-life experience. An experience utilizing real actors, rather than high-fidelity mannequins, was beneficial because students were better able to practice non-verbal communication skills, as reported by four (21%) sophomore-level participants. Finally, sophomore students greatly valued the feedback provided by their peers and felt that they would be able to incorporate this feedback into future practice (reported by seven [37%] students). Six (32%) students expressed that they enjoyed the experience and hoped the experience would be permanently incorporated into preparation for clinical experiences in the hospital setting.

While few qualitative responses were offered by sophomore-level students who did not participate in the SP experience, three (13%) students expressed satisfaction with the classroom-based education regarding therapeutic communication. However, several students disliked the lack of hands on experience, as reported by three (13%) students. In addition, students requested a more realistic experience to reinforce their skills prior to entry into the clinical setting (reported by three [13%] students).

Junior Participant Qualitative Responses

The junior participants involved in the SP encounter also found the experience to be beneficial. Three (15%) students reported that the experience offered them an opportunity to practice and reinforce their skills related to therapeutic communication. In addition, four (20%) students reportedly valued the ability to observe the nursing role from the patient's point of view, as instances of non-therapeutic communication were reportedly much more obvious. Junior-level students felt that the experience was realistic and appreciated the opportunity to provide feedback to sophomore-level students, as reported by two (10%) participants. Finally, two (10%)

students felt that the experience allowed students to reflect on their improvement in skill level since their sophomore-level studies, promoting their confidence related to therapeutic communication and patient interactions.

Recommended Areas of Improvement

Two primary areas of improvement were reported by both sophomore and junior students who participated in the SP encounter. Many students requested more guidance and direction for the sophomore-level participants. Twelve (63%) sophomore students reported that a prompt including patient information would be helpful. Many junior-level participants felt that the sophomore-level students were inadequately prepared and time was spent explaining the objectives to the sophomores (reported by seven [35%] students). As a result, this may have negatively impacted the effectiveness of the project, as well as further limited the time available for the intervention. Both sophomore and junior students reported that while the experience itself was realistic, the setting was not particularly realistic (reported by two [11%] sophomore and one [5%] junior participant). Three (8%) students recommended that the experience take place in a more realistic setting (for example, the simulation laboratory).

CHAPTER 5

DISCUSSION

Explanation of Findings

The purpose of this EBP project was to assess the effect of SP encounters on undergraduate nursing students' feelings of empathy and self-efficacy related to therapeutic communication. The target population for this project included sophomore-level nursing students prior to exposure to the clinical setting. Junior-level nursing student acted as SPs. Feelings of empathy and self-efficacy of all students were evaluated using the Empathy and Self-Efficacy in Therapeutic Communication scale, a Likert-style tool developed for the purpose of this project. All students completed the tool immediately prior to and one week following the intervention.

Wilcoxon Matched-Pairs Signed-Rank Testing

A Wilcoxon Matched-Pairs Signed-Rank test was calculated using pre- and post-intervention data collected from each group. The Wilcoxon Matched-Pairs Signed-Rank test is designed to evaluate the median differences of scores within each group between the pre-intervention and post-intervention periods. Testing was conducted for each group independently to determine whether the intervention resulted in a significant change in the participants' responses regarding specific aspects of therapeutic communication. A significance level was set at $p < 0.05$.

Junior participant findings. Wilcoxon Matched-Pairs Signed-Rank tests run on junior-level participants revealed several statistically significant ($p < 0.05$) results. Following the intervention, participants felt that they were better able to put themselves in a patient's shoes while providing care ($p = 0.020$). This may indicate that students have difficulty identifying with the patient role as a result of lack of personal experience. If students have not been previously diagnosed with a serious injury or illness, they are unlikely to have fulfilled the patient role in the

capacity of the patients they are caring for in the clinical setting (for example, the hospitalized patient on a medical-surgical unit). In addition, the junior-level students' experience acting as a nurse in the clinical setting may heighten their awareness, thus making them hyper-critical of the interaction between the nurse and patient. Following the intervention, junior-level students were also more likely to identify with the belief that empathy is an important component of health care ($p = 0.025$). It can be asserted that this may also be a result of the students' improved ability to identify with the patient role. Without understanding the situation from the patient's point of view, it may be difficult to fully comprehend the important role that empathy plays in patient care. Similarly, the presumption that an emotional connection with a patient may be detrimental to the nurse's ability to provide unbiased care may also be related to the nurse's ability to identify with the patient role. Junior-level students were less likely to feel that an emotional connection with a patient may be detrimental to care following the intervention ($p = 0.046$). Having played the role of the patient, students may be better able to understand the value of an emotional connection with a patient, especially a patient who is clearly distraught. Students were also more likely to express comfort using silence as a therapeutic communication technique ($p = 0.014$) as well as summarizing a conversation prior to closure of a discussion with a patient ($p = 0.011$). These techniques may have felt awkward or uncomfortable prior to the intervention. However, following the intervention, students may have realized that these techniques are not awkward for the patient, and may actually help the patient communicate with the nurse. Finally, junior-level participants reported a greater awareness of body posture during patient interaction following the intervention ($p = 0.021$). Being able to observe other students in the nursing role may have highlighted both positive and negative aspects related to body posture that the student may not have previously recognized or experienced. No reviewed studies explicitly evaluated improvements in therapeutic communication in reference to the SPs themselves. However, considering the significant results noted in this EBP project, the evaluation of SP skills may serve as an area for further research.

Sophomore intervention participant findings. A Wilcoxon Matched-Pairs Signed-Rank test conducted within the sophomore-level intervention group did not reveal any statistically significant ($p < 0.05$) findings. This may be due to students' lack of experience in the clinical setting. While the intervention was, ideally, implemented to help prepare students for clinical practice, lack of clinical experience may have actually been a detriment. Current teaching of communication skills involves didactic methods reflecting the reductionist paradigm, in which the complex phenomenon of communication is broken down into basic components (Kidd, Patel, Peile, & Carter, 2005). Communication skills may be better taught in the clinical environment, as education received mirrors patient communication experienced in the clinical setting. In addition, teaching communication skills in the clinical setting allows for the reflection and integration of experience and allows students to improve their skills (Kidd et al., 2005). While the SP intervention was intended to mimic the clinical environment, the lack of adequate instruction and background information for the sophomore intervention participants may have limited the benefits of the intervention. Many sophomore-level students reported that they did not understand the objectives or context in which the intervention was framed. This theme was also noted in qualitative reflection offered by the junior-level participants. These students reported that they felt the sophomore-level students were confused and unprepared. In the future, it may be beneficial to develop a case study outlining the context in which the experience will take place. This case study may include the patient's background information and current complaint. Clearly outlined instruction may demonstrate beneficial results in the sophomore intervention population. Unfortunately, the lack of significant findings in the sophomore intervention group was inconsistent with the findings reported in reviewed literature. Several studies (Bosse et al., 2012; Crofts et al., 2008; Lin et al., 2013; Moulton et al., 2009; Oh, Jeon, & Koh, 2015) included in the literature analysis reported significant improvements in communication skills. However, future modifications to the intervention may demonstrate results consistent with those expressed in the literature.

Sophomore comparison participant findings. Two statistically significant ($p < 0.05$) findings resulted from a Wilcoxon Matched-Pairs Signed-Rank test conducted within the sophomore comparison group. Following their classroom session, students in the sophomore comparison group were less likely to feel that they should remain objective and distance themselves from a patient's emotions ($p = 0.013$). In addition, students reported a greater level of comfort with the use of silence as a therapeutic communication technique ($p = 0.007$). Education regarding communication skills in this group was didactic in nature. Students received information from the professor via PowerPoint presentation. In addition, handouts regarding specific therapeutic and non-therapeutic communication skills were provided. Finally, students completed an exercise aimed at evaluating students' abilities to identify and utilize appropriate communication techniques (L. Winkler, personal communication, August 20, 2015). The results demonstrated by the sophomore comparison participants indicate that the didactic methods utilized in the NUR 201 course are, in fact, effective in teaching therapeutic communication skills. However, as suggested by Kidd et al. (2005), communication skills are best taught by combining didactic methods with clinical experience. While two evaluative statements were found to have improved significantly following the classroom activity, the majority of the evaluative statements were not found to have significantly improved. The findings further support the assertion of Kidd et al. (2005). While didactic educational methods may be beneficial in improving therapeutic communication skills, a well-designed SP intervention may augment these benefits.

