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Utilizing High Fidelity Simulation to Enhance Nursing Students' Level of Self-Efficacy in Caring for Patients and their Families in their End of Life Journey

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Utilizing High Fidelity Simulation to Enhance Nursing Students' Level of Self-Efficacy

in Caring for Patients and their Families in their End of Life Journey

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Executive Summary

Capstone Project Title

Utilizing High Fidelity Simulation to Enhance Nursing Students' Level of Self-Efficacy in Caring for Patients and their Families in their End of Life Journey.

Problem

The nurse is present with the patient at the end of life (EOL) more than any other healthcare provider. Yet many believe that nurses are inadequately prepared and lack confidence in providing quality care to dying patients and family. Research has shown that there are major deficiencies in EOL education for nurses. Kwekkeboom,Vahl and Eland (2005) found that many practicing nurses report inadequate nursing education related to death and dying. The identification of the problem as well as the use of simulation as the means to enhance nursing education was derived through a review of the literature. This capstone project was based on a PICO question. The population was senior level traditional baccalaureate nursing students. The intervention was the opportunity for the students to practice caring for a dying patient and family using a high fidelity simulation experience. A comparison was made between the students' level of self-efficacy in providing holistic compassionate care before and after the opportunity to practice in simulation. The outcome of the project was the student nurse's level of self-efficacy in providing holistic, compassionate care for the dying patient and family.

Purpose

The purpose for this project was to improve quality nursing care for dying patients and family members by equipping nurses with the knowledge, skill and confidence needed to provide quality compassionate EOL care.

Goal

The goal for this project was to evaluate the effectiveness of using high fidelity simulation as a learning strategy, to enhance the student nurse's level of self-efficacy while caring for the EOL patient and family members.

Objective

The senior level nursing student self-evaluated their level of self-efficacy before and after the didactic presentation and following the EOL experience.

Plan

Students were presented with a didactic lecture on EOL care and an opportunity to practice EOL care in a simulated laboratory setting. The Bandura Scale for Self-Efficacy (2006) was completed by nursing students on three separate occasions; before the didactic presentation; following the didactic presentation; and following the simulation experience to measure the level of confidence in dealing with EOL care.

Outcome and Results

 Repeated measures ANOVA results showed a significant linear growth in self-efficacy over the three waves: Baseline, Post-lecture and Post-Simulation. The analysis shows statistical significance in the trend of improved self efficacy ($F=63.04$, $p=.000$).

Data from the Self-Efficacy questionnaires were further analyzed in a repeated measures design using ANCOVA. The covariates for the study included age, spiritual beliefs and previous experience caring for a dying person. After controlling for the covariates, the growth in self-efficacy was no longer statistically significant ($F=1.06$, $p=.307$).

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This Capstone Project assessed the pedagogical effectiveness of utilizing high fidelity human simulation (HFHS) to enhance the self-efficacy of senior level nursing students in caring for dying patients and their families. This innovative educational strategy was evaluated using a descriptive study design to measure the level of self-efficacy before and after the simulated patient care experience. Albert Bandura's theory of self efficacy, a concept central to his Social Cognitive Theory, served as the framework for this project.

Problem Recognition and Definition

Purpose of Capstone Project

The ultimate purpose for this project was to improve quality nursing care for dying patients and family members, thus leading to a more peaceful end-of-life (EOL) journey. This can be accomplished if nursing students, who are our nurses of the future, are equipped with the knowledge, skill, and confidence to care for dying patients and family members. Through the use of a simulated EOL patient scenario, nursing students had an opportunity to practice providing holistic, compassionate care, in a safe learning environment, to enhance the their level of self efficacy.

Problem

For every person, death is inevitable, and according to Orth (2009), it is the nurse that is present with the patient at the end-of-life more than any other healthcare provider. Nurses positively impact the end-of-life (EOL) journey for both the patients and the family members when providing quality, holistic care during the illness, death and into the bereavement time for the family who is left behind.

There has been much discussion in recent years as to the inadequacy of nursing preparation in end-of-life care, and the discomfort that nurses feel in providing care for a dying patient and family. Bandura (1977) states that people tend to avoid situations in which they perceive inadequate skill. He further describes that the perception of confidence in one's ability affects his/her performance. As such, nursing education has a responsibility of developing and implementing effective learning strategies in compassionate, holistic nursing care of the dying patient and family.

Problem Question

The question for this Capstone Project was: Will senior level baccalaureate nursing students have a greater level of self-efficacy in providing compassionate care to a dying patient and family if given the opportunity to practice in a hybrid, high fidelity simulation experience, than they did prior to the practice opportunity?

