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The Effectiveness of Combining Simulation and Role Playing in Nursing Education

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Shari Redden

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Walden University
2015

Abstract

The Effectiveness of Combining Simulation and Role Playing in Nursing Education

by

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MAEd, Univeristy of Phoenix, 2008

MSN, University of Phoenix, 2005

BSN, Texas Woman's University, 1999

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

September 2015

Abstract

The profession of nursing is affected by a nursing and nursing faculty shortage that is impacting the ability to produce adequate numbers of nurse graduates to address the healthcare needs of the future. Nursing schools are increasingly using simulation and/or role-playing to supplement the decreased number of nurse faculty and clinical sites in order to be able to continue to enroll nursing school applicants. The purpose of this phenomenological study was to examine the experiences of nursing students with role-playing and simulation and the extent to which role-playing with simulation is perceived by students as beneficial for learning within the nursing program at the study site. Constructivism theory and experiential learning theory were the theoretical frameworks used to evaluate the student perceptions of combining simulation and role-playing. Seven students from a bachelor's of nursing program volunteered to participate in the study and individual interviews were conducted. Interview transcripts were open coded and analyzed for patterns and themes. The results of the study indicated that the 7 students preferred the combination of simulation and role-playing over the use of either technique independently. It is recommended that simulation coordinators use the combination of role-playing and simulation to enhance student learning in the simulation laboratory. This study promotes positive social change by providing data to the local site on students' perceptions of the benefits of a technique that is able to support instruction and maintain student enrollment during nursing faculty shortage.

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Dedication

This project is dedicated to my husband, Dennis. He has been supportive of all of my educational endeavors, and he was a driving force for my remaining focused on achieving my ultimate educational goal of obtaining my doctorate in education. Whenever I felt discouraged and wanted to quit, he encouraged me to continue, and I found myself successful due to his never-ending support and encouragement.

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I would also like to acknowledge the administrators and faculty at the school of nursing where this study occurred. They provided me with the necessary resources in order to be able to conduct my interviews in private, as well as a means to talk to the students in order to recruit participants. I would not have been able to be successful with this project without their continuous support.

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Section 1: The Problem

Introduction

The nursing profession is experiencing a nursing shortage that has implications for healthcare facilities and for nursing education. With the decrease in the numbers of nurses, there will also be a significant reduction in nursing faculty and a decline in the number of clinical sites where nursing students can learn through hands-on experience. Due to the decline in clinical sites, many schools are incorporating simulation into the curriculum so that nursing students can get a clinical learning experience in a safe, controlled environment. In addition, role playing is being incorporated into the simulation experience. The purpose of this study was to determine whether combining role playing with simulation is beneficial to student learning and whether it prepares them for clinical practice.

Definition of the Problem

In the United States and in the state of Colorado specifically, the nursing shortage is at an all-time high and is expected to get worse over time. The nursing shortage has been a problem for many decades as care needs and the demand for nurses have increased while the availability of qualified nurses has not. The difference between the shortages of the 1940s and 1950s and those of today is that the shortage now does not seem to be getting any relief and will actually worsen (Rivers, Tsai, & Munchus, 2005).

In order for healthcare institutions to have enough qualified nurses to care for the citizens of this country and Colorado, nursing programs have to educate and graduate qualified new nurses on a regular basis. To do this, nursing programs have to be able to

provide the necessary classroom instruction as well as clinical instruction to ensure that students are properly prepared to become competent nurses. Unfortunately, this is not occurring at a rate adequate to meet current and future staffing needs. Several factors have been identified in this shortage, including a lack of qualified faculty and a shortage of clinical sites at which students can learn nursing care (Ironside & McNelis, 2010; McKinnon & McNelis, 2013; McNelis, Fonacier, McDonald, & Ironside, 2011; Reid, Hinderer, Jarosinski, Mister, & Seldomridge, 2013).

The Robert Wood Johnson Foundation (RWJF) is a philanthropic organization that, for the last 40 years, has worked with individuals and organizations to identify health and healthcare solutions and affect change for those whom healthcare serves (Executive Nurse Leaders, 2015). The RWJF has also been devoted to identifying solutions to problems faced by the nursing profession and has investigated the problem of the nursing shortage. Thousands of qualified applicants on average are turned away from nursing programs every year due to lack of faculty, classroom space, and clinical sites (Fox & Abrahamson, 2009; Reinhard & Cleary, 2009; RWJF, 2005). This problem has been a subject of discussion for a long time, and as the members of the Baby Boomer generation—individuals born between the years 1946 and 1964—begin to retire and their medical needs increase, many in the medical field are concerned about the nursing shortage. If there are not enough nurse faculties or clinical sites for students, schools of nursing will have to either continue to turn away more applicants who are qualified or increase their waitlists to the point that applicants will lose interest.

The faculty shortage is a major concern for those in the nursing education field as well as those who are anticipating the preparation of new qualified nurses. Nursing programs are struggling to admit enough qualified applicants because they do not have enough faculty to teach students (American Association of Colleges of Nursing, 2014; Cangelosi, 2014; Rivers, Livsey, Campbell, & Green, 2007). Annually, enrollments escalate, but these increases in enrollment are not enough to meet the future projections of needed nurses, as there will be an estimated shortage of approximately 500,000 nurses between 2012 and 2022 (Richardson, Goldsamt, Simmons, Gilmartin, & Jeffries, 2014). Healthcare will need more nurses graduating from nursing programs, in both Colorado and nationwide, in order to ensure that hospitals have enough nurses to care for patients. Without enough qualified nursing faculty to teach student nurses, schools will not be able to accommodate the needs of healthcare in the future.

There are several key elements that define the problem of the faculty shortage. First, the majority of current faculty members are reaching retirement age and will be gradually leaving the profession over the next several years (Cangelosi, 2014; Craft-Morgan et al., 2014; Yedidia, 2014). This would not be seen as a problem if there were qualified younger replacements to occupy these vacant jobs; however, the number of qualified younger replacements is decreasing (Cangelosi, 2014). This decrease is not due to a lack of nurses receiving advanced degrees, but rather to a lack of nurses pursuing careers in education. The decrease in the number of qualified faculty will have a wide-ranging effect on nursing education.

The faculty shortage is not only affecting classroom instruction, but also affecting the ability of schools of nursing to provide quality clinical experiences. Students are expected to perform in the clinical setting in order to practice the nursing skills they have learned in the classroom and to learn how to provide total patient care to real patients. In order to perform in the clinical setting, though, they have to be overseen by clinical faculty. Unfortunately, there are not enough clinical faculty members to provide clinical instruction to high numbers of nursing students. In addition, each specialty area of nursing requires nurse educators who are specialized in each area to oversee the clinical experiences. This reality makes it even harder for nursing programs to have the proper number of clinical faculty to meet needs for the entire nursing program's clinical rotations (American Association of Colleges of Nursing, 2005). This is important because clinical experiences serve a valuable purpose in educating nursing students.

Nursing programs of study involve several components designed to aid in the students' learning. These components include classroom instruction, laboratory instruction, and clinical instruction. The clinical instruction portion of the students' learning experience involves the students going to clinical sites in order to receive hands-on learning by caring for patients. These clinical experiences require a predetermined number of hours that vary from setting to setting. Students are expected to attend all required hours for each clinical experience in order to meet the requirements for graduating from the nursing program. Unfortunately, the number of available clinical hours for students to attend at local medical facilities is on the decline. Competition among many nursing programs for a limited number of clinical experience slots at

medical facilities is limiting how many hours are granted for each school and each level of education for which students are designated. As a result, more attention has to be paid to schools of nursing's ability to supplement the clinical experience in alternative ways. Many schools are turning to the practice of high-fidelity patient simulation to bridge gaps in clinical experiences (Anonymous, 2006; Comer, 2005; Schiavenato, 2009). Recently, a new practice has emerged of combining role playing with the simulation laboratory to teach clinical skills to nursing students (Comer, 2005; Cooper, 1980; Sideras et al., 2013; Wheeler & McNelis, 2014). While a great deal of research has been done on role-playing and simulation individually, minimal research has been conducted on the combination of these techniques in nursing education.

Rationale

Evidence of the Problem at the Local Level

In the United States and in the state of Colorado specifically, the severe nursing shortage is at an all-time high and is expected to worsen. The nursing shortage has been a problem for many decades as care needs and the demand for nursing professionals have increased while the availability of qualified nurses has not. Over the decades, the shortage has remained a constant problem, and it will actually intensify in the future. This problem is evident in the state of Colorado. By the year 2032, Colorado will need approximately 3,000 new nurses a year to meet residents' healthcare needs (Colorado Center for Nursing Excellence, 2012). These 3,000 nurses represent 1,500 to replace the nurses who are retiring and 1,500 to support population growth, increased access to health care, and the increased needs of an aging population (Colorado Center for Nursing

Excellence, 2012). The ability of nursing schools to graduate this number of nurses every year is greatly reduced by the lack of nursing faculty and this shortage will get worse over time. Currently, with approximately 950 faculty teaching in Colorado nursing schools, the percentage of faculty members who are over the age of 55 is 50%, with 45% of these nurse faculty members retiring every year (Colorado Center for Nursing Excellence, 2012). These retirements are having a direct impact on how schools of nursing are conducting business and how they are meeting the needs of students.

The nursing shortage is affecting not only facilities' ability to staff properly, but also nursing programs' ability to hire qualified faculty to teach nursing students primarily in the clinical setting (Carlson, 2015; Ganley & Sheets, 2009; Nardi & Gyurko, 2013; Richardson, Gilmartin, & Fulmer, 2012; The Truth About Nursing, 2007). There are several factors that are hindering the hiring of new faculty members. These include low pay, more attractive clinical career paths, delay in entry into academia, overwhelming workloads, and inability to educate new faculty properly (Colorado Center for Nursing Excellence, 2012). This reality, in addition to growing unavailability of clinical sites, has impacted students' ability to complete valuable learning experiences in the clinical setting. Difficulty in meeting the needs of nursing programs as well as the needs of students is a problem that has been not only identified by schools of nursing, but also recognized in the nursing literature.

Evidence of the Problem from the Professional Literature

The United States is facing an increase in the nursing shortage, and this problem is evident in the professional literature. According to The Truth About Nursing (2007),

“In the most basic sense, the current global nursing shortage is simply a widespread and dangerous lack of skilled nurses who are needed to care for individual patients and the population as a whole” (para. 1). Several factors have been identified in the literature for this shortage, including a lack of qualified faculty and a shortage of clinical sites for students to learn nursing care. Research has shown that there is a correlation between nurse staffing numbers and patient outcomes. If the number of nurses remains inadequate, the health of the country, and the world, will be in jeopardy (Kowalski & Kelley, 2013; Sherman, Chiang-Hanisko, & Koszalinski, 2013; The Truth About Nursing, 2007). Nursing schools are trying to fill the staffing needs of the healthcare system; however, with low numbers of faculty members to teach students, nursing schools are unable to accept all of the qualified applicants who apply to their programs. The lack of faculty is not the only area that is causing problems for the nursing programs’ ability to meet the learning needs of the students; a lack of clinical sites is also a contributor to the problem.

Lack of clinical sites for students to learn clinical skills is another issue affecting nursing programs nationwide. In Colorado, nursing students are expected to attend a minimum of 750 clinical hours in medical facilities prior to being able to graduate and sit for the National Council Licensure Examination for Registered Nurses (NCLEX; Colorado State Board of Nursing, 2014, p. 9). The problem facing nursing programs is the increasing lack of clinical sites for the nursing students to gain valuable clinical experiences. There are several issues that nursing programs are dealing with in relation to clinical sites. These issues include clinical site availability, which is on the decline; a trend of patients spending less time in the hospital; increases in the acuity and severity

levels of illnesses (Acuity, 2013); a change in the type of patients students are caring for; students not being allowed to work with interdisciplinary teams in facilities, with family members, or in crisis situations; the cost of securing some clinical sites, which has gone up; many hospitals prohibiting students from using available technology; and the decreased ability of nursing programs to secure qualified nursing faculty (Nehring, 2008).

The Robert Wood Johnson Foundation (RWJF), an organization devoted to improving healthcare through efforts that include sponsoring nursing research, has analyzed the problem and is attempting to create solutions. The areas of concern identified by this organization are lack of faculty, classroom space, and clinical sites, which have caused schools to turn away an abundant number of qualified applicants (Feldman, Greenberg, Jaffe-Ruiz, Kaufman, & Cignarale, 2015; Richardson, Goldsamt, Simmons, Gilmartin, & Jeffries, 2014; RWJF, 2005). These issues are compounded by the reality that a high number of nursing faculty belong to the Baby Boomer generation, which is beginning the process of retiring, leading to many more faculty vacancies. Unfortunately, there are not enough younger nurses interested in pursuing teaching to fill the gaps left by those faculty members who will soon leave the profession. With the combination of low numbers of qualified faculty and a growing lack of suitable clinical sites, many more qualified applicants will be turned away from nursing schools.

Nursing students are expected to complete an average of 750 clinical hours in order to complete their programs of study (Colorado Board of Nursing, 2014). Unfortunately, there has been a decrease in the number of available clinical sites and a decrease in the number of available clinical hours in addition to the decrease in clinical

faculty and clinical preceptors (Allen, 2008). As a result, more attention has to be paid to schools of nursing's ability to supplement the clinical experience in alternative ways. Some schools are entering into partnerships with facilities where staff nurses are serving as clinical instructors. In addition, many schools are turning to the practice of human patient simulation to bridge the gaps in clinical experiences (Allen, 2008; Richardson, Gilmartin, & Fulmer, 2012;). Schools of nursing are becoming creative in order to address the needs of students in relation to learning nursing clinical skills. One creative idea that has emerged is the combination of role playing and simulation. Unfortunately, while a great deal of research has been done on role playing and simulation independently, there is a lack of research on the combination of these techniques, especially in nursing education.