Mann-Whitney *U* Testing

Mann-Whitney *U* testing was completed to compare the effects of the intervention between two groups of participants. The Mann-Whitney *U* test is designed to compare the median scores and degree of deviation of scores from the median. Testing was conducted to compare the sophomore intervention and sophomore comparison groups, as well as the sophomore intervention and junior groups. A significance level of $p < 0.05$ was set for this test.

Sophomore intervention and comparison participant findings. A Mann-Whitney U test was utilized to compare the effects of the intervention between the sophomore intervention and sophomore comparison groups. Those who participated in the intervention had a significantly greater perception that lack of empathy may hinder their ability to provide high quality patient care compared to those who did not participate in the intervention ($p = 0.015$). In addition, students who did not participate in the intervention were more likely to perceive an emotional connection with a patient as detrimental to patient care than students who did participate in the intervention ($p = 0.018$). These may be directly related to the student's ability to communicate with someone in the patient role, rather than learning about therapeutic communication in a didactic manner. The intervention was implemented the semester before students were scheduled to begin their clinical rotations. Participating in SP the experience and communicating with a "patient" may have emphasized the importance of empathy and emotional connection with a patient. This is consistent with the findings presented by Fisher, Taylor, and High (2012) who demonstrated the value of encompassing the patient role during education regarding therapeutic communication. The authors determined that acting in the patient role augments the experiential element that is obtained from real-world experience. Specifically, the student is able to recognize, manage, and reflect on their own feelings while in the patient role, allowing them to further empathize with patients encountered in the future (Fisher et al., 2012). Interestingly, the difference related to the use of silence during patient interaction was significant prior to the SP encounter, with the intervention group reporting greater comfort levels than the comparison group ($p = 0.017$). Following the intervention, however, the difference in comfort level between groups was no longer found to be significant ($p = 0.079$). This result indicates a change in perceived comfort with use of silence as a therapeutic communication technique. While students felt comfortable with this technique prior to interacting with a SP, the encounter may have highlighted the fact that they were not as comfortable as they first believed. This is a valuable finding, as students are likely to pay greater attention to this communication technique

in the future. Improvements in SP encounter participants are consistent with studies reviewed for this project. Crofts et al. (2008) reported significant improvements related to perception of clear, therapeutic communication, as well as respect, following a training session with patient-actors. A meta-analysis by Oh et al. (2015) reported significant improvements in communication skills and self-efficacy following interventions with SPs. The authors reported that simulation-based learning was found to be beneficial to the cognitive, affective, and psychomotor realms of nursing education. Specifically, the authors concluded that SP interventions demonstrated significant effects on knowledge acquisition, communication skills, self-efficacy, learning motivation, and clinical competence (Oh et al., 2015).

Sophomore intervention and junior participant findings. A Mann-Whitney *U* test was also used to compare the junior participants and the sophomore intervention participants, with multiple significant ($p < 0.05$) findings detected. Junior participants reported that they were better able to put themselves in a patient's shoes while providing care ($p = 0.042$). This is likely directly related to their role in the intervention – they were acting as the SPs. The experience of acting as a patient likely increased their ability to relate to the patients encountered in the clinical setting. In addition, junior-level participants were better able to understand a patient's non-verbal cues ($p = 0.004$) and were more likely to perceive non-verbal communication as an important aspect of patient care ($p = 0.003$). Observing the nurse's non-verbal cues from a patient's perspective may have highlighted the importance of these cues in therapeutic communication. Finally, junior-level students were significantly more comfortable using open-ended questions during patient interaction ($p = 0.042$) and were more comfortable summarizing a discussion prior to closure of a conversation with a patient ($p = 0.043$). It is unlikely that the SP intervention alone increased their comfort level related to these two aspects. Rather, the intervention more likely compounded their experience as a nurse in the clinical setting. The intervention allowed them to observe the nursing role, thus allowing for reflection on their own practice and experience. Literature evaluating the effect of SP experiences on the SPs

themselves appears to be lacking. However, one study conducted by Sittikariyakul, Jaturapatporn, & Kirshen (2015) assessed self-reported improvement in skills related to palliative care as a result acting as a SP. Participants reported improvements in communication skills, as acting as a SP taught students how to appropriately express their own feelings and explore alternative communication techniques. In addition, the participants felt their verbal and non-verbal communication skills had improved (for example, speaking gently, maintaining eye contact, etc.) (Sittikariyakul et al., 2015). A study conducted by Chunharas et al. (2013) used medical students as patients to learn the skill of medication/vaccine injection. Participants in the intervention group used themselves as surrogate patients and practiced skills related to injections on themselves. Following the experience, intervention participants reported greater levels of confidence in injecting medications, as well as greater levels of empathy toward the prospective patient. It was speculated that the experience allowed students to better understand the patient's feelings and how they wish to be treated (Chunharas et al., 2013). These results can be extrapolated to the results demonstrated in this EBP project. Junior-level students reported greater levels of empathy and self-efficacy related to therapeutic communication due to their ability to encompass the patient role and better understand how the patient feels during the clinical encounter. In light of this gap in literature, this project contributes knowledge to the realm of SP education, particularly for students acting as the SPs.

Following the intervention, data related to an evaluation of the teaching method and learning satisfaction was collected from all participants. The majority of participants found the experience helpful and felt that the activity fostered active learning. Most reported that they enjoyed the activity and felt that the activity helped them develop the skills necessary to be successful in clinical practice. These findings are consistent with several previously reviewed studies in which participants reported a high degree of satisfaction following SP encounters (Eid et al., 2009; Kowitlawakul et al., 2015; Lin et al., 2013; Miles et al., 2014; Owen & Ward-Smith, 2014). Qualitative feedback provided by the students was largely positive. Sophomore students

who participated in the intervention reported that the experience was beneficial because they were able to think independently and practice their skills in real-time. In addition, students valued the verbal feedback provided by the SPs and observers. The benefits of feedback following an SP encounter further supports findings of several studies included in this project's literature synthesis (Anderson et al., 2014; McKenna et al., 2011; Mesquita et al., 2010; Miles et al., 2014).

Applicability to Patricia Benner's From Novice to Expert Theory

Patricia Benner's From Novice to Expert model was adapted from the Dreyfus Model of Skill Acquisition and describes five levels of nursing expertise. Each level reflects changes in two aspects of skill performance – movement from reliance on abstract concepts to use of concrete experiences and perception, and understanding of a particular situation. The five levels of nursing expertise include (a) novice, (b) advanced beginner, (c) competent, (d) proficient, and (e) expert. The novice level focuses on the acquisition of new nursing skills. Novice nurses often utilize a predetermined set of rules to guide clinical practice and these nurses are unable to use discretionary judgment. Nurses or students occupying the advanced beginner role may demonstrate marginally successful skill performance. These individuals are able to develop guidelines for practice based on experience, though these individuals may still lack the ability to appropriately prioritize tasks. Competent nurses are able to effectively prioritize tasks and understand their nursing actions in the broader context of patient outcomes. This level is characterized by feelings of confidence and the ability to adapt to a variety of clinical situations. The proficient nurse is able to perceive the clinical situation as a whole and begins to develop an intuitive sense regarding patient care and variations from normal. Finally, the expert nurse is characterized by a deep, intuitive understanding of the clinical situation. Nursing actions are guided by this intuition, rather than structured rules or guidelines (Benner, 1982).