PICO Question

Evidence-based practice studies often detail the specifics of the study question using a PICO format (Houser & Oman, 2011). The PICO question for this study is as follows:

P (Population):	Senior level traditional baccalaureate nursing students
I (Intervention):	Following a lecture on end-of-life care, students will have an opportunity to practice caring for a dying patient and family, using a hybrid, high fidelity simulation experience.
C (Comparison):	The student nurse's level of self-efficacy in providing holistic compassionate care for the dying patient and family, with no opportunity to practice.

O (Outcome):   Student nurse's level of self-efficacy in providing holistic

compassionate care for the dying patient and family.

Nurse-Sensitive Outcome Driven

This project was nurse-sensitive outcome driven. According to the American

Nurses Association (ANA), nurse-sensitive outcomes are indicated by the skill level of

the nurse, and the quality of nursing care (American Nurses Association, n.d.). If patient

outcomes improve based on greater quality nursing care, it is considered a nurse sensitive

outcome. The author of this paper believes that the quality of nursing care provided to

the dying patient and family will be improved if the nurse has the opportunity to practice

such nursing care in a safe simulation scenario.

Appropriate Evidence-Based Practice Project

This project was appropriate for a Doctorate in Nursing Practice (DNP) Capstone

Project. According to the AACN's *Essentials of Doctoral Education for Advanced*

Nursing Practice (2006), DNP graduates should be prepared to address emerging practice

problems through organizational assessment, identification of issues and facilitation of

changes in practice. It is the role of the DNP prepared nurse to develop new practice

guidelines in an effort to improve practice and ultimately patient outcomes. The DNP

nurse educator will use the skills and practice expertise to educate nursing students, as the

next generation of practicing nurses.

Theoretical Framework

Albert Bandura's (1977) Social Cognitive Theory has self efficacy as a central

concept. Bandura explained that the perception of confidence in one's ability affects

his/her performance. Bandura states that people tend to avoid situations in which they

perceive inadequate skill. When a person judges himself capable, he will get involved, even with intimidating situations (Bandura). According to Bandura, confidence is influenced by self-efficacy, which is described as a person's belief in his or her ability to succeed in a particular situation. Unlike self-esteem, self-efficacy can differ greatly from one subject or performance area to another. As new information is gained, and experience is acquired, self-efficacy is increased. As self-efficacy increases, so does one's self-confidence.

Bandura (1977) believes that personal efficacy is derived from four major sources: performance accomplishments, vicarious experience, verbal persuasion and emotional arousal. Performance accomplishment is based on personal mastery experiences. Bandura states that success increases feelings of efficacy, whereas failures lower them. Vicarious Experience is described by Bandura as the observation of others performing threatening activities without adverse outcomes. A person will believe that if others are capable of accomplishing a task, so must he. Bandura describes Verbal Persuasion as vocal suggestions from others as to the positive suggestion of success. The verbal persuasion can be implemented directly before, during, or immediately following the situation. Emotional Arousal, the fourth major source of efficacy as described by Bandura, is the emotional response of the individual in threatening situations. High levels of anxiety can be debilitating to a person, and if the person is not paralyzed from fear during an intense situation, they feel successful. Extinguishing anxiety prior to a difficult situation, is one strategy that can be used to diminish debilitating fear.

Each of these four sources of efficacy, as described by Bandura (1977), would apply to a nursing student participating in a simulated EOL scenario. A positive

experience in a safe learning environment, such as the simulation laboratory, will enhance a student nurses' self-efficacy in caring for a dying patient and family. Vicarious experience is also applicable to a simulation experience because in each scenario, some nursing students will be directly caring for the patient in the role of the nurse, whereas other students will be observing. Following the simulation scenario, the debriefing session would serve as the verbal persuasion as the skilled instructor affirms the successful actions of the nursing student. Emotional arousal is the emotional response of the individual in threatening situations. Having the opportunity to practice caring for the EOL patient and family in a safe learning environment such as the simulation laboratory should decrease the anxiety of the nurse when faced with the actual patient care situation in a clinical agency.

Literature Review

The question for this Capstone Project was: Will senior level baccalaureate nursing students have a greater level of self-efficacy in providing compassionate care to a dying patient and family if given the opportunity to practice in a hybrid, high fidelity simulation experience, than they did prior to the practice opportunity? A review of the literature based on this research question will follow.