Definitions

For any research study, it is important to define key words that are used so that the reader comprehends the meaning and significance of these terms. The keywords for this study were *clinical experiences*, *high-fidelity simulation*, *nursing shortage*, *nursing students*, and *role-playing*. The definitions for these keywords are as follows:

Clinical experiences: Practical experiences in medical and health-related services that occur as part of an educational program (Education.com, 2012).

High-fidelity simulation: High-fidelity medical simulation is the use of technology to create a lifelike situation where an individual can suspend disbelief and practice both procedural and decision-making skills in an environment safe for both the trainee and the patient (Sutton, n.d.).

Nursing shortage: “A widespread and dangerous lack of skilled nurses who are needed to care for individual patients and the population as a whole” (The Truth About Nursing, 2007, para. 1).

Nursing student: A student enrolled in a nursing program of study.

Role playing: “A teaching method that has been used widely for experiential learning” and that “provides an imaginary context in which issues and behaviors may be explored by participants who take on a specific role or character” (Ching, 2014, p. 295).

Significance of the Problem

The nursing shortage is not expected to get better over time. In fact, the shortage should continue to grow over time as more nurses leave the field, either through retirement or for other reasons. The growing shortage will have ramifications for facilities and nursing programs. Due to the decrease in the number of nurses, many of whom are faculty members, the number of nurses who could oversee clinical experiences will also decrease. In Colorado, there is a program that is designed to assist in the shortage of nursing faculty called the Clinical Scholar Program, in which facility nurses are trained to be clinical instructors in their respective facilities. According to the Colorado Center for Nursing Excellence (2011), “A Clinical Scholar is a baccalaureate prepared or higher level prepared registered nurse who works with a School of Nursing to instruct nursing students in a clinical setting” (para. 1). Clinical Scholars maintain their employment status while overseeing the students at the facility (Center for Nursing Excellence, 2011). If the number of nurses decreases, not only will the number of faculty

who can oversee students decrease, but the number of scholars who are trained to work with the students in their facility will decrease as well.

Guiding/Research Question

The lack of qualified faculty is the driving force for the use of simulation in nursing programs in the western United States as well as in other areas of the country. While a great deal of research has been conducted on the topics of simulation and role playing separately, little research has been conducted on the two teaching methods combined, especially in the context of nursing education. The questions that were answered through this research and were addressed through the use of a semistructured interview were the following:

1. Did incorporating role playing into the simulated clinical experience enhance the learning of course content?
2. Do students feel they learn the content presented in the simulation lab better through the combination of simulation and role playing or through simulation alone?

Review of the Literature

In conducting the literature review, several database sites were used through the Walden University library. These databases included Google, EBSCO, ERIC, Education Research Complete, ProQuest, and CINAHL Plus. The search terms that were used were *nursing theories, constructivism theory, experiential learning theory, nursing shortage, history of the nursing shortage, nursing faculty shortage, nursing demographics, nursing faculty demographic, nursing employment numbers, impact of faculty retirements, future*

of nursing, need for highly qualified graduate nurses, nursing education, clinical site availability in nursing education, simulation, use of simulation, history of simulation, benefits of simulation, perceptions of simulation by students, benefits of simulation, role-playing, use of role-playing, and combining role-playing and simulation.

Websites used included the following: Bureau of Labor Statistics, American Association of Colleges of Nursing, National Council of the State Boards of Nursing, Colorado State Board of Nursing, The Florida Center for Nursing, BusinessDirectory.com, Colorado Center for Nursing Excellence, IRADIS Foundation, Oregon Center for Nursing, Robert Wood Johnson Foundation, Education.com, The Center for Nursing Advocacy, Chicago State University, Queensland University of Technology, The Truth About Nursing, University of California at Los Angeles. Lastly, the following peer-reviewed journals were used for gathering information: *Journal of Engineering Education, Nursing Economic\$, The Canadian Nurse, The High School Journal, Nursing Education Perspectives, Journal of Nursing Education, Journal of Computerized Higher Education, Nursing Forum, British Dental Journal, Journal of Qualitative Methods, Journal of Continuing Education in Nursing, Christian Education Journal, Cancer Nursing, Medical Teacher, PS, Political Science & Politics, Monthly Labor Review, Journal of Psychosocial Nursing, Journal of Professional Nursing, Mount Sinai Journal of Medicine, International Studies Perspectives, Community College Week, Journal of Health Care Finance, Journal of Chemical Education, Clinical Journal of Oncology Nursing, Australian Health Review, Nephrology Nursing Journal, Nurse*

Researcher, and the *Connecticut Nursing News*. The following literature review is a reflection of the above searches.

Nursing programs are dealing with a shortage of nursing faculty, and the problem will continue to worsen in the future. With the increasing lack of faculty, these programs are seeking methods for teaching students in order to prepare them for graduating and becoming safe practitioners. One area that is affected the most by the nursing shortage is the clinical teaching arena. Unfortunately, the problem is not only a lack of faculty, but also a lack of clinical sites to provide students with the proper clinical experiences. A literature review was conducted to determine the extent of the problem within nursing education.

In this review, the theoretical base for the study is addressed, in addition to the history of the nursing shortage, employment numbers, the need for high-quality nursing graduates, and the lack of clinical sites. In addition, the use of simulation has been identified as a quality method of teaching clinical skills in the absence of clinical sites. The literature review also covers the use of simulation, student perceptions of simulation, and the benefits of simulation. Lastly, as the study was designed to determine the effectiveness of combining role play with simulation, the use of role play and the benefits of combining the two techniques are covered.

Theoretical Base

While designing the research, two theories were identified as being appropriate to the study. Both of these theories are used to identify student learning and the learning that occurs through their experiences. As the study was conducted to determine how students

view the learning experience obtained through the combination of role playing and simulation, the attributes of this theory are applicable to this study. The theoretical base for this study consisted the constructivism and experiential learning theory.

Constructivism.

Constructivism is concerned with the learning experience and how individuals take meaning out of the experience of learning (Merriam, Caffarella, & Baumgartner, 2007). This theory is based on the assumption that the knowledge learned is based on the knowledge that the student already knows (Applefield, Huber, & Moallem, 2001; Brandon & All, 2010; Shiland, 1999). The view of knowledge acquisition involves constructing knowledge instead of transmitting knowledge from information recorded and conveyed by other people. Students must make meaning of their experiences and create an understanding through social interactions. The students' efforts to acquire new knowledge and understanding are central to the educational experience (Applefield et al., 2001). In nursing education, the content-rich methods of instruction do not adequately teach students to think critically. With an interactive format integrated into education, students are better able to collect data, analyze data, evaluate data, and formulate a new framework for addressing the issues identified, thus improving their critical thinking skills (Brandon & All, 2010). The basis of constructivism includes the ideas that learning requires mental activity, that new knowledge must relate to existing knowledge, that learning occurs due to dissatisfaction with existing knowledge, that learning incorporates a social aspect, and that learning needs to be applied (Shiland, 1999). This theory has been used in education in the hope of helping students learn from their experiences.

From the work of Socrates to that of Piaget, this theory evolved into the learning theory that is used today in such disciplines as literature and history (D'Angelo et al., 2009). This theory is also applicable to nursing education because nursing students are learning through their own as well as shared experiences. The students apply existing knowledge to learning new applications; the learning requires mental activity; the learning is social in nature, as students work and learn with other students; and the knowledge is applied in a simulation experience.

Experiential learning theory.

The second theory that informed the study was experiential learning theory. Experiential learning is based on the process of the transformation of learning by using specific skills or through experiences (Hedin, 2010; Lisko & O'Dell, 2010). Nursing is like other applied sciences in that it requires hands-on skills along with critical thinking and problem solving (Hedin, 2010). Through experiential learning, knowledge and skills are developed through an emphasis on the experiences that students encounter (Hedin, 2010). In this theory, there are six identified propositions. These propositions, according to Merriam et al. (2007), are as follows: Learning is best conceived as a process and not in terms of outcomes; learning is relearning; students' ideas must be drawn out, discussed, and refined; learners must move between "opposing modes of reflection and action and feeling and thinking"; learning is holistic; learning involves interactions between learner and the environment; and learning is constructivist in nature. The propositions of experiential learning theory made the use of this theory applicable to this study's purpose. According to Chan (2012), "Traditional classroom-based learning may

not always create deep impressions in students because of its didactic, passive and standardised nature, yet the active and practical nature of experiential learning tends to facilitate deep understanding” (Chan, 2012). Simulation is seen by students as a combination of learned classroom knowledge, skills learned in the laboratory, and experiences from the clinical setting (Lisko & O’Dell, 2010). Experiential learning theory is thought to align strongly with constructivism by indicating that new knowledge is acquired through students finding meaning in their experiences (Abdulwahed & Nagy, 2010; Hedin, 2010). A determination concerning the learning experiences of the nursing students through the use of the combination of role playing and simulation was made through this study. The important aspects of role playing and simulation that inspires learning are interaction with the environment, relearning what was taught in the classroom, discussions with fellow students, and reflection.

The Nursing Shortage

Early shortages/

The nursing shortage has existed for quite some time; it is not a new phenomenon within healthcare. The world of healthcare has been struggling with maintaining adequate numbers of nursing staff for many decades. Spohn analyzed data for the time span of 1930 to 1952. In that time, she determined that hospitals had increased their bed numbers by 52% with a correlating increase in the number of patients but not a related increase in nursing numbers (Fox & Abrahamson, 2009). Societal factors were cited as being contributors to the nursing shortage at that time, including accreditation issues, educational opportunities, foreign conflicts that the United States entered into, and the

image of the profession (Fox & Abrahamson, 2009). During the 1980s, Aiken again looked at the phenomenon of the nursing shortage. She identified the new payment system as the cause for the unavailability of nurses. The new system led to a drop in nursing salaries, causing many nurses to leave the profession (Fox & Abrahamson, 2009). Nurses found that they could make better salaries in other fields, including those outside healthcare, and potential nursing students opted for careers in other sectors due to the low pay offered in the field of nursing. The problems related to low nursing numbers did not improve over the years; however, different causes were added to previous causes of the shortages beginning in the 1990s.

The 1990s.

There has been a nursing shortage for decades that has been caused by many different factors during different periods. Reasons for the shortage have not been related only to increasing bed numbers without a corresponding increase in staff. During the 1990s, the rise of managed care, cuts in wages for nurses, and the negative publicity that the nursing profession received contributed to a nursing shortage that was present for more than a decade (Fox & Abrahamson, 2009). Then, with several initiatives, including the Nursing Quality Research Initiative released in 2010 by the Robert Wood Johnson Foundation and the Transforming Care at the Bedside initiative of 2003, as well as backing by important organizations, enrollments into nursing programs again began to rise. These initiatives were working to increase interest in careers in nursing by improving the recruitment and retention of nurses and by improving satisfaction among nursing staff (RWJF, 2008). Input was derived from staff nurses and used to identify the

areas that needed improvement in order to retain and attract more nurses to the profession (RWJF, 2008). Unfortunately, these positive gains for the nursing profession were not long term, and other areas of concern emerged.

The recession of the 2000s.

In the 2000s, another recession hit, and an increase in the need for nurses again surfaced. For a long period of time, nurses had no trouble finding nursing jobs in a variety of healthcare fields; however, a competitive job market emerged due to the recession, as many nurses were returning to work, more nurses were working longer hours, and new graduates were having a hard time finding work in hospitals (Williams, 2009). This temporary influx of nurses back to practice caused a misunderstanding to emerge that a shortage did not exist that could lead to a potential crisis in the near future. The current economic situation is in part to blame for the misconception that there is no nursing shortage. Older nurses are staying in the field longer or returning to the field, and therefore hospitals are not hiring as many new graduates. While facilities are currently maintaining a seasoned, veteran workforce, this practice of hiring or keeping older nurses and turning away new graduates gives the illusion that there is no longer a nursing shortage.

This perception will diminish, however, when older nurses and aging nurses begin to retire and the demand becomes higher than the supply. Williams (2009) stated that “one of the reasons for the shortage is that, as the current nurse workforce ages, a growing proportion of these nurses will begin to retire, with a sharp increase around 2015” (p. 1). However, the economy has had an impact on the employment environment

“Nurses who have been hit hardest by the economic downturn are remaining in the work force with the expectation that the economy will rebound over the next five years” (Williams, 2009, p. 10). Due to the influx of older nurses, many hospitals reported that they were not experiencing a shortage and that they were unable to hire new nurses.

In Colorado, 35% of nurses are over the age of 55, with 4,500 nurses in the state being over the age of 65. In addition, 2,000 active nurses are expected to retire each year for the next 10 years (Colorado Center for Nursing Excellence, 2011). Even with the variations in the shortage and supply, the nursing profession does not seem to have a viable means of maintaining a solid workforce. Other reasons for the shortage have been identified as short staffing, inadequate work conditions, inadequate resources, an aging workforce, expanding career opportunities, an increase in technology, and an aging population (Fagin, Maraldo, & Mason, 2007). There will always be changes in healthcare and the population, currently, is not only getting older but living longer and requiring more healthcare services. The number of practicing numbers needs to keep up with the ever changing nature of healthcare and the needs of the patients.

Employment numbers.

An analysis of the nursing employment numbers was conducted by the Bureau of Labor Statistics (Lacey & Wright, 2009), which determined employment projections through the year 2018. Of all the areas of employment, nursing was identified as the field that would need the most new workers between the years 2008 and 2018 (Lacey & Wright, 2009). Lacey and Wright (2009) stated, “with roughly 581,500 new jobs anticipated for the projection period, the most of any single occupation group, registered

nurses will account for more than one-third of the growth in this occupational group” (p. 84). With the impending nursing shortage, the need for more nurse graduates is clear; however, the shortage is also affecting the nursing schools that are responsible for teaching prospective students. Just as the nursing workforce is aging and many of its members are beginning to leave the workforce, so are the faculty members responsible for training the nurses of tomorrow, with not enough younger nurses interested in filling the educational gaps left by these retiring professionals.