In the context of this EBP project, sophomore-level nursing students were thought to assume the novice level. These students had little to no clinical experience, as they had not yet

begun their clinical rotations. Junior-level nursing students were assumed to occupy the advanced beginner role, as they had received education and clinical experience aimed at improving their skills related to therapeutic communication. Based on the measured outcomes, these assumptions appear to be appropriate. The SP intervention served as an initial opportunity to practice the therapeutic communication skills that sophomore-level students had previously learned. The feedback provided by the SPs and observers was designed to further aid the sophomore-level student's progression and transformation of therapeutic communication skills. Junior-level nursing students appeared to be consistent with the advanced beginner nurse. These students' clinical experience may have further emphasized the benefit of the SP intervention. Students were able to reflect of their patient experiences and expand on these experiences through the SP intervention. The application of Patricia Benner's From Novice to Expert theory served as an appropriate theoretical basis for this EBP project and will continue to serve as a basis for various interventions aimed at improving nursing education.

Application of ACE Star Model

The ACE Star Model of EBP describes the cycle of knowledge transformation used to guide clinicians in promoting and utilizing EBP. Knowledge transformation is the process of converting primary research findings into evidence-based care methods. The model consists of five steps including (a) research discovery, (b) evidence summary, (c) translation to guidelines, (d) practice integration, and (e) process and outcome evaluation (Stevens, 2012).

The first stage of knowledge transformation involves primary research development. This EBP project aimed to utilize previously-established research rather than generate primary research (Melnyk & Fineout-Overholt, 2011; Stevens, 2012; Stevens, 2013). Though the project was developed using EBP principles and current evidence, new knowledge was generated through the evaluation of outcomes. No previously reviewed studies evaluated the effect of a SP program on the SPs themselves. The results of this EBP project demonstrated several positive findings within the junior participant SP population following the intervention. Similarly, previous

studies did not compare improvements between those participating in the SP encounter and those acting as the SPs. Again, this comparison was made for this EBP project, thus contributing new knowledge to the realm of nursing education involving SPs.

An evidence summary was completed prior to the development of the SP intervention. An evidence summary is considered a form of knowledge generation and is used to help differentiate research utilization from EBP (Melnyk & Fineout-Overholt, 2011; Stevens, 2012; Stevens, 2013). A review of literature was completed regarding the use of SPs in education. This review included the use of upperclassmen as SPs, a comparison of SP encounters compared to student role playing (in an effort to establish best practice), and the value of feedback following a SP encounter. In turn, this review aided in the development of the SP intervention based on EBP principles.

The third step of knowledge transformation involves translation of appraised evidence to practice guidelines. Synthesized research findings are contextualized to fit a desired population, guidelines are developed, and these guidelines are implemented into practice (Melnyk & Fineout-Overholt, 2011; Stevens, 2012; Stevens, 2013). Program guidelines were developed for this EBP project. While the implementation of these guidelines was not widespread, a statement of best practice was developed and an intervention developed to aid in the refinement of therapeutic communication skills among sophomore-level nursing students.

Following the development of practice guidelines, these guidelines must be incorporated into practice (Melnyk & Fineout-Overholt, 2011; Stevens, 2012; Stevens, 2013). The SP intervention was implemented during the Fall 2015 semester and involved sophomore and junior-level nursing students. This implementation required changes on the individual and organizational levels. Professors were willing to devote class time to make the intervention possible. Junior-level students diligently prepared for the intervention, taking time to embody the patient role and learn how to provide meaningful feedback. Sophomore-level students demonstrated patience and an eagerness to learn through new learning methods. Without the

valuable input by all involved parties, project implementation would have been challenging and, potentially, unsuccessful.

The final step of knowledge transformation involves process and outcome evaluation. Process and outcome evaluation allows the investigator to draw conclusions, identify areas of further development, and verify the success of EBP (Melnyk & Fineout-Overholt, 2011; Stevens, 2012; Stevens, 2013). Outcomes of this EBP project involved evaluation of empathy and self-efficacy related to therapeutic communication among all participants. Data was collected prior to and one week following the intervention. Statistical analysis was conducted to evaluate improvements to communication skills within each group of participants, as well as to compare various groups of participants. Ultimately, these results were used to evaluate the impact of the intervention and offer improvements to the SP program.

The ACE Star Model of EBP served as an appropriate theoretical basis for the development of this EBP project. The process of knowledge transformation and implementation into practice guidelines was consistent with the EBP process. The use of this theory aided in the development and promotion of EBP principles, as well as encouraged outcome and process evaluation. This model appears to be an effective model for the translation of research into practice.

Strengths

Several strengths were identified following the implementation and evaluation of the SP intervention. By implementing a SP program during a semester prior to the beginning of clinical rotations, sophomore-level students were offered the opportunity to practice their therapeutic communication skills in an environment free of clinical consequence. This is critical, as these students may lack confidence and experience communicating with patients. While the timing of the implementation did not allow for sophomore-level students to reflect on their past clinical experiences, it did allow students to experience patient communication – a topic which has the potential to be very stressful for student nurses (Casey, Fink, Krugman, & Propst, 2004).

Conversely, the timing of the intervention may have also provided some benefit for junior-level participants. Taking place following the initiation of clinical rotations, the intervention allowed junior-level students an opportunity to reflect on past experiences and incorporate them into acting as a patient and providing valuable feedback. Studies evaluating the value of role play in psychiatric nursing education demonstrated several significant findings. While it may initially cause the student anxiety, acting as a SP has the potential to enhance self-confidence related to communication and ability to care for a patient. In addition, acting as a SP has been shown to decrease anxiety and uncertainty that students may experience in clinical situations (Dawood, 2013). Ultimately, a major strength of the SP intervention involves its potential to positively influence multiple groups of students.

An unanticipated strength of the project was the positive impact on junior-level nursing students. While sophomore-level students were the primary target population for the intervention, junior-level students acting as the SP and observer seemed to benefit greatly from the intervention. Improvements on several aspects of therapeutic communication were revealed through statistical analysis and feedback from these students was positive. Students seemed to value the opportunity to put themselves in the patient role and observe communication through the patient's perspective.

Improvements noted to the junior participant group may further support the value of peer teaching in nursing education. Peer teaching refers to a form of collaborative teaching and learning, in which students actively participate in the teaching of specific skills (Secomb, 2007). A systematic review conducted by Secomb (2007) evaluated the effects of peer teaching in clinical education. Improvements in cognitive development were demonstrated and researchers propose that reflection and analysis of one's own behavior requires a higher level of cognitive thinking. In addition, peer teaching was shown to increase mentoring, teaching, and leadership skills, as well as increase accountability when placed in a self-directed environment. The

benefits noted to the junior participant group in this EBP project may have resulted from the active teaching and learning role that they assumed as the SP.

Despite the many results that were found to be insignificant, subjective value of the program was largely positive. In sophomore-level students, the majority of the feedback was positive and students felt that the experience was beneficial. Students found the experience enjoyable and valuable, despite the lack of significant findings following the intervention. The project manager is hopeful that, with some improvements to the program design, sophomore-level students will receive the full benefit of the SP intervention.

An additional strength of the SP program involves the provision of feedback from those acting as the SP or observer. Sophomore-level participants valued the feedback provided by upperclassmen. In addition, the provision of feedback also allowed upperclassmen the opportunity to actively reflect on therapeutic communication principles. The development of a feedback guide was particularly useful in guiding the type of constructive feedback provided. The guide may have also served as a tool to reinforce therapeutic communication skills previously learned. Providing feedback and, thus, teaching the sophomore-level participants may have further reinforced these skills as a result of peer teaching. Feedback was reportedly valuable to the sophomore-level participants. Active learning in this population was enabled by the provision of feedback related to their performance. Feedback is an important component of nursing education, as feedback may aid the student in improving their skills (Berenson, Wenger, & Goodill, 2012). Feedback is most valuable when delivered in a way that is constructive and offers specific strengths, weaknesses, and areas in which to improve (Berenson et al., 2012). Ultimately, the provision of feedback allowed sophomore-level students to reflect on the experience, their performance, and identify areas in which their therapeutic communication skills may improve.