Nursing care of a dying patient and family. According to Wallace et al. (2009), "Approximately 53% of American people die in hospitals and 24% die in long term care facilities" (p. 50). Assisting patients and their families to have a dignified end-of-life journey is a responsibility of the nurse. Mutto, Errazquin, Rabhansi, and Villar (2010) stated that nurses are the frontline caregivers for patients who are near the end of their lives. According to Orth (2009), it is the nurse that is present with the patient at the end-

of-life more than any other healthcare provider. Providing EOL comfort care to a patient

and family involves pain and symptom management. According to Whitehead,

Anderson, Redican, and Stratton (2010), comfort includes not only the absence of

physical pain but includes emotional and spiritual suffering as well.   It is imperative that

the nurse is able to utilize a holistic approach of compassion and awareness of the

individuals' physical, spiritual and psychosocial needs (Ruland & Moore, 1998).

Wallace et al. stated that all nursing students should be prepared to provide effective and

compassionate EOL care to patients in any practice settings. Skilled nursing care can

lead to a peaceful EOL transition for patients and family and can reduce their distress.

Research has shown that there are major deficiencies in EOL education for

healthcare workers.   Lindsay (2010) found that the topic of EOL care is cursorily

introduced to nursing students. Barrere, Durkin, and LaCoursiere (2008) described

nursing students as tentative and ill at ease when caring for a dying patient. Deffner and

Bell (2005) reported that nursing students often feel helpless, guilty and sad when caring

for patients in their EOL. Dozer and Addison (1992) found that feelings of helplessness,

guilt and anger, kept physicians unconsciously distant from dying patients and their

families. Kwekkeboom, Vahl, and Eland (2005) stated that many practicing nurses report

inadequate nursing education related to death and dying, and that nursing students report

anxiety and inefficiency in caring for EOL patients. Mutto et al. (2010) reported that

nurses with greater exposure to dying patients, and more educational experience have a

more positive attitude toward caring for a dying patient; however, if nurses are not

provided with adequate educational experiences, they are more likely to withdraw from

the care of the dying patient and family.

According to Ferrel, Virani, and Grant (1999), a survey of nurses found that most believe that undergraduate education on EOL care is extremely important, but that only one-half of the nurses surveyed felt that their nursing education prepared them adequately. Lindsay (2010) stated that the topics of death, palliative care, and unexpected death are typically discussed briefly with students, and very few educational materials are available or distributed to the nursing students in preparation for caring for the dying patient and family. According to Orth (2007), researchers have discovered that nursing education is deficient in providing adequate instruction to nursing students regarding EOL care. The deficiencies include minimal EOL content, inadequate nursing faculty knowledge in EOL care, and minimal information included in textbooks.

Traditional lecture on EOL care can present content for the nursing student; however, traditional lecture will not fully engage the student in appreciation for the complexity of nursing care (Lindsay, 2010). Another traditional method of introducing nursing students to experiences in EOL care is through their clinical experiences in healthcare agencies. Relying on clinical experiences in EOL care puts the student at a disadvantage because not every student will have the opportunity to experience the EOL journey with their assigned patients. Hamilton (2010) reported that EOL care is discussed in nursing didactic courses, but students may not have an opportunity in their clinical course to care for a patient who is dying. Many students graduate from their undergraduate nursing program, never having the opportunity to care for a patient who is dying.

In response to the well documented deficiency of nursing preparation to provide EOL care, many healthcare initiatives have been implemented in an effort to improve

such care for this vulnerable population. The American Association of Colleges of Nursing (AACN) has formulated a list of competencies that nursing students should attain in undergraduate nursing education (Barrere, Durkin & LaCoursiere, 2008). The End-of-Life Consortium (ELNEC) developed a curriculum that contains essential knowledge and skills necessary for providing appropriate care (Barrere, et al.). Although these healthcare initiatives have been designed and implemented, the questions remain as to the most effective way to introduce this emotionally complex topic into an already burdened curriculum.

Simulation as an effective pedagogical strategy. Nurse educators have the responsibility of developing and implementing effective educational strategies that will not only enhance the students' cognitive knowledge, but also enhance their feelings of confidence and self-efficacy in caring for a dying patient and family. The use of high fidelity simulation (HFS) with nursing students has been recommended as a learning tool to provide nursing students with a practice opportunity to provide end-of-life care for a patient. An end-of-life simulation experience provides nursing students the opportunity to be active participants in caring for dying patients, while in a safe environment.