Nursing Education Faculty Shortage

Considering the reality that there is a pending nursing shortage crisis, there is a need to educate more nurses to ensure that the health care needs of the country are met in the future. However, the need for an adequate number of future nurse graduates is being impacted by the inability to recruit qualified faculty to teach (MacIntyre, Murray, Teel, & Karshmar, 2009; Richardson, Glimartin, & Fulmer, 2012). In fact, the most pressing issue that is affecting the ability to train and graduate qualified nurses is the inadequate supply of nursing faculty (MacIntyre et al., 2009). In addition, there is a growing need to expand on nursing programs in order to meet the demands of the future; however, the expansion is severely limited by the inability to staff nursing programs adequately with qualified faculty (MacIntyr et al., 2009; Rosseter, 2011). This shortage of faculty has a direct impact on enrollments into nursing programs. Due to the shortage of qualified faculty to teach potential students, more than 67,000 qualified applicants are denied admission to the nursing programs annually (Rosseter, 2011). While the shortage is

mainly discussed in relation to the hospital setting, the shortage of faculty has a direct impact on the education of future nurses.

The average age of faculty is 49, which indicates that many of these faculty members will be retiring in the near future. With the impending retirement of older nursing faculty, a lack of teachers impacts how many students are admitted every year into nursing programs (Pitzer, 2011; Robert Wood Johnson Foundation, 2005; Talbert, 2009). In Colorado, the future outlook related to the faculty shortage is bleak. According to the Colorado Center for Nursing Excellence (2011), based on a survey conducted by the Colorado Health Institute (CHI), 25% of the state's 900 nursing faculty are intending to retire by 2015; another 25% are intending to retire by 2020. When the time it takes to educate new faculty to at least a master's level is taken into consideration, it is a challenge for the state or the schools of nursing to prepare a large next generation of nurses (Colorado Center for Nursing Excellence, 2011). Decreasing nurse faculty numbers has a direct impact on the number of students who are trained and the future numbers of graduating nurses that are needed to address healthcare needs.

Future of nursing.

The future of nursing is a topic of concern within nursing as well as the medical community. *The Future of Nursing: Leading Change, Advancing Health* is a document prepared by the Robert Wood Johnson Foundation (RWJF) and the Institute of Medicine (IOM). In this report, the authors discussed the future of nursing and how best to ensure that the country has the number of nurses that will be needed in the future. They determined that there is a need to reconceptualize the role of nurses within the context of

the entire workforce, the shortage, societal issues, and current and future technology (Rodts, 2011). There is also a need to expand nursing faculty, increase the capacity of nursing schools, and redesign nursing education to ensure that it can produce an adequate number of well-prepared nurses who are able to meet current and future healthcare demands. Nurse leaders should examine innovative solutions related to care delivery and healthcare professional education by focusing on nursing and the delivery of nursing services and find ways to attract and retain well-prepared nurses in multiple care settings, including acute, ambulatory, primary, long-term, community, and public health care (Rodts, 2011). The nursing community needs to address this issue in order to meet the future needs of healthcare.

Other nurse professionals are also concerned with the future of nursing and the challenges that the nursing profession faces. Hind (2011) developed four recommendations which include: (1) nurses should practice to the full extent of their education and training; (2) nurses should achieve higher levels of education and training in seamless academic progression; (3) nurses should be full partners with physicians and other health care professionals to redesign health care in America; and, (4) improved data collection and information infrastructures are essential for workplace planning and policy making to fully educate and deploy the nursing workforce. These recommendations are designed to help address the future needs of nursing education since the future of nursing requires high quality nurses to graduate from nursing programs to staff the healthcare institutions.

The Need for Highly Qualified Graduate Nurses

The American Association of Colleges of Nursing (AACN) investigated the educational standards of the graduates produced that will work in the nursing profession. The AACN suggested that the future of nursing, and its ability to meet the needs of the future health care demands, requires that more nurses be educated at the baccalaureate degree or higher level (AACN, 2011). One of the findings indicates that “a more highly educated nursing workforce is critical to meeting the nation’s nursing needs and delivering safe, effective patient care” (AACN, 2011, para. 4). The focus on creating a strong, high quality nurse workforce is vital for the future healthcare needs of the patients.

The issue of the need for highly qualified nurses will continue to grow over the years to come in light of changes in the healthcare system. These changes include advancements in technology, demand for quality health care, cost containment pressures, decrease in length of hospital stays by patients, complex diagnoses, and higher acuties (Simpson & Courtney, n.d.). If nurses are to be able to deal with these vast changes in healthcare they must possess higher critical thinking skills and improved reasoning abilities (Knapp, 2007; Simpson & Courtney, n.d.). According to the Oregon Center for Nursing (2011) “Acute care nurses provide direct care to patients requiring hospital-level care” and these nurses “must make critical decisions associated with the care of very sick, injured, and/or frail patients and work with sophisticated, life-saving equipment” (p. 4). Based on this definition of current nursing requirements, highly qualified nurses are needed to staff the hospitals.

Lack of Suitable Clinical Sites for Practicing Nursing Students

While the need for more nurses, and more highly qualified nurses, has been identified, there continues to be an increasing problem of diminishing availability of clinical sites for the students where they can practice their nursing skills and care for real patients. A great deal of research has been focused on this problem and some of the remedies for aiding in the students' acquisition of needed skills, competencies, and confidence in caring for their patients. One possible solution that has been suggested is the use of simulation. Schiavenato (2009) suggested that a decrease number of clinical sites have increased the use of simulation in nursing education. Schiavenato (2009) also suggests that this move to more simulation may be caused by an increase interest in "patient safety or because of pressures brought on by decreased opportunities for clinical practice or nursing faculty shortage" (p. 390). In order to understand the importance for remedying the problem with the decrease in clinical sites, the schools need to understand the causes of the lack of clinical sites.

It has been suggested that the decreased number of clinical sites for nursing students is related to several issues. Nursing school administrators are faced with many issues affecting the clinical experience quality and quantity. There is a decline in the number of clinical sites that are available for the schools to send the students to. In addition, the facilities are keeping the patients a shorter period of time even though their acuity levels are higher. There is also higher costs associated with securing sites for students to go and there are not enough faculty to oversee the student' clinical experiences. (Nehring, 2008). This issue is affecting all areas of nursing education,

including the area of psychiatric nursing education. This area of medicine is being significantly impacted by economic conditions.

These facilities are experiencing tremendous budget cuts, which are affecting not only these facilities but also the nursing programs that use the facilities for clinical experiences for their students. The budget cuts are causing the closure of many psychiatric units, which limits the number of training sites for the nursing students' clinical experiences (McGuinness, 2011). Another complication of finding suitable clinical sites is competition.

There is increased competition for the clinical sites by the many nursing schools. When this competition is combined with shorter patient stays, the ability of nursing programs to provide opportunities for traditional nursing experiences has become increasingly limited (Lasater, 2007). Nursing students attend clinical experiences so that they can practice the patient care skills that they have learned in nursing school. The clinical component of nursing programs should be reexamined including the number of hours spent in specialty clinical rotations. The main reason for this reexamination is that the total amount of time required and the number of available facilities, especially in obstetrics and pediatrics, which the students attend for their clinical experience, has an impact on the number of nursing students that can receive their education in a community (MacIntyre, Murray, Teel, & Karshmer, 2009; Waxman, 2010). Most boards of nursing do not specify a certain number of clinical hours in any prelicensure program; therefore, the number of hours required should be reconsidered for the clinical experience. The value of the clinical component can be determined by: "student, staff nurse, faculty, and

clinical site satisfaction; new graduate and employer evaluations of transition to practice; recruitment and retention costs; patient safety measures; and student capacity at clinical sites” (MacIntyre et al., 2009, p. 451). However, some states are also allowing schools to have equal time in the simulation lab as in the clinical setting (Richardson et al., 2012). In Colorado, nursing schools are allowed time in the simulation lab to account for the clinical time missed in the clinical setting.

Use of Simulation

In response to the lack of clinical sites, many schools of nursing are incorporating high fidelity simulated clinical experiences to fill the gaps of missing clinical hours. The National Council of the State Boards of Nursing and many nursing organizations are looking at these issues and addressing them to help the schools of nursing meet the clinical needs of the students. One of these solutions is that of high-fidelity patient simulated clinical experiences. For the state of Colorado, the state board has not specifically changed the regulations of simulator time for clinical time, but they do allow up to 25 percent of clinical time to be conducted in the simulation laboratory (Colorado State Board of Nursing, 2014). The Colorado State Board of Nursing is also considering future regulation changes related to simulation use for clinical hours (Nehring, 2008). With the input of schools and clinical sites, the board of nursing is trying to determine the right balance between actual clinical time and simulation time so that the students get the experiences that they need to become competent practitioners.

Simulation has been in use in education for the last 25 years with an increased interest over the past 10 years (Seropian, Brown, Samuelson, & Driggers, 2004). The

literature indicates that the use of this technology began with aviation since the early 1900s with an electronic version available in 1930 (Waxman, 2010; IRADIS Foundation, 2006) and progressed into medical studies through the use of RescueAnnie in the 1950s (Okuda, Bryson, DeMaria, Jacobson, Quinones, Shen, & Levine, 2009; Schiavenato, 2009). The field of anesthesiology has also been using simulation for their training for decades (Bearnon, 2005; Waxman, 2010;). The use of simulation began in nursing education in the 1950s with simple things like practicing skills in a laboratory (lab) to learn new skills on motionless mannequins in a laboratory. Other advantages have also been identified for the use of simulation.

The advantages of using simulation include experiencing a crisis prior to the clinical setting; the evaluation and reflection of activities in a non-threatening environment; and, the ability for students to encounter scenarios which may not occur in real life (Horan, 2010; Sanford, 2010; Ziv, Small, & Wolpe, 2000). Sanford (2010) also noted in her conclusions that “simulations also assist with the already hard-to-get clinical sites and many state boards of nursing now allow some simulation experiences as clinical time” (para. 19). The increased popularity of simulation in nursing programs has been attributed to the nursing shortage and the need to increase nursing school enrollments; the need to supplement a limited number of clinical sites; lower cost of equipment; an increasing emphasis on evidence-based practice and competencies; acceptance of simulation as a valuable and useful tool; increased awareness of the importance of addressing patient safety; and, to enhance clinical practice through simulation (Seropian

et al., 2004). Nursing programs have identified the value of using simulation to teach the students real world skills including critical thinking.

Many educators have found simulation in nursing education to a very valuable tool. They use it to teach basic nursing skills to the more advanced skills as well as critical thinking. There are several advantages and disadvantages to the use of simulation. One advantage to the use of this technology is that it is a great tool for helping students who are struggling in the clinical setting. They are able to repeat the skills they are struggling with multiple times until the skill is learned (Haskviz & Koop, 2004). An important aspect that relates to the use of simulation is in regards to the shortage of clinical sites. Rothgeb (2008) states “Simulation experiences are needed in nursing education as a result of the lack of clinical site availability, low census in clinical areas, and nursing faculty shortage” (p. 489). Lasater’s (2008) article discussed the use of simulation, program development, regulations, advantages and challenges to simulation. She noted that “simulation is one innovative and effective teaching and learning tool that fits into the rapidly changing world of nursing education and modern health care” (Lasater, 2008, p. 494). Students are finding that the simulation approach promotes active learning through collaboration and teamwork (Horan, 2009; Schlairet, 2011;). Simulation has also shown to be an effective learning tool for achieving program outcomes from the view of the American Association of Colleges of Nursing (Davis, 2011). The achievement of program outcomes is not the only advantage that faculty members have identified for the use of simulation.

Another advantage which has been identified is that faculty members believe that simulation experiences prepared the students for the clinical setting (Feingold, 2004). Simulation is an effective way to enhance student learning, which will enhance patient care and ultimately, patient safety (Harder, 2010; Haskviz & Koop, 2004;) Bearnon (2005) identified simulation as an effective evaluation tool, while other researchers identified simulation as effective for measuring student performance and their ability to perform in real-life situations, a valuable method for remediation of clinical performances, maintaining clinical skills, and the ability to manage crises (Haskvitz & Koop, 2004). Sanford (2010) conducted a literature review on the use of simulation in nursing education. She identified that there is a lack of research to support the use of simulators in nursing education; however, through the research she did locate some disadvantages. The disadvantages included the following: (1) lack of theory or research to support simulation use; and, (2) the time consuming tasks of creating the scenarios, setting up the lab and planning the roles for role playing. A last disadvantage was identified by a group of students in a study where, while they felt the scenarios were realistic, they did not feel the simulation would prepare them for real-life in the clinical setting (Feingold, Calaluce, & Kallen, 2004). Even though some disadvantages have been identified, there are more benefits to the use of simulation.

A last benefit is related to the opinions of different boards of nursing concerning the use of simulation in nursing education. Researchers surveyed boards of nursing across the country, in Washington, D. C., and Puerto Rico. One of their main concerns was whether the boards considered simulation a suitable substitute for actual clinical

experiences. Currently, not all states allow for simulation as an alternative to clinical experience, but indicate that the regulations could change in the future depending on determining the effectiveness of the use of simulations (Nehring, 2008). The National Council of the State Boards of Nursing and many nursing organizations are looking at these issues and addressing them to help the schools of nursing meet the clinical needs of the students.