Though sample size for this EBP project was limited, attrition was very low. One participant in the sophomore comparison group failed to attend class during the follow up

period. All participants in the sophomore intervention and junior participant groups were present at the one week follow up. This low level of attrition increases the accuracy and the validity of the findings. In addition, chi-square testing determined a high degree of homogeneity, indicating that results were not altered by age, gender, ethnicity, previous education, or previous work experience.

Finally, the Empathy and Self-Efficacy in Therapeutic Communication tool was found to have a strong degree of internal consistency. The pre-intervention Cronbach's alpha was found to be 0.752 and the post-intervention Cronbach's alpha was found to be 0.828. An Inter-Item Correlational Matrix was also completed on the Empathy and Self-Efficacy in Therapeutic Communication tool, resulting in low correlational values. These findings reinforce that the project manager-developed tool utilized in this project was a well-weighted tool with strong internal consistency.

Limitations

Despite the numerous strengths of this EBP project, several limitations were also noted. A major limitation involved logistics. The intervention took place in common areas of the educational institution's nursing building. While this was sufficient for the purposes of this EBP project, the setting was not realistic and left room for improvement. In the future, it may be beneficial to change the setting of the intervention to the simulation laboratory or clinical examination rooms. The location change may promote feelings of realism and help participants stay in their role as the nurse or patient.

Qualitative feedback to the project manager following the intervention revealed the need for more detailed instruction for sophomore-level participants. While instructions and project objectives were provided, many students requested more information regarding their specific role in the intervention. In the future, it may be beneficial to provide sophomore participants a case study describing the situation and patient background. Providing students with additional information may help them fully understand the nursing role in the context of the SP encounter.

In addition, the method in which information was delivered to the sophomore-level participants may not have been sufficient. Communication took place via email and education was provided in Microsoft Word format. In the future, providing instructions and information in a more interactive format (for example, in person or via voiceover PowerPoint) may be more effective.

Outcomes of this EBP project were measured immediately prior to and one week following the intervention. These results evaluate only short-term improvements but do not address long-term improvements. It is unclear if the intervention resulted in long-term improvements in therapeutic communication. In addition, it is unclear if these improvements were translated into practice. Future research is needed to determine if the SP encounter resulted in long-term practice changes related to therapeutic communication with a patient. No reviewed studies addressed these limitations, as most studies were short term in nature. In fact, the majority of the reviewed studies cited long-term effects and translation into practice as study limitations.

A number of limitations were noted regarding use of a Likert-style evaluation tool. Many students ranked their skills highly during the pre-intervention period, leaving little room for improvement following the intervention. This may have minimized the positive impact noted as a result of the intervention. Similarly, the time allotted for completion of the tool may not have been sufficient and students may have responded to the prompts without fully reading and contemplating them. This is evident by two reverse-coded questions that were often overlooked. Finally, there is the possibility that exposure to the evaluation tool during the pre-intervention period may have influenced responses to the post-intervention evaluation, as participants were acutely aware of the survey questions. This also may have influenced the benefits noted in response to the intervention, as students may have focused on specific aspects of therapeutic communication addressed during the pre-intervention evaluation.

Due to logistical concerns, the intervention was implemented in only a small sample of sophomore-level nursing students. The small sample size may limit the reliability and

generalizability of the results identified. In addition, a small sample size may result in a wider margin of error, decreased confidence level, and larger effect size. In the future, a larger sample size may identify additional benefits not observed in this project.

Logistics are a major concern influencing long-term implementation of the SP intervention. Specifically, these concerns involve time constraints and inadequate space to ensure a realistic experience. There are multiple options available that allow the continuation of the intervention involving all sophomore and/or junior-level students, though each option has its respective flaws and compromises.

It would be possible to continue the intervention with the sophomore and junior participant groups working independently, rather than junior participants serving as the SPs and recorders and sophomore participants as the nurse. Assuming that 105 students are enrolled in NUR 201, with five discussion groups of 21 students, the intervention could take place during scheduled discussion class time. Each discussion group could be divided into seven groups of three students, with one nurse, one SP, and one recorder. Group members could switch roles following each intervention period, allowing all students to participate in all roles. Four groups could complete the intervention in the examination rooms and three groups could complete the intervention in the simulation laboratory. The location of the intervention would promote realism, though planning would be required to ensure that the required space is reserved. Each intervention period would be allowed to take 20 minutes – 10 minutes for interaction between the patient and nurse, five minutes for feedback, and five minutes to switch roles. Assuming that each student is expected to experience each role (nurse, SP, and recorder), 60 minutes would be required to complete the intervention. This would require that the NUR 201 professor dedicate two class periods to the intervention, with a total of 100 minutes of class time. The use of the remaining class time (40 minutes total) would be determined by the NUR 201 professor, but may include debriefing or an assignment reflecting on the experience. While this option requires the professor to dedicate two class periods to the intervention, it would promote realism

and would not require any commitment outside of class time. In addition, it may be beneficial for the instructor to develop additional SP case studies, allowing each student to have a unique experience with a different case study. Allowing sophomore-level students the opportunity to act in multiple roles may also allow them to experience the benefits associated with acting as a standardized patient, as demonstrated by this EBP project.

Similarly, the intervention could take place during class time with only junior-level participants. With 95 students enrolled in NUR 341, this would allow for 31 groups of three participants and one group of two participants. Again, each intervention period would last 20 minutes, with students rotating roles after each period. However, due to inadequate space available to complete the intervention with 32 groups at one time, the intervention would likely need to take place during two class periods, with 16 groups participating during each class period. If 16 groups participated for each of the two class periods, it would allow four groups to complete the intervention in the examination rooms, four groups to complete the intervention in the simulation lab, and eight groups to complete the intervention in unused classrooms or common areas. However, due to time constraints (each class period is only 50 minutes and each intervention period is 20 minutes), students would be required to forgo acting in one of the three roles. The class period in which students do not participate in the SP intervention could be completed online via PowerPoint lecture or an alternative assignment determined by the NUR 341 professor. An intervention taking place during NUR 341 may reinforce skills learned in class and in the clinical setting. While the location of the intervention may promote realism, requiring the NUR 341 professor to dedicate two class periods to the intervention is inconvenient.

An intervention allowing sophomore and junior-level students to collaborate would require time commitment outside of the scheduled class period. The structure of the intervention involving both sophomore and junior-level students would largely mimic the structure of this EBP project, though on a larger scale. If 96 students were enrolled in NUR 341, this would allow for 48 pairs SP/recorder pairs. Assuming that 100 students were enrolled in NUR 201, this

would require each of the 48 junior-level pairs to interact with two sophomore-level students and four junior-level pairs to interact with three students (these four pairs could be offered extra credit or credit for an alternative clinical experience for the extra time dedicated to the intervention). Again, each intervention period would last 20 minutes and, due to conflicting class schedules, the intervention would be required to take place outside of class time, perhaps during the evening. In order to ensure that the intervention does not exceed allotted class time, both NUR 201 and NUR 341 professors would be required to dedicate one class period to the intervention. Alternatively, the intervention could be utilized as a simulation experience or alternative clinical experience. This would require cancelling one class period and rescheduling it during the intervention period. To accommodate the large number of students involved, the intervention would take place in a large conference room. The intervention would take place during one 50-minute “class period”, with two 20-minute sessions involving 48 groups of participants. The remaining four participants would be required to stay approximately 10-15 minutes following the end of the 50-minute session to accommodate the remaining sophomore participants. If the intervention took place during one 50-minute time period, both NUR 201 and NUR 341 professors could facilitate the intervention. The intervention could also take place during two 50-minute sessions run successively or concurrently (in different conference rooms). This would allow for a total of four 20-minute sessions involving 24 groups during each session. Again, four groups would be required to remain slightly past the end of the session to accommodate the remaining sophomore participants. One professor could facilitate each session. This setup would be less crowded and less distracting. An additional assignment would be required to fill the remaining class time, as sophomore-level participants would only participate in one 20-minute session.

A final alternative would also involve sophomore and junior-level participant collaboration. In an effort to promote realism, all SP encounters would take place in the examination rooms or simulation laboratory, allowing for eight groups to participate at a time

(four groups in the examination rooms and four groups in the simulation laboratory). Again, assuming that 100 sophomore-level students and 96 junior-level students participated in the SP intervention, this would require 48 pairs of junior-level students to interact with two sophomore-level students and four pairs to interact with three sophomore-level students. In order to accommodate these 52 SP groups in the examination rooms and simulation laboratory, seven 20-minute sessions would be necessary, with eight groups participating in each session. This implies that a total of approximately two-and-a-half hours would be necessary to enable the intervention in this setting. Again, NUR 201 and NUR 341 professors would be required to dedicate one 50-minute class period to the intervention (cancelling class and rescheduling it for the designated intervention period). Alternatively, the experience could be incorporated into required clinical hours, with clinical instructors monitoring the encounter. The two-and-a-half-hour intervention period could be scheduled on one evening, or divided into multiple evenings, depending on instructor and student schedules. NUR 201 and NUR 341 professors would facilitate the intervention during different periods, each for the 50 minutes of their “class time” and an additional 25 minutes of volunteer time. NUR 201 students would be expected to complete a reflection assignment or additional assignment determined by the instructor to fill the remaining 30 minutes of class time during which they are not participating in the SP program. While significantly more time consuming, this alternative allows for a more realistic SP encounter, which may be beneficial to sophomore and junior-level students alike.

Implications for the Future

Practice

It is assumed that skills learned in nursing education translate to the clinical setting. This EBP project demonstrated positive improvements in therapeutic communication following the SP intervention, particularly for those who acted as the SPs. While the project did not evaluate practice change, it was the intention of the project to increase empathy and self-efficacy related to therapeutic communication in the clinical setting. Allowing students to practice these skills

prior to entry into the clinical arena may increase their confidence and ability to use these therapeutic communication skills (Bosse et al., 2012; Hill et al., 2010). Effective communication is vital in the exchange of health-related information and it is the nurse's responsibility to ensure that effective communication is accomplished. Ensuring that communication is therapeutic in nature further promotes patient satisfaction and health outcomes (Eid et a., 2009; Lin et al., 2013). Essentially, the communication skills addressed in undergraduate nursing education serve as a foundation for future skill development and success in the practice setting (Casey et al., 2004; Oh et al., 2015).

Theory

The development of this EBP project was guided by the theoretical underpinnings outlined in Patricia Benner's From Novice to Expert theory and the ACE Star Model of EBP. Benner's theory proved to be an appropriate selection, as it addresses nursing skill development. The aim of this project was improve empathy and self-efficacy related to therapeutic communication – skills routinely addressed in undergraduate nursing education. The utilization of Benner's theory made it simple to determine which proficiency level a student identifies with and identified characteristics associated with each level. The development of this project closely followed the steps outlined in the ACE Star Model of EBP, beginning with evidence summary. This model served as a clear, concise foundation for the development of EBP. Finally, as a theory is utilized in research or EBP, it can be assumed that the theory increases in strength, as each study or project contributes to the knowledge base surrounding each theory. In essence, theory guides practice and practice, in turn, guides theory.

Research

There has been extensive research evaluating the effect of SP encounters in education and practice. However, the majority of studies evaluated hands-on skills, rather than therapeutic communication. The results of this EBP project add to the growing body of knowledge related to the use of SP encounters to improve therapeutic communication skills. In addition, this project

contributes knowledge not previously identified in the literature. This project evaluated improvements in empathy and self-efficacy in therapeutic communication among those acting as the SPs. While other studies have utilized upperclassmen in the study design (Miles et al., 2014; Owen & Ward-Smith, 2014), they did not evaluate skill development among that population. Similarly, none of the reviewed studies compared participants and SPs to evaluate the impact of the SP intervention. Considering all participants involved in the intervention may allow educators to optimize the benefits elicited from the SP intervention.

While further research is needed to substantiate and reinforce the results presented in this EBP project, two specific areas of further research have been identified. This EBP project compared skill improvements between the sophomore and junior-level participants. However, no statistical comparison was conducted to compare the junior-level students in the SP and recorder role. At the time of the intervention, students were asked to indicate their role as a SP or recorder. However, the majority of students overlooked this request and did not indicate their role. In addition, the project manager requested that junior-level participants provide the name of the partner they planned to work with, but did not require them to communicate which role each partner would assume. This made it impossible to accurately identify SPs and recorders for statistical analysis. It is possible that SPs may demonstrate improvements in aspects of therapeutic communication that recorders did not, or vice versa. This is significant, as SPs were exposed to more hands-on learning while recorders observed the interaction. Establishing a distinction between the two groups may help optimize student outcomes in future programs. Additionally, further research is needed to determine if the skill improvements resulting from the SP intervention is translated into the practice setting. Due to time constraints, the project manager was unable to evaluate the long-term impact of the intervention or the ability of students to translate the experience into practice. This information is particularly valuable if SP programs are to be incorporated into nursing curricula.

Education

The findings of this EBP project are directly related to undergraduate nursing education. SP encounters build on the constructivism learning theory. This theory asserts that learning is an active process and individuals construct knowledge and meaning from their own experiences. It recognizes that individual interpretations may differ as a result of life experiences and encourages the learner to continuously build on previous knowledge (The University of Sydney, 2016). This theory is especially applicable to therapeutic communication, as students have utilized communication skills for their entire life. However, the communication skills utilized by nurses can be very different than those used in everyday communication. Interaction with a SP teaches therapeutic communication skills in accordance with the constructivism learning theory, further enhancing the role of SPs in undergraduate nursing education.

Conclusion

The purpose of this EBP project was to assess the effect of SP encounters on undergraduate nursing student empathy and self-efficacy related to therapeutic communication. Therapeutic communication is an essential component of optimal nursing care. The value of therapeutic communication is demonstrated by its inclusion in the Joint Commission National Patient Safety Goals (JCO, 2015). In addition, the National Council of State Boards of Nursing has identified therapeutic communication as one of four fundamental processes (Puppe & Neal, 2014). Current evidence supports the use of SP encounters to aid students in developing therapeutic communication skills. A SP intervention was developed based on a review of current literature and EBP findings.

Statistical analysis conducted following the intervention revealed several statistically significant findings. Those students who acted as the SPs appeared to benefit greatly from the intervention, as demonstrated by several statistically significant improvements in specific aspects of therapeutic communication. Benefit to the sophomore-level participants may have been mitigated by inadequate instruction and background information. More detailed instruction

may be beneficial for future replication of the SP program. In addition, logistical concerns greatly limit the ability to incorporate this program into undergraduate nursing curriculum in the long-term. Alternatives to the current program structure include limiting involvement to one grade level (either junior students or senior students) or offering the program outside of the scheduled class period.

Offering students the opportunity to act as SPs promotes active learning and cognitive development. In addition, peer teaching and the provision of feedback to sophomore-level participants reinforces learned skills related to therapeutic communication. Qualitative feedback provided following the intervention was largely positive. Students reported that they enjoyed and valued the experience and hoped that the intervention would be continued in the future. While further project development and long-term evaluation of therapeutic communication skills are necessary, this EBP project demonstrated the positive impact that a SP intervention may have on empathy and self-efficacy related to therapeutic communication in the undergraduate nursing population.