The Florida Center for Nursing (2010), did a research study concerning the nursing shortage and the use of simulation for aiding in increasing enrollment numbers in the light of limited faculty and a lack of clinical sites for clinical education. Through the use of simulation, student are able to practice skills and critical thinking in conjunction with technology and the experiences are designed to mimic the clinical setting (Florida Center for Nursing, 2010; Horan, 2009). When nursing students participate in simulation exercises and take the simulations seriously, they are shown to retain the knowledge learned through the experience, are able to demonstrate the new skills effectively, increase their confidence levels, the speed in learning is shown to increase (Florida Center for Nursing, 2010). These experiences tend to increase the students' enthusiasm for learning, increase their comfort level with providing care, decrease their anxiety levels and promote sound clinical judgment in a safe environment (Horan, 2009). In order to determine the value of the simulation experiences, it is vital to know the students' perceptions of their experiences in the simulation lab.

Perceptions of Simulation by Students.

The use of simulation in nursing education has produced several opinions of its use by students. Students have suggested that the use of simulation is beneficial to their learning process. Students in one study identified four main benefits of the use of simulation. First, they appreciated being able to “enact the nursing role based on their current level of education” (Leonard, Shuhaibar, & Chen, 2010, para. 16). Second, the students were able to see how their education would progress with time through their interactions with upper classmen. Third, the students felt that the simulation helped them better learn the dynamics of the team environment. Lastly, the students benefited from the ability to work on the scenarios with other students which “enhanced the students’ sense of professional solidarity” (Leonard et al., 2010, para. 17). By tailoring the experiences to both the educational level of the students and the learning needs of the students, they benefit more from the simulation experiences.

Other benefits of simulation, identified by nursing students, were related to their nursing skills. They indicated that the simulation experiences enhanced their assessment abilities and their ability to identify abnormal body sounds and abnormal results. In addition, the students were better able to encounter a more diverse set of conditions and diagnoses that they may not see in the clinical setting. Lastly, the students said that the use of simulation increased their ability to formulate effective care plans based on their assessment findings (Bearnon, 2005). There were some other themes students identified concerning the use of simulation in nursing education.

Simulation has been shown to improve student self-confidence and self-efficacy even though effective evaluation tools for the simulation experience needs to be developed (Bambini, Washburn, & Perkins, 2009; Horan, 2009; Piscotty, Grobbel, & Tzeng, 2011). Another theme that has emerged is that some students struggle with the team aspect of the simulation experience. This concept and practice, though, is important for the students to master prior to the clinical experience. Through this experience, the students identified that the simulation was a valuable tool for improving skills, competence, and critical thinking skills (Bambini, Washburn, & Perkins, 2009; Horan, 2009; Piscotty, Grobbel, & Tzeng, 2011). Students have also identified that simulation is useful in learning the proper techniques of passing medications. The students acknowledged that they were able to increase their knowledge level of medications and the side effects associated with each medication. They also reported that they felt they learned how to pass medications safely and how to better identify the different patient responses to the different medications. Lastly, students indicated that the simulation lab increased their confidence in safe medication administration (Bearnon, 2005). In addition to the improved nursing skills and improved thinking skills, there are other benefits to the use of simulation.

Benefits of Simulation.

Advantages have been identified for the use of simulation. These advantages include experiencing a crisis prior to the clinical setting; the evaluation and reflection of activities in a non-threatening environment; and, the ability for students to encounter scenarios which may not occur in real life (Sanford, 2010). Simulations are an effective

alternative to hard to get sites for clinical experiences and boards of nursing are allowing for some clinical time to be conducted in the simulation lab (Sandford, 2010). Through the use of simulation and the studies conducted on its use, several benefits to the use of simulation have been identified.

One benefit is that simulation has been shown to improve safety behaviors of nursing students (Gantt & Webb-Corbell, 2010). While the behaviors themselves did not specifically improve, the students were able to identify deficiencies and identify the gaps in how they needed to approach these deficiencies. The researchers also identified that the simulation laboratory is a great environment to practice these patient safety behaviors (Gantt & Webb-Corbell, 2010). The simulation lab provides a safe environment in which students can practice their skills and be able to integrate the material they have learned into nursing practices (Gantt & Webb-Corbett, 2010). Another benefit is that many organizations that govern nursing programs have identified that simulation is an effective tool for student learning.

Due to the increased interest in simulation, many organizations, boards of nursing and accrediting bodies, schools of nursing, and many others are interested in determining the best practices for the use of simulation in order to promote problem solving and decision making skills (Jeffries, 2006). Seropian, Brown, Smuelson-Gavilanes, and Driggers (2004) stated that “After nurse educators break free of the idea that simulation is just a mannequin, the breath of educational opportunities for students increases exponentially” (Seropian, et al., 2004, p. 169). These mannequins simulate real patients and are interactive components of the learning process. Faculty need to be encouraged in

the “empirical execution of the technique, the clarification of goals and outcomes, and the facilitation of research such as evaluation of competing technologies and the investigation of evidence-based pedagogical and clinical practices” (Schiavenato, 2009, p. 393). Another benefit of simulation is the integration of lecture into the simulation experience and in clinical practice.

Once they have been given the lecture material, the students are sent to the simulation lab to apply the material in a control setting, and then the students are able to transfer that learning to the clinical setting. Researchers have found that the students benefitted from using multiple instructional methods and it prepared the students better for the clinical setting. Through the use of repetition and reinforcement, the instructors were better able to help the students acquire confidence in their newly learned skills (Wagner, Bear, & Sander, 2009). Simulation has also been shown to be beneficial when medical and nursing students interacted in the simulation experience together. Reese, Jeffries, and Engum (2010) conducted a study in which they investigated the use of simulation in a collaborative effort between nursing and medical students. The setting was a surgical scenario with both medical and nursing students dealing with surgical complications. The sample for the study was 15 medical students in their third year of study and 13 nursing students in their senior year. Two pre-developed and one researcher-developed survey was used to gather the data needed. Both groups felt that putting the two groups together in the simulation experience helped them to learn how to function in the real world (Reese, Jeffries, & Engum, 2010). This type of collaboration was shown to improve communication skills between the disciplines and the students from

both disciplines indicated that they learned from the simulation experience through the use of feedback and reflection.

Use of Role Playing

Role playing is “an experiential learning technique with learners acting out roles in case scenarios to provide targeted practice and feedback to train skills” (Ertmer et al., 2010, p. 75). Nursing programs across the country are using simulation experiences to educate their students in an environment that does not provide the clinical experiences that nursing students so greatly need to learn the skills of a safe registered nurse. Role-playing is used in many different educational settings from international studies to business schools to the social sciences, including medical schools and nursing schools. Role-playing is commonly used because “assigning roles motivates students to participate in discussions and test their own problem solving capabilities” (Kanner, 2007). By using role-playing, the students are able to critically think through the scenario and increase student awareness of the issues they are required to address during the simulation.

Business students perform role-playing exercises in order to learn how to deal with such things as public relations crises. The students in these programs learned the value of preparing for a crisis, the importance of effective crisis management and the implications of the company’s reactions to the crisis (Baglion, 2006). “Role-playing can be used to help students experience stressful, unfamiliar, complex or controversial situations by creating circumstances that are momentarily real, thereby letting students develop and practice those skills necessary for coping (Baglion, 2006). Due to the

increased ability to learn in challenging situations, medical students have been using role-playing to learn proper techniques.

Twelve tips for using role-playing in teaching have been identified as the following: be prepared; clarify learning objectives; create challenging cases; package the role play; allow adequate time; involve all students; define the ground rules; keep observers busy; use a structured assessment form; ensure debrief and feedback to all participants; encourage reflection; and, maintain your sense of humor (Joyner & Young, 2006). Through role-playing students are able to practice skills through the role of a clinician, gather patient information and data in order to make decisions based on diagnoses and receive constructive criticism from the instructor (Joyner & Young, 2006). Role-playing has been shown to be a valuable tool for teaching not only business students and medical students, but nursing students as well. It encourages the students to learn the perspectives of the role they are portraying so that they can better understand how to deal with individuals in the real world. Role-playing has been used for teaching and practicing communication skills which are needed for taking effective histories and for gathering information (Joyner & Young, 2006). The use of role-playing is a valuable teaching technique and would produce additional benefits when combined with simulation.

Benefits of Combining Role Playing and Simulation.

The combination of role-play and simulation has been shown to be an effective combination of techniques in programs designed to teach defense and force management. According to a study by Tagarev, Stankov, and Bizov (2009) at the Defense and Staff College, interactive simulations “make complex theories clearer and present students the

chance to apply theoretical principles and approaches, develop critical thinking skills, and provide ‘a welcome relief from the everyday tasks of reading and preparing for classes’ (para 35). These principles that are seen as valuable in other areas, such as business and defense, are also seen as valuable in the field of nursing.

Simulation has also been useful in educating students in some areas of nursing that the curriculum does not address such as family nursing. Eddenberger and Regan (2010) used role-playing in combination with simulation to determine the usefulness of these techniques in teaching students how to deal with family issues. They found that role-playing and simulation were effective tools in providing this form of education. The students were able to assume the roles of family members and learn the perspective of these individuals in the care of the patient. Students were able to identify that they were able to relate to the family’s emotions through role-playing these individuals within the simulation experience. Through the use of role-playing in the clinical simulated experiences for nursing students, researchers found that the students were able to use reflection and self-evaluation. Additionally, critical thinking and integration of previously learned material were identified as being heightened through the combination of role playing and simulation (Ertmer et al., 2010). In response to the lack of clinical sites, many schools of nursing are incorporating high fidelity simulated clinical experiences to fill the gaps of missing clinical hours. Role- playing in combination with simulation is also being used as a means to teach nursing students.

Role-playing is shown to humanize the learning environment of the laboratory (Tarnow, 2005). By assigning roles, the students were able to develop better approaches

to interacting with their patients in the clinical setting. Role-playing in combination with simulation also has an impact on the acquisition of critical thinking skills, critical thinking skills, and communication skills (Gropelli, 2010). By role-playing with simulation, students not only perform the simulation experience but they are required to role play a member of the scenario – nurse, doctor, support personnel, or family member. With this combination of teaching styles, research has shown that there is a difference between playing a process based versus a response based scenarios and that “high-fidelity nursing simulation influenced students’ expressions of critical thinking skills and habits of mind” (Ertmer et al., 2010, p. 75). The results of a study reflected that role-playing enhanced the students’ self-awareness, improved critical thinking, and allowed the students to see the big picture.

In the use of role-playing in conjunction with the simulation experience, the facilitator must be specific in the assignment of the roles so that the students know what is expected of them. The roles can and will vary depending on the scenario being presented. The students will play a variety of roles, engage in the clinical situation, and learn the different role perspectives (Gropelli, 2010; Jeffries, n.d.) . It is important for nursing students to learn how to understand other persons’ perceptions in order to become a nurse who can show empathy for the patients and the family as well as developing an understanding of the disciplines’ roles in the healthcare continuum.

Implications

“The outcomes of scientific research can help us learn about how the world ‘works,’ but the quest doesn't end there. Findings inevitably inspire new questions that

lead to further research and they may have broader impact and applications” (Journey North, 2012, para. 1). Several implications have been identified concerning this study in relation to role-playing and simulation in the practice of nursing education. The findings of this study should have an impact on nursing education and the manner in which students learn. The combination of role-playing and simulation can provide important teaching techniques for preparing nursing students for clinical practice. The goal of this study is to show the value of using role-playing in combination with simulated clinical experiences.

Due to the shortage of nurse faculty and the decrease in the number of clinical sites, the use of simulation is valuable for teaching clinical skills and critical thinking to nursing students. The targets of this study are nursing schools, faculty members, and the boards of nursing as well as nursing organizations such as the National League of Nursing. There are also implications of how different types of people might respond to these findings. These responses would include: (1) Increased approval for the use of simulation in nursing programs; (2) Schools of nursing deciding that the equipment is worth the cost; and, (3) Faculty receiving training in the use of role-playing in simulation. In addition, the results of the study might inspire new research studies in the areas of: (1) Repeating the project to determine if the results are the same for different groups; (2) Determining if students at other schools have the same experience with simulation and role-playing; (3) studying NCLEX pass rates, job performance, and job satisfaction after the use of role-play and simulation clinical experiences; and, (4) Are there other techniques that can be incorporated into simulation experiences to enhance student

learning? These concerns can lead to projects because nursing programs are constantly trying to improve the ways that students are taught. With the increased use of simulation, faculty need to find ways to better use this technology in order to enhance the learning experience of the students.

Summary

There is a current and future nursing shortage that is affecting the health care system in our country. This looming shortage is in part due to an aging nursing workforce that is starting to retire in high numbers and will continue to get higher over the next few years. Another area that is having an impact on producing future nurses to replace the retiring nurses is a shortage of nurse faculty. There is such a shortage of faculty that high numbers of qualified applicants are turned away from nursing schools annually due to not enough faculties to teach the nursing courses. There is also a lack of clinical faculty and a decreasing availability of clinical sites for the students to learn safe patient care. In response to these issues, nursing programs have begun using human patient simulation in order to teach these clinical skills. In addition, a school of nursing in the western United States, as well as other locations, has begun to use role-playing in combination with simulation. Through an interview process, this researcher investigated whether the use of role-playing and simulation is an effective method for teaching for teaching clinical skills, including critical thinking, to prelicensure nursing students.

Section 2: The Methodology

Introduction

This portion of the research study addresses the research design, participants, data collection, and data analysis. The design used was the qualitative method of phenomenology, which was used to analyze the lived experiences of the participants; taped interviews were conducted to determine the experiences of the participants related to the topic being researched. Once the interviews were conducted, the recordings were analyzed and the information was coded into themes. Once all the information had been categorized, member checks and peer debriefing is used to determine the validity of the findings.