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BIOGRAPHICAL MATERIAL**Alana M. Urness**

Alana's desire to pursue a career in nursing stemmed from her early fascination with psychology and mental health disorders. She graduated from Valparaiso University in 2010 with a Bachelor of Science in Nursing with cum laude honors. Alana began her nursing career with the Illinois Department of Juvenile Justice, providing medical and mental health care to incarcerated juvenile offenders. In 2012, she decided to combine her love of nursing and travel and spent eight weeks volunteering in a maternity clinic located in the slums of Nairobi, Kenya. Upon her return, Alana accepted a nursing position at an inpatient pediatric mental health facility and quickly developed an affinity for working with children diagnosed with Autism Spectrum Disorders. In 2013, Alana decided to continue her educational pursuit, returning to Valparaiso University with the goal of earning her Doctorate in Nursing Practice in May of 2016. She is an active member of Sigma Theta Tau International, Zeta Epsilon Chapter, the Society of Nurses in Advanced Practice, and the Coalition of Advanced Practice Nurses in Indiana. Upon graduation, Alana hopes to continue her work with culturally diverse and underserved populations, both domestic and abroad.

ACRONYM LIST

ABIM: American Board of Internal Medicine

ACE: Academic Center for Evidence-Based Practice

APN: Advanced practice nurse

BBNSPI: Breaking Bad News Standardized Patient Intervention

CASP: Critical Appraisal Skills Programme

CINAHL: Cumulative Index to Nursing and Allied Health Literature

CNA: Certified Nursing Assistant

CSAF: Communication Skills Assessment Form

EBP: Evidence-based practice

EMT: Emergency Medical Technician

HOF: Hematology-oncology fellow

IPPI: Integrated Procedural Performance Instrument

IRB: Institutional Review Board

JBI: Joanna Briggs Institute

JCO: The Joint Commission

NIH: National Institute of Health

OSCE: Objective Structured Clinical Examination

ROL: Review of literature

RCT: Randomized controlled trial

SP: Standardized patient

VAS: Visual analog scale

Appendix A

Date: _____

Code: _____

Sophomore (please circle): Standardized patient / Classroom

Junior (please circle): Standardized patient / Recorder

Empathy and Self-Efficacy in Therapeutic Communication Scale

Participation in this project is voluntary. All responses will be kept confidential and will be used only for the purposes of statistical analysis in this project. Please read each statement and select the response with which you identify. Responses are private and will not impact your class grade – please answer honestly.

	Strongly Disagree	Disagree	Neutral/Not Sure	Agree	Strongly Agree
Therapeutic Communication Empathy					
I feel that I am able to put myself in a patient's shoes while providing care					
I feel that I am able to understand my patient's non-verbal cues and body language					
I consider the understanding of non-verbal communication to be an important aspect of patient care					
I believe that empathy is an important component of providing quality health care					
I feel that lack of empathy would hinder my ability to provide quality care					
I feel that an emotional connection to my patient may be detrimental to my ability to provide optimal/unbiased care					
I try to remain objective and distance myself from a patient's emotions during patient interactions					
Therapeutic Communication Self-Efficacy					
I feel comfortable using silence during a conversation with a patient					
I feel comfortable giving recognition/acknowledging a patient's feelings of distress					
I feel comfortable using open-ended questions during a conversation with a patient					

I feel comfortable using humor during a conversation with a patient					
I feel comfortable using touch to comfort a patient					
I feel comfortable summarizing a conversation with a patient prior to closure of the conversation					
I feel confident that the facial expressions utilized during a conversation with a patient appropriately mirror the emotion the patient is attempting to verbalize					
I am aware of my body posture (open stance, uncrossed arms, etc.) during communication with a patient					

Thank you for your participation in this project. All statistical data for the purposes of this project will be kept in the strictest of confidence.

Appendix B

Date: _____

Code: _____

Sophomore (please circle): Standardized patient / Classroom

Junior (please circle): Standardized patient / Recorder

Learning Satisfaction and Learning Method Evaluation Scale

Participation in this project is voluntary. All responses will be kept confidential and will be used only for the purposes of statistical analysis in this project. Please read each statement and select the response with which you identify.

This tool has been modified from the National League for Nursing (2005) Simulation Design Scale, Educational Practices Questionnaire, and Student Satisfaction and Self-Confidence in Learning.

	Strongly Disagree	Disagree	Neutral/Not Sure	Agree	Strongly Agree
Learning Satisfaction/Learning Method Evaluation					
The teaching methods utilized during this class session were helpful and effective					
The learning activity provided me with a variety of alternative materials and activities					
The activity was taught/conducted in a way that was conducive to learning					
I enjoyed the learning activity					
I am confident that the learning experience has helped me develop the skills necessary to be successful in the clinical setting					
I had the opportunity to actively participate in the learning activity					
I learned from the comments made by the professor and/or peers during the activity					
There was enough information provided prior to the learning experience to provide direction and foster learning					
Independent problem-solving was facilitated during the learning opportunity					
The learning experience allowed me to analyze my own behavior and actions					

I feel that the learning experience was realistic (real life factors, situations, and variables were built into the experience)					
As a result of this learning experience, I feel that I am better able to understand things from a patient's perspective					
I feel that the learning experience will help me translate my skills into clinical practice					

What was the most helpful/beneficial thing about this experience?

What was the most difficult aspect of this experience?

Do you have any recommendations for this experience in the future?

Any additional comments:

Thank you for your participation in this project. All statistical data for the purposes of this project will be kept in the strictest of confidence.

Appendix C

**Standardized Patient Program Informed Consent Form
Valparaiso University**

Title: The Effect of Standardized Patient Encounters on Undergraduate Nursing Student Empathy and Self-Efficacy in Therapeutic Communication

Project Coordinator: Alana Urness, BSN, RN, DNP Student

Description: This project is designed to compare the effect of Standardized Patient (SP) encounters and traditional teaching methods utilized in the NUR 201 course for the purpose of learning therapeutic communication skills. Outcomes include self-perceived feelings of empathy and self-efficacy related to therapeutic communication techniques. In addition, learning satisfaction and evaluation of the SP educational method will be assessed.

Risks and Benefits: The benefits include contributing to the knowledge base of the effects of SP encounters on nursing students' feelings of empathy and self-efficacy of therapeutic communication skills. In addition, the SP encounters will offer sophomore students an opportunity to interact with a simulated "patient" prior to entering the clinical arena. There are no anticipated risks associated with participating in this project.

Voluntary Participation: Your participation in this project is completely voluntary. There is no financial compensation associated with participation in this project.

Confidentiality: Code numbers will be assigned to the demographic form and Empathy and Self-Efficacy scale. These code numbers will be known only by Alana Urness, DNP student, and will be used only for the purpose of statistical analysis. Code numbers will not be assigned to the satisfaction form ensuring that no one, including Alana Urness, will have the ability to identify student information. All information will be held in the strictest of confidence. Data will be stored in a locked desk drawer and/or a password protected computer file on a password protected computer. Findings of the project, while kept confident, will be used in publications and presentations.

Right to Withdraw: You are free to refuse to participate in the project and to withdraw from the project at any time. Your decision to withdraw will result in no penalty to you.

Informed Consent: I, _____, have read the description,
(please print)

including the purpose of the project, the potential risks and benefits, information about confidentiality, as well as the option to withdraw from the project at any time. The project manager has offered an opportunity for me to ask questions and I believe I understand what is involved in the project. My signature below indicates that I freely agree to participate in this EBP project.

Signature

Date

Appendix D

**Standardized Patient Program Demographics Form
Valparaiso University**

Please respond to the following prompts to the best of your ability. Thank you for your participation in this EBP project.

Grade:

- Sophomore
- Junior

Previous Education:

- This is my first degree
- I have a previous healthcare-related degree
- I have a previous non-healthcare-related degree

Age:

- < 17 years
- 17 years
- 18 years
- 19 years
- 20 years
- 21 years
- > 21 years

Previous Work Experience:

- I have not previously worked in the health care field
- I have previously worked as a nurse
- I have previously worked as a CNA
- I have previously worked as an EMT
- I have other previous work in the health care field

Ethnicity:

- White or Caucasian
- Hispanic or Latino
- Black or African American
- Native American or American Indian
- Asian or Pacific Islander
- Other

Gender:

- Male
- Female

Appendix E

Calgary-Cambridge Guides – Communication Process Skills (Adapted)**Standardized Patient Feedback Guide**

How well does the student perform the following:

Initiating the Session

	Poor	Fair	Good	Excellent
Greets patient appropriately.				
Introduces self and nature of encounter.				
Demonstrates respect and interest.				
Identifies the patient's problem or issues that the patient wishes to address with appropriate opening question.				

Gathering Information

	Poor	Fair	Good	Excellent
Encourages patient to tell the story (clarifying reason for anxiety/distress)				
Uses open ended questions to gather information				
Listens attentively to the patient's opening statement, without interrupting or directing patient's response.				
Facilitates patient's responses verbally and non-verbally (e.g. use of encouragement, silence, repetition, paraphrasing, interpretation)				
Picks up verbal and non-verbal cues (body language, speech, facial expression, affect); detects and acknowledges appropriately				
Clarifies patient's statements as needed				
Periodically summarizes to verify own understanding of what the patient has said; invites the patient to correct or provide further information				
Uses concise, easily understood questions and comments; avoids or adequately explains jargon				

Building Relationship

	Poor	Fair	Good	Excellent
Demonstrates appropriate non-verbal behavior: <ul style="list-style-type: none"> • Eye contact, facial expression 				
Demonstrates appropriate non-verbal behavior: <ul style="list-style-type: none"> • Posture, position, movement 				
Demonstrates appropriate non-verbal behavior: <ul style="list-style-type: none"> • Vocal cues (e.g. rate, volume, tone) 				
Accepts legitimacy of patient's views and feelings; is not judgmental				
Uses empathy to communicate understanding and appreciation of the patient's feelings				

Provides support: expresses concern, understanding, willingness to help; acknowledges coping efforts; offers partnerships				
Gives explanation at appropriate times: avoids giving advice, information or reassurance prematurely				
Provides opportunities and encourages patient to contribute: ideas, suggestions, preferences				
Shares own thinking as appropriate				
Uses humor to engage the patient and make the patient feel comfortable				

Closing the Session

	Poor	Fair	Good	Excellent
Summarizes session briefly				
Final check that patient is comfortable and asks if any corrections, questions, or items to discuss				

Notes:

Nurse's Statement	Therapeutic? (Y/N)	Why/Why Not? (What point was demonstrated or not demonstrated?)

References:

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Appendix F

Standardized Patient Program Training Information**Valparaiso University****Acting as a Standardized Patient (SP):**

Firstly, I would like to thank you for your interest and willingness to be a part of this project. I am extremely excited to see this project in action and it wouldn't be possible without all of you.

I'm going to start by providing you a bit of information about SPs. Simply, an SP is an individual who has been prepared to portray the characteristics of a real patient in order to provide students or other learners the opportunity to practice their skills firsthand. In reference to this project, it allows the sophomore nursing students the opportunity to practice their therapeutic communication skills prior to interaction with actual patients.

So how is an SP supposed to act? When you see the doctor as yourself, you answer questions and provide facts about yourself and your condition. You don't need to learn these facts because they are your experience and your history. Acting as an SP is very similar. However, because the facts presented in the scenario are not your experience and are not your history, these facts must be learned and memorized. I have attached a few FAQs for you to review at the end of this document.

Attached to the same email from which you found this PowerPoint is a document containing the patient case information. This is your new "identity" and you are expected to memorize and embody your character. It is strongly recommended that you practice with a peer who is able to provide you feedback related to your performance. There is a lot of information packed into the patient case – You do not have to share all of the information with the student. I have included this information so that you are a) able to embody your patient as a whole person, and (b) able to provide this additional information if the student asks. Some improvisation is expected because no experience with a student will be exactly the same, but the acting should make sense in the scenario. This is why it is so important to memorize and be able to accurately portray the patient. In order to promote realism and consistency, it is extremely important that you stay in character during the encounter with students.

The scenario utilized in this project is purely focused on communication. There is no physical examination component.

Providing Feedback:

Important information can be received from feedback related to our behavior. This feedback helps make us more aware of what we do and how we do it, thus allowing us to modify our behavior to become more effective communicators. The following is an outline to aid in delivering effective feedback.

Focus feedback on the behavior rather than the person. Refer to what the person does, rather than what the person is. For example "you offered a great deal of advice" rather than "you were a know-it-all." Focusing on behavior implies that there is something that can be changed, while focusing on personality traits implies an inherent, constant quality that may be difficult to modify. It is less threatening to a person to hear comments about their behavior, rather than their personality traits.

Focus feedback on description rather than judgment. Description represents a method of reporting, while judgment represents an evaluation in terms of good/bad or right/wrong. Judgments arise out of personal values, while descriptions are more neutral. For example, you may want to say something like, "here you offered a closed question which did not prompt me

(as the patient) to provide additional insight,” rather than, “you asked a closed question here which made me feel like you didn’t want to talk to me.”

Focus feedback on behavior related to the specific situation rather than behavior related to the abstract situation. Keep feedback relevant to the situation and scenario at hand. Avoid projecting feedback to the abstract future patient.

Focus feedback on alternatives rather than answers or solutions. There is no single right or wrong way to communicate. Discussing alternatives for specific behaviors promotes active learning and modification of these behaviors.

Focus feedback on the value it may have to the recipient, not on the value that it provides the person giving the feedback. The feedback provided should serve the needs of the recipient rather than the needs of the giver. Feedback needs to be given and heard as an offer, not an imposition.

Consider the amount of information the person receiving it can use, rather than on the amount that you might like to give. Overloading the student with feedback may reduce the possibility that he/she may use the feedback effectively. Provide specific examples.

Focus feedback on what is said rather than why it is said. The aspects of feedback related to the *what, how, when, and where*, of what is said are objective, observable characteristics. The *why* of what is said takes us from the observable to the inferred. Focus on observable behaviors.

Here are a few tips for providing feedback:

- Do stay in character
- Do make suggestions on how to do things differently
- Do include both positive and negative behaviors – positive reinforcement is just as important as constructive criticism
- Do avoid using ‘but’ or ‘however’ as it may be perceived that these terms negate the words that came before them
- Do take the mindset of a coach – we can’t do it for them but we can help them learn as much as we can
- If a student becomes defensive or agitated, end your feedback and let the professor or project coordinator know. It is not your job to diffuse an uncomfortable situation with a student.

Attached to the same email from which you downloaded this PowerPoint is a document containing the feedback tool being used in this project. Please review this feedback tool prior to the day of the encounter so you have an idea of what you should be paying attention to.

General Reminders: If you remember nothing else, remember these!

- Stay in character!
- If the student doesn’t ask, don’t tell. It is okay if you don’t share all of the case information with the student. You have been provided extra information in case the student asks.
- Provide both positive and constructive feedback.
- Be specific and non-judgmental. Write down specific quotes to discuss with the student.
- Feedback should be objective, observable, and modifiable.
- Provide suggestions for how to improve.

On the day of the project, you will be paired with one of your peers. During the encounter with the sophomore student, one of you will act as the Standardized Patient and the other will act as a recorder. The recorder should make specific notes related to the sophomore student's performance, but feedback will be delivered by the Standardized Patient and the recorder together.

Please let me know if you have any questions! The best way to contact me is via email at Alana.urness@valpo.edu

FAQs:

What are Standardized Patients and why do we need them? Standardized patients are individuals who have been trained to portray the characteristics of a real patient in order to provide students the opportunity to practice their skills firsthand. While working with standardized patients, students can practice their clinical skills prior to interaction with real, hospitalized patients. The value is in the experience of working with a patient – not a simulation mannequin or a peer. It takes the learning experience as close to an actual patient encounter as one can get without actually being in the clinical setting.

Do the students know that we are not real patients? Yes. I am not trying to deceive anyone. Students know that you are standardized patients but are told to behave as they would with an actual patient in the clinical setting.

How do I know what to say? I have developed a complete case history for you to learn. This case history includes past and present illnesses, current complaints, relevant information about the patient's life, and other tidbits. You are expected to learn and portray this information during the encounter. For the purpose of this exercise, the focus is purely on therapeutic communication. There will be no physical assessment, no reviewing of lab tests, and no development of a treatment plan.