Qualitative Design and Approach

A qualitative design was used for this research study. Qualitative research is conducted in order to achieve a rich description of the phenomenon under investigation. These types of studies do not contain independent and dependent variables and do not compare groups; rather, they involve looking at the persons who experience the phenomenon (Vishnevsky & Beanlands, 2004). More specifically, a phenomenological study was conducted to determine the usefulness of combining role playing with simulation experiences. The phenomenological approach “comes from a focus on the experience itself and how experiencing something is transformed into consciousness” (Merriam, 2009, p. 24). Through this form of research, a researcher searches for the true essence of a phenomenon and presents the findings from the viewpoint of the participants (Wall, Glenn, Mitchinson, & Poole, 2004, p. 21). This type of research fit this study

because it was the lived experiences of the nursing students in the simulation laboratory that were of interest. As nursing is concerned with lived experiences, this approach was appropriate for nursing research (Vishnevsky & Beanland, 2004).

Participants

The setting for this research study was a Bachelor's of Science in Nursing program in a western state of the United States. The participants were seven students enrolled in the program who were recruited through homogeneous sampling. Homogeneous sampling was used because it "purposefully samples individuals based on membership in a subgroup that has defined characteristics" (Creswell, 2012, p. 208). These students were selected because they had participated in a traditional simulation experience as well as a simulation experience combined with role playing. The students were enrolled in a baccalaureate nursing program in a western state, were enrolled in nursing courses that had a simulation component, and were required to perform role-playing scenarios in the simulation lab. The students were selected based on their experiences in the simulation laboratory and due to the fact that they had experienced both simulation without role playing and simulation with role playing integrated into the experience. The characteristics of the group were not taken into consideration—just the types of experiences participants had in the simulation laboratory. The participants were informed about (a) the research purpose, 2) the procedures to be used, 3) the risks and benefits, 4) the voluntary nature of the study, 5) their right to withdraw from the study at any time, and 6) the means of protecting confidentiality (Groenewald, 2004).

Data Collection

The participants were selected from among nursing students who were enrolled in courses that had a required simulation component. These students had participated in a simulation exercise with and without role playing used in combination with the simulation. Data were collected through the use of interviews. A semistructured format was used because “this format allows the researcher to respond to the situation at hand, to the emerging worldview of the respondent, and to the new ideas on the topic” (Merriam, 2009, p. 90). Semistructured interviews were composed of six questions that identified the areas being researched, but this type of interview permitted me, as the interviewer, to go into more detail in alternate areas. This interview technique is frequently used in healthcare research because it gives the participants guidance on what to discuss, which is important and helpful for many of those involved. This approach to interviewing was very flexible and allowed for the discussion of information that the participants found important but that might not be identified as vital by researchers (Gill, Stewart, Treasure, & Chadwick, 2008). Six structured questions were developed in order to ensure that the necessary information was obtained from the interviewees (Appendix A). The interviews were unstructured, which allowed for more flexibility during the interview process. This technique was used in order to “respond to the situation at hand, to the emerging worldview of the respondent, and to new ideas on the topic” (Merriam, 2009, p. 90).

Prior to the beginning of the interview, the participants were informed of the provisions for anonymity and confidentiality. The interviews were tape recorded and transcribed verbatim to prevent bias and to have a permanent record of the interviews

(Appendix B). Field notes were used to provide observations and thoughts about the interview, which could aid in data analysis (Gill et al., 2008). Observational field notes clarified the observations related to the participants during the interview process. Care was taken to ensure that categorizing or analysis was not performed during the field-note process (Groenewald, 2004).

Data Analysis

I maintained interview responses by tape recording the responses as well as note taking during the interview process. The recording of data on a tape recorder ensured that the information was preserved for the analysis portion of the study (Merriam, 2009). Upon the completion of the interviews, significant statements were extracted from each interview, the statements were given meaning, and themes and codes were identified that resulted in a phenomenological description (Wall et al., 2004). The recordings were listened to multiple times in order to obtain a comprehensive understanding of the participants' experiences (Groenewald, 2004). After listening to the interviews repeatedly, I isolated specific statements that dealt with the subject being studied. The different units of meaning were arranged according to the number of times each unit was mentioned by the participants and the manner in which the units were stated—the weight of the meaning and the order of importance (Groenewald, 2004; Wall et al., 2004). The next step was clustering the units of meaning, which was accomplished through grouping the units together and identifying topics that were significant to the study (Appendix C). Through the process of relistening to the taped interviews and reviewing the units of meaning, central themes were identified (Groenewald, 2004; Wall et al., 2004).

Coding involved the process of organizing, retrieving, and interpreting data and drawing conclusions based on the analysis of the data. Codes were created after the data collection process and during the process of data analysis. The coding of the interview data consisted of three segments and included documenting background information, a verbatim transcription of the information, and making observations during the interview (True, Cendejas, Appiah, Guy, & Pacas, n.d.). Each interview was analyzed in this manner until all the transcripts had been coded appropriately. Once the notes and comments were analyzed, they were grouped together according to qualities that went together (Merriam, 2006). The data were coded according to how the participants responded to the questions asked. Major themes were identified from the tape-recorded interviews, and all responses were grouped according to the responses.

After the data were coded and grouped, a detailed description concerning the persons, place, and events of the study were discussed. Once the discussion had occurred, major themes were identified from the coded data. These themes provided an explanation of what was learned from the study, and the themes were applied to the data for a richer understanding of the data. Once these steps occurred, the writing of the research report commenced, which included the interpretation of the data results (Lodico et al, 2010). Member checks were performed in addition to peer debriefing to validate the findings. Member checks involved the analysis of the categories and the interpretation of the information and the conclusions that were drawn (Cohen & Crabtree, 2006). Peer debriefing, on the other hand, involved an impartial party reviewing the findings and

providing feedback in order to increase credibility and improve validity (Debriefing.com, 2013).

Qualitative Results

Once approval was granted to collect data, the process of determining who to approach for the interviews began. The simulation coordinator provided information concerning which cohorts had attended both types of simulation, without role playing and with role playing. A time to approach the classes was arranged with the classroom instructors and the pre-determined groups of students were approached. With the instructor out of the room, the study was explained to the classes, including the purpose of the study, what would be required of them, that they could withdraw from the study at any time, and that their identities would be kept confidential. They were given a sealed envelope that contained the consent form and an addressed, stamped envelope for them to return the consent if they decided to participate in the study. They were also asked to initiate the contact to schedule the interview.

Once the students sent in their consent forms, the interviews were planned for a day and at a time that was convenient for the students. The interviews were conducted in a private area of the school of nursing, since that was the most convenient location for the students. The students were again reminded of what the study was about and their interview was being taped; however, no one else would be hearing the interviews nor would their participation in the study be revealed. The interviews continued through seven participants at which point it was determined that saturation had been achieved.

The interviews were recorded and saved until the recordings could be transcribed. Immediately after the interviews were recorded, the recordings were transcribed and the identities of the participants were changed into a number which became their identifier (Stu 1, Stu 2, etc). Once the transcriptions were completed, the interviews were analyzed for themes that were common among the participants. The study analysis showed six themes: improved learning, improved communication, they gained a perspective of others, improved teamwork, provided a safe place to practice skills, and prepared them better for clinical. All seven participants acknowledged that the combination of simulation and role playing was better than simulation alone. Two participants did indicate, though, that it is better to have a couple of simulations without role playing until they get used to simulation laboratory.

Improved Learning

The first theme identified was improved learning. The students indicated that through simulation combined with role playing, they were better able to connect the content they had learned in class to the patient care world. Through the use of role playing with simulation the students were able to engage in activities that enhanced their learning of the course content, which is supported by the literature (Barry & Trapp, 2014; Clayton & Gizelis, n.d.; Comer, 2005; Hayden, Smiley, Alexander, Kadong-Edgren, & Jeffries, 2014; Khalaila, 2014; University of Akron, n.d.; Whitman & Backes, 2014). The future of nursing requires that new nurses have the knowledge base and thinking abilities that are provided through the combination of role play and simulation. Through the enhanced learning that occurs in the simulation lab with role play, this improved

learning translates into enhanced patient care (Dumphily, 2014; Khalaila, 2014).

Considering the increased use of simulation in nursing education, it is vital that the students feel that the combination of techniques enhances the material learned in the classroom. Fortunately, this is not the only theme that the students identified as being enhanced through combining role-playing and simulation.

Improved Communication

The second theme that was identified was that of improved communication. Through the process of dealing with the scenarios, the students found that they had to have effective communication in order to progress through the scenario properly. These interactions caused their communication skills to improve as a result. This was not the first study to show that communication is enhanced through the use of simulation and role play. The literature review indicates that combining role play with simulation helps students understand the importance of good communication skills and increase these skills through the assigned role play activities (Fruscione & Hyland, 2010; Harder, Ross, & Paul, 2013; Hayden et al., 2014; Pearson & McLafferty, 2011; Sideras et al., 2013). Due to the nature of the work of nursing, with patients as well as other disciplines, good, effective communication is vital as well as the ability to understand the perspectives of others.

Gained Perspective of Others

When the students enrolled in a nursing program, their focus was on learning all the skills required to be a nurse. They never considered that they will have to learn how to deal with many other individuals from a multitude of other disciplines. Once they

began their clinical rotations, the reality of the need to work with other professionals emerged. Through the interviews for this study, the students indicated that they learned from the role play simulations to value the perspectives of others involved in the care. This does not just involve those caring for the patients but the family members who are present with the patient. The interviews showed that the students valued the roles they played as this helped them see the point of view of those around them in the health care setting. This was also reflective in the literature as many students have valued the exposure to other peoples' perspectives and feelings (Clayton, n.d.; Harder et al., 2013; Jenkins & Turick-Gibson, 1999; Pearson & McLafferty, 2011; Pfaff, 2014). The practice of nursing does not exist in a vacuum, they need to be able to work with others and understand their roles in the care of the patient. The understanding of the perspectives of others also enhances the ability to work as an effective team member.

Improved Teamwork

Through identifying and learning to appreciate the other individuals' perception of caring for the patient, the students identified that they learned how important teamwork is. They were involved in some simulations with other medical students in order to learn how to work more efficiently together. They reported that this combination of professionals working with them improved their teamwork skills. This was also identified in the literature as a skill that was acquired from combining simulations with role play since an appreciation of other roles and learning how to work with other professionals is enhanced (Fabro, Schaffer, & Scharon, 2014; Galloway, 2009; Hinchcliffe, 2014; Pearson & McLafferty, 2011; Pfatt, 2014; Wordsworth, 2013;

University of Kentucky, n. d.). The ability to function as a team member, who is able to work well with others, is vital in healthcare; no one, regardless of discipline, works in isolation from other professionals, they have to work well with others.

Safe Place to Practice Skills

Another theme identified through the interviews was having a safe place to practice nursing skills in order to be prepared for clinical practice. These students, like all nursing students, are focused on learning and perfecting the skills they will need for nursing practice. Nothing makes nursing students more anxious than not getting to practice new skills prior to going into the clinical arena. They felt that the simulation lab was a safe place to practice these skills since there was no chance of causing harm to the patients. The ability to practice new skills in a safe environment also prepared the students for clinical practice and providing care to real patients (Chee, 2014; Fabro, Schaffer, & Scharton, 2014; Fruscione, & Hyland, 2010; Galloway, 2009; Gibbs, Trotta, & Overbeck, 2014; Guzic et al., 2012; Hayden et al., 2014; Valer-Jones, Meechan, & Jones, 2011; Wheeler & McNelis, 2014).

Better Preparation for Clinical

The last theme identified was that the students all felt that participating in simulation with role-playing prepared them better for the clinical rotations. Through playing the roles of nurses, as well as other professionals and family members, they were better able to identify ways to handle situations if they encounter them in the clinical world. Through a combination of the other themes identified, the students felt they would perform better in clinical since they were made to feel more at ease in what they were

required to do. They also indicated that through practicing their skills, they were more confident in doing these skills in the real world. Other studies have shown that the use of simulation and role-play increased student's critical thinking skills and their comfort level once they were placed into the clinical arena (Berndt, 2014; Berragan, 2014; Fabro, Schaffer, & Scharton, 2014; Khalaila, 2014; Thidemann & Soderhamm, 2013; Wordsworth, 2013). For the students to achieve the outcomes for the clinical experiences, the ability to feel prepared for the clinical setting is important for their confidence level, thereby, increasing their chances of being successful in their clinical rotations.

Member Checks

All of the student participants were provided with a copy of their transcript, a copy of the data theme chart, and a copy of the analysis. After they reviewed all the documents, they all agreed to the information in the transcriptions, the themes that were identified, and the analysis of the data. The students saw no errors in any of the paperwork and all identified that they supported that their learning was enhanced through the combination of simulation and role playing.

Peer Reviews

Qualitative Validity

Two doctorate prepared nurse educators were recruited to review the study and the analysis portion of the study. They received the study, the transcripts, and the themes chart. These peer reviewers were in no way affiliated with the school where the study occurred. In fact, these reviewers do not live in the state of Colorado so the anonymity of

the students was maintained through no names being identified and the reviewers not knowing any of the students enrolled in the program.

The first peer reviewer agreed with the conclusions that were garnered from the interviews and the data analysis. She stated:

Role playing not only enhanced the learning of course content, student comprehension of the complexity of the role of the nurse was enhanced, as well.

The benefits the students perceived in the simulated clinical experience culminated in a rich, holistic perspective of what being a nurse entails. (Wendy Mason, personal communication, December 5, 2014)

Dr. Mason agreed that the results showed the importance of combining simulation and role play and she had no recommendations for changes.

The second peer reviewer also agreed with the study results and analysis. She indicated that “I read each piece and I must say great job! I don't have any recommendations on data collection and data analysis” (Tami Rogers, personal communication, December 9, 2014).

Qualitative Reliability/Trustworthiness

Validity of a qualitative study is important aspect to prove but so is the reliability or trustworthiness of the study. Golafshani (2003) stated “the way to achieve validity and reliability of a research get affected from the qualitative researchers’ perspectives which are to eliminate bias and increase the researcher’s truthfulness of a proposition about some social phenomenon.” In order to eliminate bias and increase truthfulness, I enlisted the use of tape recorded interviews, the aid of the interviewees to review the transcripts

and analysis as well as two peer reviewers who were not associated with the study of the school. The use of multiple methods in qualitative research involves using such techniques as observation, interviews and recordings will lead to more valid, reliable and diverse construction of realities” (Golafshani, 2003). Golafshani (2003) goes on to say that “To improve the analysis and understanding of construction of others, triangulation is a step taken by researchers to involve several investigators or peer researchers’ interpretation of the data at different time or location.” All of these techniques for showing reliability/trustworthiness were used including observation, recording the interviews, including the participants in the analysis process, and I enlisted the help of peer reviewers.

Conclusion

The participants’ experiences with the combination of simulation and role-playing were studied through the use of interviews. The interviews were recorded and those recordings were analyzed and the results were coded into categories according to the responses, looking for themes and emerging categories. The steps to coding of the data involved bracketing, delineating the units of meaning, clustering the meanings to form themes, and coding the information into categories. The entire transcript was worked through in this manner with the analysis of the notes and comments. After this process was completed, five themes were identified but they were not broken down into further categories as they were self-explanatory on their own. The students’ perceptions showed that they preferred the combination of simulation and role-playing. The participants identified that the combination of techniques improved their learning, improved their

communication skills, allowed them to gain a perspective of others, improved their teamwork abilities, provided them a safe place to practice skills, and prepared them better for clinical. Member checks and peer debriefing was done in order to verify accuracy and validity of the data. Once the methodology and data analysis criteria were identified, a thorough discussion of the project can be conducted.

Section 3: The Project

Introduction

I designed this project to analyze students' perceptions of the combination of simulation and role playing to enhance learning and fill the void left by a lack of clinical sites and clinical faculty. I interviewed seven students before saturation was achieved, and I analyzed the data to determine whether combining simulation and role play was an effective method of supplementing the lack of clinical sites and clinical faculty. I focus this section of the paper on implementing the project into the school where the study occurred. I provide a rationale for the project and a literature review to show the importance of combining these teaching methods. Additional areas that I discuss include potential resources and existing supports, potential barriers, an implementation timetable, roles and responsibilities of the students and others, project evaluation, and implications including social change at the local level and far-reaching implications.

Description and Goals

There is a problem in nursing education that has a direct impact on schools and students. This problem is a lack of suitable clinical sites for students to learn how to properly perform as nurses. This lack of sites has been due to several factors, including competition for clinical sites among numerous nursing programs and lack of enough qualified nursing faculty to oversee students in the clinical arena. One method of instruction that has been recognized as suitable is simulation. While it is not a replacement for clinical experiences, it is a viable means of augmenting clinical assignments. The program under study had recently begun incorporating role play into its

simulation scenarios, and its educators wanted to know whether this combination of techniques was useful for teaching students clinical skills. The goal of this project was to determine the effectiveness of combining simulation and role play through analyzing students' perceptions.

Rationale

I conducted this study to determine whether combining simulation and role playing is an effective teaching technique. The simulation coordinator at the study site had recently incorporated role-play scenarios into the simulation learning environment and wanted to know if combining these two methods of instruction was effective in teaching students. The coordinator wanted to know the students' perceptions of the benefits they gained from combining simulation and role-play scenarios.

The findings of the study supported the combination of simulation and role play. The students felt that this combination of teaching strategies enhanced their learning. They felt that the scenarios helped them to transfer knowledge learned in the classroom and that their learning was enhanced. They also felt that it was a safe place to learn how to perform skills and provide safer patient care. Lastly, the students felt that the experiences helped them to communicate more effectively, understand other people's perspectives, and improve their approach to teamwork.

I conducted the study to determine the importance of combining role playing and simulation, which the students identified as a meaningful teaching technique. There is so much competition for clinical experiences that nursing students often do not get the amount of clinical time that they need to learn the proper way to care for patients. There

is also an ever-growing problem with decreasing numbers of clinical sites for students to attend as well as a shrinking number of faculty members to attend clinical experiences with students, and these deficits will only get worse with time. With that said, it is vital that nursing programs find a method for students to learn clinical skills in the absence of clinical sites in which to learn. The combination of simulation and role play is one method that students can participate in to learn these skills; however, not enough studies have been conducted to show the importance of combining these two methods of instruction.

The study was submitted to the Internal Review Board for approval prior to data collection, resulting in approval number 03-11-14-0178996. Once approval was received, I conducted the interviews, and data were generated. In interviewing the student volunteers for this project, I found that combining these two methods was effective for teaching clinical experiences in the simulation lab. The students were able to identify the benefits of combining role play with simulation, which was the focus of this study. In order for the school to provide the best simulation possible, role-play scenarios should be incorporated into the simulation experience if educators hope to help the students benefit from being in the lab instead of being at actual clinical sites. These lab experiences can also expose students to situations they might not encounter in the real clinical arena.

Due to the continual challenge of finding clinical rotations for large groups of undergraduate nursing students, nursing programs have needed to be creative in providing students with adequate learning experiences. Through this project, I was able to show that the combination of simulation and role play is a creative option for ensuring

that students get the necessary experiences in the absence of clinical sites. While simulation will not replace the actual clinical setting, nor should it, it is an option that enhances students' preparation for clinical practice and is used in combination with clinical rotations. Given that clinical groups have specific faculty-to-student ratios, the lack of clinical faculty creates a dilemma wherein many students are not getting the clinical time they need to learn how to be safe practitioners (Hayden et al., 2014).

These issues concerning student experiences in the clinical setting, or the lack thereof, have been recognized by the National League of Nursing. This organization was so concerned with the decreasing ability of schools to obtain the necessary clinical experiences that it conducted a study to test the validity of using the simulation lab as a means to meet the clinical needs of nursing students. These researchers found, as I did in this study, that the use of simulation with role-playing scenarios adequately prepared nursing students for clinical practice (Hayden et al., 2014). With the challenges that nursing programs have with staffing and securing clinical sites for clinical learning, the use of simulation, in addition to real clinical learning, is a viable solution to the problem of not being able to provide adequate clinical learning experiences for nursing students.

Review of the Literature

Nursing education has, and will continue to, face a dilemma wherein schools are not able to obtain the proper number of clinical sites or clinical hours to meet the educational needs of their students. This deficit of clinical learning sites is due in part to a decreased number of sites offering clinical placements, severe competition for the available sites, decreased access to patients, and decreasing numbers of clinical faculty to

oversee students' learning experiences (Akhu-Zaheya et al., 2013; Fabro et al., 2014; Guzic et al., 2012; Hayden et al., 2014; Wilson, Klein, & Hagler, 2014;). Due to these issues facing nursing programs, simulation has become a subject of discussion to fill in the gaps created by the limited ability to secure enough clinical experiences for the ever-growing number of nursing students.

Simulation has been defined as “a teaching method that attempts to replicate some or nearly all of the essential aspects of a clinical situation so that the situation may be more readily understood and managed when it occurs for real in clinical practice” (Thidemnn & Soderhaamm, 2013, p. 1599). Simulation has been used by professionals in such fields as aviation, business, the military, firefighting, and other areas where safety is an issue in learning proper techniques (Swenty & Eggleston, 2011; University of Akron, n.d.). The medical field has also been using simulation for many years for learning anatomy, clinical thinking, surgical training, and anesthesia (Swenty & Eggleston, 2011). Nursing education began using simulation with the development of Rescue-Annie in 1960 (Chee, 2014; Hayden et al., 2014; Rosen, 2008) for students learning cardiopulmonary resuscitation but has expanded since the late 1990s/early 2000s to the use of high-fidelity models that mimic real-life scenarios (Hayden et al., 2014). To enhance the experiences provided in the simulation lab, role playing has been seen as an effective addition to the simulation experience to provide realistic scenarios for students in the absence of real-life clinical opportunities (Clayton & Gizelis, n.d; Galloway, 2009; Wheeler & McNelis, 2014).

Role play is defined as “a structured set of circumstances that mirror real life and in which the participant acts as instructed. The participant is asked to play the part of someone else” (Hua, 1991, para. 14). Role play is seen as an effective method for teaching (Wheeler & McNelis, 2014) and helps students realize the importance of the roles they are playing. In addition, role playing has been shown to improve learning, expose students to complex situations, enhance engagement, and helps students transfer the acquired knowledge to the clinical setting (Clayton & Gizelis, n.d.). While role playing alone is an effective method of helping students learn, combining role-play with simulation enhances the learning even more.

The combination of role-playing and simulation helps students gain multiple perspectives of the clinical arena (University of Kentucky, n.d.). The combination of these teaching methods has shown to help students’ deep learning as opposed to the more massive types of teaching methodologies (Clayton & Gizelis, n.d.). The students are placed in more real world situations where they are able to see the scenario from multiple perspectives which help them learn in a more global way and help the students retain the information (Clayton & Gizelis, n.d.). When compared to simulation on its own, the inclusion of role-playing increases the participation of the students (Clayton & Gizelis, n.d.; Hua, 1991). In addition, Wheeler and McNelis (2014) stated that the use of simulation with role-play “provided active learning, diverse ways of learning and high expectations for learning” among the participants (p. 260). Through an understanding of the use of role-play with simulation, nursing programs can help alleviate some the problems of finding quality clinical experiences for their students.

The Denver area is not unlike other areas of the country, as well as other parts of the world, in that nursing programs are struggling to acquire the proper amount of clinical learning that nursing students need to become safe practitioners (Akh-Zaeya, Gharaibeh, & Alostaz, 2013; Hayden et al., 2014; Noone, Markle, Frazier, & Sullivan, 2013; Swenty & Eggleston, 2011; Sideras, McKenzie, Wordsworth, 2013). This is also true for the school where the study was conducted. The program is small; however, they are struggling with finding enough clinical hours for the students and when they do find the clinical sites, they struggle with finding enough clinical faculty to fill those spots. Fortunately, the Colorado Board of Nursing (2013) allows for the combination of clinical experiences and simulation experience up to 25% of the clinical hours for each clinical course taught (p. 9).

The inclusion of simulation experiences was first identified as acceptable by the National League of Nursing (NLN). With their recommendations, the individual states recognized the use of simulation for clinical experiences. The NLN has expanded on the rules governing the use of simulation in a recently released study. This study identified “strong evidence supporting the use of simulation as a substitute for up to 50% of traditional clinical time and makes a substantial contribution to the literature in both nursing regulation and education” (Hayden et al., 2014, S36).

Implementation

Upon completing this project, the results will be provided to the school where the study took place. They are concerned with the difficulty in trying to secure adequate clinical experiences for the students so they need to know how to improve the simulation

experiences so that the students have sufficient learning opportunities. With the release of the NLN study, they know that the NLN has determined that simulation experiences are a sufficient substitution for the traditional clinical setting (Hayden et al., 2014); therefore, they are planning to increase the use of the simulation lab for the clinical experiences that are lacking the required hours. My study will show them that the students see the value of combining the methods of simulation and role-playing. The students value the learning that occurred in the simulation lab when these two methods of instruction were combined. The evaluation of the implementation of the project into all simulation lab experience will be through the end of semester evaluations. The students will be able to provide feedback on the learning activities during each semester and the combination of simulation and role-play is an activity that will be evaluated.

Potential Resources and Existing Supports

There are already sufficient resources and support systems in place at the study school. There is a fully functioning simulation lab with simulation mannequins that are created to meet the various needs of the simulation and role-play scenarios. All mannequins are high-fidelity and include an adult, a child, and a labor and delivery mannequin. The mannequins also have the software for programming different and realistic scenarios. In relation to the existing support, there is a simulation lab oversight person, who is a member of the leadership, a simulation lab coordinator, and two support staff members. These individuals are vested in providing proper and efficient scenarios for the students so that learning will occur. They are very interested in the results of this study so they will know whether or not their efforts of creating role-play scenarios is

worth the time it takes to create them. Lastly, since this study was initiated, the original lab coordinator is no longer in charge of the simulation lab. By providing the new lab coordinator with this study, she will understand the students' perceptions related to the importance of incorporating role play scenarios into the simulation experiences.

Potential Barriers

While the study school has a fully functional simulation lab with a variety of different mannequins for use in the simulation experiences, there are still some barriers that could impact the ability to provide adequate learning in the simulation lab. Lack of knowledge, time, skills, technical support, and training in computer use were identified as barriers that could have an impact for implemented quality simulations (Trevizan, 2012). Other potential barriers, as identified by the National League of Nursing (n.d.), include resources are limited for development and implementation, the potential for administrators to not recognize that the work is part of the faculty workload, and resistance to change by the leaders and/or staff.

Proposal for Implementation and Timetable

The combination of role-playing and simulation has already been initiated in the nursing program but not for all the simulation experiences. Upon completion of this project, the school will have the results of how the students who participated in this study feel about the combination of simulation and role-playing. Through this study, they will be able to determine the value in combining the two methodologies.

Roles and Responsibilities of Student and Others

The students have several responsibilities related to participating in the simulation activities. The students have to be prepared for the simulation through reading all related documents that are provided to them, complete any assigned coursework related to the simulation, and watch any videos that may be assigned prior to the simulation (Bloomsburg University, n.d.). They are also required to bring any required equipment (stethoscope, etc.) and any completed work to the lab in order to be prepared to do the required skills in the lab. Lastly, the students need to take initiative in their learning, practice any skills they feel they need work on prior to the lab experience, and use their current knowledge base as well as critical thinking skills while performing in the simulation lab (Bloomsburg University, n.d.).