Do I have to decide whether the student passes a test or not? Nope. This is purely educational – there is no test involved. You will, however, be evaluating the student's performance and providing the student with helpful feedback to improve their therapeutic communication skills.

Training guide modified from Howley, Simons, & Murray (2005) Focusing Feedback on Interpersonal Skills: A Workshop for Standardized Patients, 3rd edition.

Appendix G

Standardized Patient Case Guide**Valparaiso University**

This guide is designed to prompt a discussion between the patient (in this case, Standardized Patient [SP]) and the nursing student. The scenario is designed to portray a stressful situation commonly encountered in nursing practice. The scenario is written in an in-depth manner to promote realism and ensure that the SP has adequate information to embody the role of the patient. Not all information needs to be shared with the student – the conversation should progress naturally. This document simply serves as a guide.

General Scenario Overview: The nursing student enters the patient's room to take vital signs and the patient is visibly anxious/distraught (crying softly, despondent, etc.). It is the first time she has been hospitalized (other than for the birth of her 3 children) and she is worried about who will take care of the children/household.

Anticipated time needed: 5-7 minutes of interaction, 7-10 minutes feedback

Setting: Inpatient medical-surgical unit at a 300-bed hospital in northwest Indiana

Summary of Case:

- 36 year old female (*ethnicity not significant in this scenario; ethnicity consistent with that of the SP*)
- DOB: 11/30/1978
- Arrived at the ED complaining of chest pain x 3 hours. ED testing revealed normal cardiac enzymes but abnormal EKG (*If asked about test results, patient is unsure of results of meaning... "I don't know... The doctors just said my tests came back 'abnormal'... I'm not sure what any of that means"*)
- Arrived in the ED around 8pm and was admitted to the medical-surgical unit around 1am for further testing and referrals. It is now approximately 10am.

Past Medical History:

- Patient generally in good health
- NKDA
- Prescribed medication: None
- Over-the-counter medication: Ibuprofen 400-600mg Q4-6H PRN for stress headaches
- History of childhood asthma (*"I haven't had an attack in... Oh, I don't know... Over 10 years?"*). Past medical history unremarkable.
- Current diagnosis of anxiety (currently not receiving treatment – patient is noncompliant with treatment due to busy schedule)
- No other illnesses reported
- Up to date on physical examination and vaccinations – Physical examination and lab work completed January 2015 with findings WNL

Past hospitalizations:

- Tonsillectomy 1990
- Childbirth 2004 (vaginal birth)
- Childbirth 2009 (vaginal birth)
- Childbirth 2013 (Cesarean section)

Surgical history:

- Tonsillectomy 1990
- Cesarean section 2013.

Family history:

- Mother: HTN
- Biological father unknown
- Maternal grandmother: Diabetes mellitus
- Maternal grandfather: Diabetes mellitus, HTN, MI
- Sister: Depression, Hypothyroidism

Description of Patient, Patient Behavior, Affect, Mannerisms:

- *Patient's attitude toward the encounter:* Patient is initially reluctant to discuss what is bothering her. Patient will answer closed ended questions with single-word answers and does not begin to discuss her worries until student/nurse offers open-ended questions.

Physical Symptoms:

- *Pain:* Headache rated 2/10 (*It's probably because I've been crying*)
- No other pain reported
- No nausea, vomiting, chest pain, palpitations, dizziness, etc. No other physical symptoms reported (*"I feel fine. I don't understand why I have to be here. I wish I could just be home with my kids."*)

Background Patient Information:

- *Vocation:* Stay at home mother (children aged 11 [daughter], 6 [son], and 2 [son]) whose spouse is an executive of a small consulting firm located in Chicago. (*"His firm is pretty small. They have been trying to expand but the market is difficult. He travels two or three times a month, usually for 1-3 days at a time. He is supposed to go out of town this week [Wednesday-Friday]. That is one reason I am so stressed – he has to travel so there is no one to care for the children."*)
- *A typical day:* Primary responsibility is to take care of the children and secondarily to run the household (cleaning, dishes, laundry, etc.). When my husband is away, I typically make all of the decisions (financial and otherwise). With the start of the new school year, my day typically starts around 6am. I wake up, drink my coffee, and try to plan out my day. The children usually wake up around 6:30am or 7am. Lexi (the 11 year old) is usually pretty good about helping Adam (the 6 year old) get ready for school so I am usually making breakfast and packing lunch during this time. Jacob (the 2 year old) usually sleeps in until I have to take Adam to school. He's a good sleeper. Lexi starts school at 7:50am. Her school is only a few blocks from the house so she and her friends are allowed to walk to school together. Adam's school begins school at 8:30 but his school is across town so I have to load the boys in the car every morning to drive him to school. We opted to send our children to private school so there isn't a bus system for Adam to use. While Lexi and Adam are in school, I usually try and do household maintenance – cooking, cleaning, laundry, errands, etc. When they arrive home from school (I pick Adam up at 3:30pm and Lexi usually arrives home around 4pm), they are responsible to do their homework before dinner at 5:30pm. Between 6pm and 7:30pm,

the older children usually have various extracurricular activities (Lexi is involved in dance and Adam is involved in football. All children attend church functions [CCD, specifically, as we are Catholic] every Wednesday evening). David (her husband) usually arrives home from work around 7pm. He isn't able to spend as much time with the children as he would like, but he works hard to provide for the family. The children have free time until 8pm, at which time they are expected to shower, snack and be ready for bed around 8:45pm. Lexi is allowed to stay up until 9:30pm. I usually try to stay up until around 11pm so I can watch the news and decompress, but I usually fall asleep earlier than that.

- *How does your schedule affect your ability to live a healthy lifestyle (exercise, sleep, nutrition)?* Usually I am sleep deprived. It just doesn't seem like there is enough hour in the day to get everything done. During the summer when the day was less structured, I was able to take walks or take the children out bike riding. Jacob loves to ride in the cart behind the bike. With the new school schedule, we are adjusting. At time, eating can be sporadic. I make sure everyone eats breakfast in the morning and I pack lunch for the children. We try hard to eat dinner as a family.
- *What do you like most about your current lifestyle?* I love watching my children grow and being so involved in their formative years. I truly believe these times are priceless. I have only been a stay at home mom for about 4 years so I especially enjoy all of the little things with my youngest.
- *What do you dislike most about your current lifestyle?* So much of what I do is repetitive. I don't feel like I accomplish anything new. I feel that much of what I do is expected and my husband and children are pretty thankless. I am constantly multi-tasking. I wish I had the luxury of working on one task at a time.
- *Educational background:* I have a masters in systems management.
- *Work history:* I worked for 11 years in the management of a nursing home.
- *What things make you angry?* Angry seems like such a strong emotion. I don't really know of anything that makes me really, really angry. I guess when the kids don't listen or do their homework when expected. I will admit that I do sometimes have indirect anger when it seems I have to do everything all of the time, even when my husband is around. I feel like I struggle more with anxiety and maybe a little depression. It's difficult not having a support system of adult friends.
- *Support systems:* When we relocated, we moved away from my family. I am originally from Pennsylvania (David and I met in college there) and my parents and sister still live there. David lost his father a few years ago and his mother moved up this way (she is originally from Indianapolis) after he died. She lives about 15 minutes away from us. She is always willing to take care of the children but she's getting older and her mental capacities are beginning to diminish. This makes me a little nervous about relying too much on her to help with the children. I have made two close friends in Indiana over the past 4 years but they have their own families and their own responsibilities to attend to. I'm not sure I could ever ask them for help. I would feel too guilty. David has made a few friends at work but they live in Chicago so we don't see them much. I'm really not sure who I can ask for help with the children and the household while I'm in here. I've never really noticed how seemingly isolated I am here.
- *Hobbies:* I enjoy scrap booking and reading, when I have spare time (which is almost never). I used to love exercising and even completed a few triathlons when I was younger but I just don't have the time to train anymore.