The lab personnel also have responsibilities, not only to the students but to faculty. The lab personnel need to ensure that they coordinate effectively with the classroom faculty to ensure student learning occurs. This can be done through developing appropriate teaching tools, support the faculty, provide a proper environment, ensure safe and proper use of the equipment, and be a resource for faculty (National Association for Associate Degree Nursing, n.d.). The lab staff also needs to ensure the lab has the proper supplies, maintains the equipment and lab, keeps an accurate budget, and ensures the inventory is maintained and stocked (National Association for Associate Degree Nursing, n.d.). The lab leader must also be able to supervise lab assistances, support the faculty, ensure the lab meets all regulatory requirements, and be able to problem solve whenever issues arise (National Association for Associate Degree Nursing, n.d.). Lastly, the lab

supervisor and staff must treat all individuals with respect and caring, be helpful to everyone, respond to faculty and staff issues in a timely manner, communicate effectively, maintain a professional appearance and attitude, demonstrate teamwork, and act as a role-model to others (National Association for Associate Degree Nursing, n.d.).

The last group to have responsibilities for the proper functioning of the lab is the school administrators. These individuals need support the lab coordinator and lab staff and ensure they have the supplies necessary to run the lab efficiently. They have to be supportive of the lab, the lab staff, and the students. They also need to allow the lab staff and faculty to attend training sessions and continuing education opportunities in relation to simulation techniques and developing effective role-play scenarios.

Project Evaluation

This project will be evaluated in a couple of ways. First the students' evaluations for the simulation lab, including the use of role-play, will be reviewed to determine whether the students continue to appreciate the combination of these two teaching methods. The leadership at this school will be monitoring the students input concerning the students views of the combination of techniques. In addition, the faculties perform evaluations on the students during their simulation time. They are in a good position to determine if there needs to be adjustments and if the students are applying what they have learned in the classroom. Another method of evaluating the project is through student grades.

Through this project I was able to uncover, through the data analysis and a literature search that simulation and role-play contribute to student retention of

knowledge and the development of higher thinking skills. The classroom faculty can gauge whether students are actually retaining the learned material if their class is participating in the simulation lab with role-play. This can be done through monitoring tests scores and ATI scores at the end of the course. Even though student perception is important to keep the students engaged in the activity, the primary method of evaluation will be based on outcomes.

Implications Including Social Change

Local Community

With the ever shifting dynamics of clinical learning, it is imperative that nursing programs find ways to make sure the students have the learning opportunities they need to be successful when they graduate. One method of providing the clinical learning they need is through simulation in combination with real life clinical experiences. These simulations can also be enhanced by combining the simulations with role-playing scenarios. According to Paquette (2012), “role play simulation is a form of experiential learning that allows you to ‘cover’ the same sort of topics as you would in a lecture course while moving your students from passive to active learners” (para. 1). This study has shown that students prefer the combination of role play and simulation to adjust for the decrease in clinical sites. This is important due to the fact that the community at large needs quality nursing graduates to staff the facilities and provide safe, quality care. If the students are unable to get the proper number of clinical hours in the hospitals, they need quality simulation and that involves combining it with role play scenarios. The faculty and administrators are also interested in producing quality graduates as this has a direct

impact on the schools accreditation and board approval. Not to mention, they take pride in educating students and helping them be successful on the NCLEX and in their careers.

Far-Reaching

There are also far reaching implications due to the fact that this is not the only school that is struggling with securing an adequate number of clinical hours for their students. This issue is affecting nursing programs nation-wide as there are more nursing programs than the facilities to accommodate the necessary clinical hours. This not only causes tremendous competition, but causes the nursing programs to not be able to secure enough clinical hours for all of their students. If there is an alternative to clinical practice, the schools will be better able to meet the clinical hours required of their students. Simulation is not enough, they need to incorporate role play as well since students find it a useful tool to helping them to learn better communication, better teamwork, gain the perspectives of others, improve their learning, and prepare them better for when they do go to the clinical setting.

Conclusion

The project that was conducted proved that students prefer combining simulation with role play over simulation alone. The school where this study took place at has already begun implementing these two teaching techniques into the simulation experiences and now that there is proof that the students prefer this method of simulation, they can continue to perform simulations in this manner. The resources for conducting effective simulations already exist as the school has a variety of high-fidelity mannequins and the staff to run the simulation efficiently, they will simply need to ensure the

maintain proper supplies and update the software for the mannequins regularly. The students will need to be engaged in the activities and be prepared for the simulation lab experiences as they would be prepared for the clinical setting. They also need to be actively engaged in the learning process in order for the simulation experience to be effective in helping them learn. The program will be evaluated through student evaluations of the experiences, faculty evaluations of student performance in the lab, and grades in the classroom. Considering the fact that clinical experiences are not as plentiful as they used to be, the addition of simulation with role play can provide the students both locally and wide reaching so that students can be prepared for the clinical setting both while in school and after they graduate. A reflection of the work completed during this project has revealed other aspects of learning related to personal growth.

Section 4: Reflections and Conclusions

Introduction

The project was a long but educational experience. Not only did student interviews reveal that simulation is better when conducted with the incorporation of role play, but other important issues were also identified. This project has some strengths but also has some limitations, and evaluation will be an ongoing activity.

Project Strengths

A major strength of this study was that the data were derived from interviews of students who were active participants in the simulation lab. While faculty opinions are always important, students' perceptions drove this study, as students were the ones who were learning in the simulation lab and it was their experiences that mattered the most. Another strength is seen in the fact that the faculty and leadership of the school were very supportive of this project. They were always willing and able to provide any assistance possible, including private locations to conduct the interviews. A last strength of the study is that the literature supports finding effective and efficient methods for schools to provide learning experiences for students in the absence of enough clinical hours to perfect the skills necessary to become safe practitioners. The literature also supported the use of simulation as a suitable method of instruction for meeting the learning needs of students.

Recommendations for Remediation of Limitations

There were a couple of limitations to this study. The first was that only female participants volunteered to be interviewed for the study. Some male students voiced

interest in participating but could not find time to do so. Another limitation was the number of students who participated. While saturation was reached, it would be interesting to see whether, with a bigger pool of participants, the opinions that emerged would be similar to what was acquired through this project. The last limitation identified is that the project was conducted at one small nursing school in a suburb of a large western city. The project needs to be conducted at other locations to determine whether the results are the same in other states, other cities, and other schools of nursing.

Scholarship

“Scholarship in nursing can be defined as those activities that systematically advance the teaching, research, and practice of nursing” (American Association of Colleges of Nursing, para. 6). In the case of this project, the scholarship activity was undertaken to develop teaching strategies for the improvement of instruction and in the effort to meet the learning needs of students. The application of scholarship is not reserved to the school where the project took place; the results should be accessible to faculty in other locations so that they may use the results to improve their instructional methods as well. Scholarship includes basic research, knowledge integration, knowledge transfer through intellectual work, and/or knowledge application to solve community problems (Ad Hoc Sub-Committee on Faculty Promotion & Tenure Criteria, 2007). My study shows faculty of schools of nursing that there is a method of meeting the learning needs of students in the absence of quality clinical experiences.

Project Development and Evaluation

The profession of nursing should be guided by research in order to meet the needs of patients. The same can be said about nursing education, in that it is imperative to meet the educational needs of students. The development of a project is not an easy task and should be guided by what is in the best interest of students. Projects, and research in general, should be designed, developed, and conducted in order to make sure that students are receiving the best experiences to ensure that they will be safe practitioners once they graduate from the nursing program. My project was designed to meet the clinical needs of nursing students in the face of decreasing real-life clinical experiences and an ever-present need to acquire the skills necessary to meet learning needs. In addition, these projects, once implemented, need to be continuously evaluated in order to determine whether they are still being conducted properly and to determine whether the method of providing instruction is still effective in meeting the students' needs.

Leadership and Change

Leadership and *change* are not terms independent of one another. In fact, “effective leaders have skills and knowledge to motivate staff, encourage and support collaboration, and facilitate change” (Watts & Gordon, 2012, p. 4). An educator cannot be a good leader unless he or she is willing and able to accept and promote change, especially if it is in the best interest of students. This was seen in this project, as the students were assigned to more simulation experiences due to a vast amount of competition for clinical hours. In wanting to meet the learning needs of students, the simulation lab coordinator began incorporating role play into the simulation scenarios to

aid the students in enhancing their learning. Luckily, the leadership of this particular nursing program is supportive of any change that will benefit the students and help them learn to be safe and competent practitioners.

Analysis of Self as Scholar

When I think about myself as scholar, I think about a definition by Southern Utah University (n.d.), which states that “scholarship involves a lifelong commitment to thinking, questioning, and pursuing answers.” With this statement in mind, I can see how I have always been a scholar to some degree. Ever since I began working with nursing students on the floor before I became an instructor, I have been thinking about new ways to help students learn how to be nurses. Once I identified teaching as my primary career choice, this drive to determine what I can do to help my students get the most out of their education grew. This drive extends to the nursing program for which I teach. I am invested in helping my students learn how to become safe, competent practitioners once they graduate, and I have a duty to help the nursing program improve its teaching techniques in order to meet students’ learning needs. I feel that I have taken an important step with this project, as it is designed to improve the experiences that students have in the simulation lab due to a shrinking world of clinical instruction. This project has also shown me that there is more that needs to be done, and I want to be a part of the adventures that lead to improved nursing education and, subsequently, better nurse graduates.

Analysis of Self as Practitioner

In the time I spent thinking about myself as a practitioner, I was not completely sure what *practitioner* referred to. Did it refer to my practice as a nurse, as a faculty member, or something else altogether? In order to answer this question, I went to the World Wide Web to get a better handle on what I am as a practitioner. There, I found the following: research conducted in the field of education “implies that practitioners will learn from their research into practice which is not always the case in other forms of research. It also aims at improving rather than proving as an approach to research” (Campbell, 2007, para. 2). I see myself as continuing to delve into the different areas of nursing education and determine best practices for the school to use in order to help students in their quest to be the best graduate nurses possible. Just as healthcare is ever changing, so must nursing education be ever changing in order to ensure that students are being taught the most current information and techniques. It is up to educators like me to ensure that students’ needs are being met, and this involves continuing to be a research practitioner.

Analysis of Self as Project Developer

I learned that project development is not an easy task even in the best situations. A great deal of time and patience goes into creating and developing projects, beginning with identifying which projects need to be addressed. If I do know exactly which projects are worth pursuing, I understand the importance of brainstorming with other professionals to determine what is worth pursuing and what is not. While I have proven that I can conduct a project on my own, I think collaboration with other professionals

who can bring other talents and thoughts to the process is crucial for ensuring that a project is a success. After all, it is about the students and their learning needs, and not about one individual's need for recognition.

The Project's Potential Impact on Social Change

I have been well aware of the problem with decreasing clinical hours for students and a shortage of clinical faculty for quite some time. I also knew that there needed to be some solution to helping the students meet their clinical learning needs in the absence of the required clinical hours. These issues are not only a reality in Colorado but in all other states and other countries around the world. In order to produce an adequate number of new nurses in the near future, society will have a severe problem with not having enough nurses to care for a population that is living longer with more health issues. In an attempt to ward off a severe nursing shortage, after the Baby Boomer generation retires, numerous schools of nursing have opened and more are planning to open to try to meet the needs of healthcare facilities across the country. This expansion of more nursing programs is actually causing problems as there are not enough facilities to meet the educational needs of the students at all these schools.

The National League of Nursing has been allowing simulation experiences as an adjunct to the clinical hour requirements and the Colorado Board of Nursing, as well as other state boards of nursing, allows clinical hours to be completed in the simulation lab. This inclusion of simulation aids the schools in having to secure clinical placements for all the clinical hours that the students are required to complete prior to graduation. However, the experiences in the simulation lab do not always fit the needs of all students

as they can tend to be dry and regimented. Some simulation coordinators have begun adding role play scenarios into the simulation experience in order to enhance the learning in the simulation lab.

The students who participated in this study confirmed that they preferred the addition of role play in the simulation experiences. They felt the combination enhanced their learning, improved their teamwork and communication skills, provided them with insight into other people's perceptions, and better prepared them for clinical both during the program and after graduation. With the increased successes of this form of instruction, the schools will not need as many clinical hours for each student and they can enroll more students in order to meet the future needs of healthcare and the community.

Implications, Applications, and Directions for Future Research

One important aspect that was learned through this project is that if nursing schools want to be successful at meeting the needs of the students and the community, they need to involve the students in research concerning nursing education. Students know what works for them and what they need to be successful. By including them in this project, I was able to talk to them one-on-one and listen to their concerns and their opinions concerning the simulation lab. While the combination of role play and simulation was initiated by the simulation coordinator, it was the students who provided the data to show that this combination was effective for meeting the students' learning needs.

In relation to future research, I would like to see a study concerning this topic conducted at other schools, in other cities, and in other states. Regardless of where in the

country a nursing program is located, they are still struggling with providing adequate clinical experiences for their students and they need to know what works for their school and for their students. The only way that a school is going to know if this technique will work in their program and for their students is to ask the students.

Conclusion

This project started out looking at the combination of simulation and role-playing in nursing education; however, I determined that it was important to meet the students' learning needs. The main strengths of this study include student perceptions, faculty and leadership support, and support from the literature of both finding effective methods of instruction and the use of simulation. On the other hand, the limitations were that this study was conducted in only one nursing program, the low number of participants even though saturation was reached, and only female students volunteered to participate in the study. Additional studies should be conducted to include more students, male students, and different locations to see if the results are the same.

The project proved that it is the faculty's responsibility to not only think about methods for improving instruction, but to actually devise plans for making the improvements happen. Research and action should not be limited to the medical realms but should be done in nursing education in order to keep up with the constant changes that are occurring in healthcare. Educators are the leaders that students rely on to make sure they are learning what they will need to be safe practitioners. As the leaders, educators must be willing and able to create and implement changes that benefit the school as well as the students.

As a practitioner I plan to be an agent of change through applying myself to future inquiries and actions that promote the field of nursing and nursing education. Through collaborations with other nursing education professionals, I can help ensure that the learning activities are well designed to meet the learning needs of the students that I will teach as well as others who I do not have the pleasure of working with. The future of nursing is counting on its nurse educators to continue to work to ensure that the needs of the community are met and that is through continuing to address the needs of the nursing schools and, in turn, the needs of the students we are responsible for training to be safe and competent practitioner.

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Appendix A: Curriculum Plan

TIMELINE	DESCRIPTION	ACTIVITIES	EQUIPMENT	PARTICIPANTS	OUTCOMES
Students will be assigned simulation (sim) experiences for each of their clinical courses, including: Fundamentals Health Assessment and Health Promotion Medical/Surgical I & II (High Blood Pressure; Pneumonia, COPD) Mental Health Nursing (Suicidal Ideation and Bipolar Disorder) Nursing Care of the Pediatric Patient (Asthma, Burns) Nursing Care of Mom/Baby (Pre-term birth, normal birth) High Acuity Nursing (SCI, ARDs) Community Nursing Nurse in a Leadership Role	Students will participate in sim experiences that allow the students to practice their basic nursing skills. Students will perform a complete head-to-toe assessment. Students will be able to relate health promotion activities to the Healthy People 2020 objectives. Students are provided a handoff report that is designed to mirror a change of shift report in the hospital setting. Report includes patient history, description of what occurred to bring them to the facility, medication history, physicians orders, timeline of what occurred during the previous shift, any labs pending, VS, mental status, current medical status, any behavioral issues. The different scenarios are designed to provide patient	Complete prep work assigned by faculty and/or sim coordinator: review anatomy and pathophysiology of disorders, look up medications, evaluate lab work, Research and provide evidence article about disorder. Review needed skills in order to perform skills properly. Meet with faculty, discuss pathos and meds for scenario and hand in research article. Pre-sim meeting with faculty one hour prior to experience where they receive their individual roles. Students receive hand off report 15 minutes prior to experience. Students perform their assigned roles while in the sim experience with the nurse role conducting the head-to-toe assessment. Go into lab and perform skills; faculty will prompt student as needed. Record patient information properly in the patient record. Students perform their assigned roles while in the sim experience with the nurse role conducting the head-to-toe assessment. Students in nurse role	Simulation Mannequin, Simulation Scenario, Vital Sign Equipment, O2, arm band for identification, medications, IV pumps, medication records, charts/forms for documentation, simulation software downloaded for scenario. Additional equipment as needed for specific scenarios: triggers for the asthma patient; improper items that a suicidal patient should not have access to; bassinets, baby blankets,	Simulation Coordinator Simulation Technician Faculty Students	Students will be able to perform basic nursing skills without prompts. Students will be able to complete a head-to-toe assessment with minimal to no prompts. Student will be able to record patient information accurately. Students will perform their assigned roles – role dependent in type of scenario - and function as a team with other students. Role-play allows student to understand the perspective of the other roles involved in the scenario. Students' involvement in the scenario allows students to practice therapeutic communication with patient. Participation in the scenario allows students to transfer the classroom material to a safe clinical setting. Students are allowed to enhance their ability to communicate with other

	<p>situations for different course content.</p>	<p>to provide health promotion education to other students based on roles assigned.</p> <p>Students will work as a team. The team goal is to enhance learning of the didactic course through using simulation with role-playing.</p> <p>Students attend a debriefing with faculty to discuss experience, identify individual strengths/weaknesses and discuss how to improve.</p>		<p>professionals and family members.</p> <p>Students develop teamwork skills including: shared workload, shared responsibilities, effective group communication, collaboration, and delegation.</p> <p>Allows students to become prepared for clinical rotation by allowing them to practice the skills necessary for clinical</p>
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Appendix B: Evaluation of Project

CRITERIA GRADED	RATIONALE	OUTCOME
Introduced self to patient and checks ID, allergies and other wrists band information	Sows respect for the patient's need to know who is caring for them, sows student is always aware that the need to know specifics of the patient's needs and status.	Student introduces self when entering room, checks ID band for specifics about patient including allergies, risks, DNR status.
Performs and monitors VS, uses equipment properly	Student needs to show that they are proficient with basic nursing skills. Uses and respects the equipment being used for patient care.	Able to use equipment properly including vital sign equipment, oxygen, iv pumps, feeding pumps, etc. Student performs skills appropriately and safely.
Asks appropriate questions, follows HIPPA guidelines	Shows concern for patient well-being and students' ability to listen to the patient; respects patient privacy and confidentiality.	Student is able to respect patient privacy and confidentiality. Student is able to listen to patient concerns and issues in a therapeutic manner in order to meet the needs of the patient.
Monitors labs in relation to disease process and patient condition.	Shows student's ability to transfer learned material to the lab setting by understanding the relation of routine testing to the patient's condition.	Is able to associate test results to patient disease process and condition. Student is able to transfer material learned in lecture to the practice setting in order to prioritize care.
Performs head-to-toe assessment using proper techniques and reassesses as necessary	Student needs to be able to perform basic and complex nursing skills in the delivery of care, including proper auscultation of heart, lung and bowel sounds, neurological checks, skin assessments, and risk assessments.	Student is able to perform nursing skills appropriately and safely. Is able to identify areas of concern or areas that need immediate attention.
Administers all medications safely regardless of route including narcotics	Student is able to administer medications through the following of the Five Rights of medication administration.	Student shows they are able to administrations of all route in a safe and therapeutic manner.

	<p>Is able to assess IV sites for problems and is able to administer IV medications properly.</p> <p>Student needs to be able to administer narcotics safely including follow-up for effectiveness/adverse reactions.</p>	<p>Student always follows the Five Rights of medication administration.</p> <p>Student always monitors narcotic administration to ensure patient safety.</p>
Provides effective patient and family education	<p>Nurses are responsible for educating patients and their families about their health issues and how to care for themselves after discharge from the hospital.</p> <p>Students have to learn how to properly educate patients and family members so that proper care is provided at home.</p>	<p>Student is able to identify the learning needs of the patient and/or family members.</p> <p>Student develops and delivers educational sessions with the patient and/or family.</p> <p>Students use or direct patients to available resources for enhanced learning.</p>
Communicates appropriately with patient and/or family members	<p>Effective communication is essential for providing nursing care. The student needs to develop these communication skills so that they will be able to interact appropriately with the patients and their family members.</p>	<p>Student communicates appropriately with patient and family members.</p> <p>Student is able to verbalize the importance of quality communication in nursing care.</p>
Communicates effectively with other staff members, leadership, physicians, other disciplines	<p>Nurses have to be able to communicate with other members of the team caring for the patient.</p> <p>Nurses have to be able to communicate patient status and needs to physicians, nurse leaders, as well as other disciplines such as occupational therapy, physical therapy, pharmacists, as well as others.</p>	<p>Through role playing, student is able to communicate effectively with other team members.</p> <p>Student is able to communicate changes in patient status to other team members in order to meet the needs of the patient.</p>

<p>Demonstrates an ability to work effectively in a team dynamic</p>	<p>Nurses are required to work in a team dynamic in the hospital setting. They have to be able to work well with others in order to provide effective care for the patients. They also have to be able to communicate changes in patient status to other team members in order to meet the patients care needs.</p>	<p>Student is able to work effectively in a team.</p> <p>They rely on other professionals in the delivery of care.</p> <p>Communication with other team members is effective.</p> <p>The assumption of roles within the scenario provides student opportunity to practice and improve the teamwork dynamic.</p>
<p>Appropriately transfers material learned in lecture to the simulation experience</p>	<p>Nursing students not only need to learn the necessary material in the classroom, they also need to be able to transfer that new knowledge to the clinical so that they can provide safe care to the patients.</p>	<p>Student actively and verbally identifies the relationship between material learned in lecture to the simulation scenario.</p>
<p>Able to prioritize patient needs and work with others to develop appropriate care interventions</p>	<p>Through knowledge acquisition, students need to be able to prioritize patient care based on needs, status, and changes in status. This prioritization needs to involve other care providers from both the nursing department as well as other disciplines.</p>	<p>Student effectively collaborates with other participants in the simulation scenario to develop appropriate interventions for enhanced patient care.</p>
<p>Anticipate the needs of other staff providing care</p>	<p>Nurses need to be able to anticipate not only their own needs for providing care for the needs of those who will assume the care of the patient and the needs of those who are caring for the patient concurrently.</p>	<p>Student is able to identify the pertinent information that needs to be communicated to other staff members so that the continuity of care is efficient and effective.</p>
<p>Identify when other resources (ie: physician or pharmacist) need to be included/consulted</p>	<p>Nurses need to be able to identify when they need to consult other healthcare professionals so that the patient's needs are met. These</p>	<p>Student is able to identify when and who to consult due to change in patient status or due to the identification of patient needs.</p>

	consultations would include, but not limited to, calling the doctor, the pharmacists, and therapy departments.	This skill involves effective transfer of knowledge from lecture to practice setting.
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Appendix C: Semi-structured Interview Questions

1. Can you describe the simulation experiences you been in involved in while in the nursing program?
2. Did you participate in simulation experiences that did include role-playing? If so, describe what the role play was like and what your experience was.
3. Which method of simulation instruction do you feel is the most effective? Why?
4. Do you feel that including role-playing into the simulation experience enhanced the learning that occurs in the simulation lab? How?
5. How does including role-playing into the simulation lab enhance your leaning?
6. What benefits can you identify from combining the two teaching methods?

Appendix D: Example of Interview Transcript

STU 5Study Semi-structured Interview Questions

1. Can you describe the simulation experiences you have been involved in whole in the nursing program?

Yes, I have been in one experience where the patient had acute pancreatitis, another patient, a pediatric patient, was in a motor vehicle accident crash. I've been in one for acute, or status asthmaticus. I've been in one for cardiac catheterization and how many others, let's see, CHF, Bipolar disorder and also did home health.

2. Did you participate in simulation experiences that included role playing? If so, describe what the role was like and what you experience was.

Yes, most of my experiences were role playing and we had a charge nurse, med nurse, we had medical nurse. I've also played a nun with the bipolar disorder and I think that role playing is very important in understanding what you're doing in the nursing process.

3. Which method do you think is more effective, with or without role playing?

With role playing, most definitely!

4. Why?

Because with role playing you get an idea, you get to observe what others are doing, you get to learn from others, you get to take away your own experiences and in debriefing, you get to share what you have done wrong, you can evaluate others, and it helps enhance the learning experience when you role play. So, you can basically learn from your mistakes and improve the next time you go back into the sim lab with different scenarios.

5. Do you feel that including role playing in the simulation experience enhanced the learning that occurred and how?

Yes, it definitely enhances your nursing skills; it helps you practice your nursing skills, it also helps you in the field to collaborate with other healthcare team members, physicians/doctors. It also helps you with your peers if there is a source of, if you're not in agreement with someone or, I don't want to use the word discord, but it happens every day and with role playing, you can learn how to educate your patient. There was one scenario where I was educating the daughter; the nurse was educating me when I was the nun. So, you have very, I mean it helps you in all aspects of nursing. It helps the student learn and grasp their skills a little bit better before they're actually out in the clinical setting.

6. Do you think it helps you see the perspective of other team members?

Absolutely! Because afterwards, they're able to apply some of the psychomotor skills that they're learning in there. They're also able to; you have an independent observer in there to see how your skills are, or how you're communication skills are, whether you've performed something correctly or if you're communicating something that you shouldn't say or something that you should say. I mean you get both positive and negative feedback on being able to do that.

7. Do you think if you were able to play a parent, would you get a better, I mean I know you are a parent, would you think it would help you communicate with parents better? Or, other family members?

Yes, it gives you insight into what they may be feeling or how can I approach this person differently? We all communicate outside of the nursing field, you know sometimes differently than we would in a professional setting, so it definitely heightens the awareness, I would say.

8. I think you've covered the benefits unless you have something else to add.

I think that role playing is a key part of the sim process to be a well-rounded nurse. I think it is extremely important and I think it is something that isn't touched on so that's my opinion.

Appendix E: Interview Data With Themes Identified

Walden University Doctorate Project

Student	Themes from Interviews	Which method preferred: with or without role playing?	Themes in Common
#1	Enhances Learning; safe environment; gain perspective of others; improved communication	With role playing	<ul style="list-style-type: none"> • Enhanced learning • Gain perspectives • Improved communication
#2	Improved communication; improved team work; enhanced learning; transferability to the hospital setting	With role playing	<ul style="list-style-type: none"> • Improved communication • Enhanced learning • Improved team work • Prepares for clinical
#3	Team work improved, improved communication; can see the ability to gain other perspectives (family members, other disciplines, etc)	With role play	<ul style="list-style-type: none"> • Improved team work • Improved communication • Gain perspectives • Prepares for clinical
#4	Improved communication, improved team work; gain perspectives of others; prepares you for clinical; helps in learning the material	Definitely with role playing	<ul style="list-style-type: none"> • Improved communication • Improved team work • Gain perspectives • Enhanced learning • Prepares for clinical

#5	Enhances learning experience; enhances skills; enhances communication and collaboration with other professionals; prepares you for clinical; gain understanding of other's perspective; heightens awareness of how to deal with others	Definitely with role playing	<ul style="list-style-type: none"> • Enhanced learning • Improves communication • Prepares for clinical • Gain perspectives
#6	Helps you learn how to deal with people; enhanced learning; enhanced communication; improved working with others	With, but feels some sims that are done without role playing would be good as well to work on nursing skills	<ul style="list-style-type: none"> • Enhanced learning • Improves communication • Improves team work
#7	Enhanced observation skills; improved communication; improved team work; prepares you for real world experiences	With but start off with the first couple without until you get used to the sim lab	<ul style="list-style-type: none"> • Improved communication • Improved team work • Prepares for clinical