The value of simulation experiences for nursing students has been studied extensively in the last few years, and research strongly supports the use of this learning methodology (Sperlazza & Cangelosi, 2010). Simulation engages the nursing student in a patient care scenario analogous to a real patient care situation. Within the simulation experience, nursing students are allowed to practice technical skills as well as problem solving, communication, and collaboration within a safe environment. According to Cant and Cooper (2009), the goal of human simulation is to offer clinical experiences that

mimic reality in a safe and secure environment.   Chen (2011) describes the benefit of simulation as an opportunity to develop clinical skills and practice managing critical or crisis events. According to Friedrich (2002), having the students become emotionally involved in a simulation scenario has added benefit. If an emotional element is added to a patient scenario, the students will understand the information at a deeper level.

According to Lindsay (2010), the use of simulation technology allows for the creation of a patient scenario. An EOL simulation scenario allows the students an opportunity to provide care to the dying patient, focusing not only on symptom management, but communication, compassion, spiritual issues, and their own feelings and emotions. Sperlazza and Cangelosi (2010) stated that student will have greater understanding of the complex care needs of the dying patient if they are given the opportunity to learn in a simulated setting. Mallory and Allen (2006) found that if nursing students are exposed to a "positive death experience in a supportive atmosphere" (p. 217), they will have improved attitudes toward caring for EOL patients and families.

Simulation has been shown to increase student self-confidence and self-efficacy. In a pretest-posttest designed dissertation study with senior level baccalaureate nursing students, Leigh (2008), found a statistically significant improvement in self-efficacy following a simulation experience. Bambini, Washburn, and Perkins (2009) also found a significant increase in self-efficacy and confidence following an OB/GYN related simulation scenario. In a study conducted by Sinclair and Ferguson (2009), students reported an increase in satisfaction with learning and self-efficacy from a combination lecture/simulation educational strategy, when compared with lecture alone.

Following each simulation experience, the faculty and students involved in the simulation experience have a debriefing session. Debriefing after a simulation experience allows students to reflect on the events, actions and emotions during the simulated patient scenario (Hamilton, 2010). Hamilton reported that debriefing allows faculty to cultivate critical thinking, problem solving and clinical judgment. It is important that both students and faculty remain receptive and open to feedback during the debriefing session to enhance learning (Hamilton).

This project assessed the effectiveness of using high fidelity simulation with senior level baccalaureate nursing students to enhance their level of self-efficacy in providing holistic care for dying patients and their families. The ultimate goal for this project was to improve the quality of nursing care to patients and their families in their end-of-life (EOL) journey by enhancing the educational strategy for nursing students. According to Whitehead, Anderson, Redican, and Stratton (2010), improved patient outcomes at end of life can be the result from the creation of more competent clinicians on EOL care, through more effective educational strategies.

Market/ Risk Analyses

This Capstone Project evaluated the effectiveness of using an EOL simulation experience as a teaching strategy to enhance the student nurses' level of self-efficacy in caring for a dying patient and family. The literature clearly revealed a documented deficiency of nursing preparation to provide EOL care. In response to this well documented deficiency of nursing preparation to care for the dying patient and family, students were given the opportunity to practice caring for this vulnerable population in a safe simulated learning environment. This Capstone Project provided benefit for the

student nurse, who will soon be a practicing registered nurse, as well as the dying patient
and family.

Strengths, Weaknesses, Opportunities, Threats

Analysis of strengths, weaknesses, opportunities and threats (SWOT) is a
systematic technique frequently used to objectively examine an organization or a project.
A SWOT analysis of this Capstone Project was completed by the author of this paper.
SWOT table is below.

Table 1: SWOT Analysis of Capstone Project

Strengths	Weaknesses
1. Experienced educator.	1. Extraneous variables such as age and experience with death and dying may interfere with statistical findings.
2. Specialized training in the use of simulation as a teaching strategy.	2. Potential for student discomfort due to emotional topic.
3. Documented need for enhancement in educational strategies on this topic.	
4. Developed simulation scenario that has been validated by End-of-Life content expert.	
5. End-of-Life scenario has been implemented for two semesters with senior level nursing students as a pilot.	
6. Data collection tool is a validated instrument.	
7. Committed Capstone Chair and mentor providing guidance	
Opportunities	**Threats**
1.Enhance student nurse's level of knowledge, comfort and self-efficacy in caring for dying patients and families.	1.Potential for technical difficulties because of reliance on technology (simulator).
2.Enhanced level of compassionate, holistic care for the dying patient and family.	2.Extraneous variables such as age and experience with death and dying may interfere with statistical findings.
3.If this project is successful, there will be opportunity to use this learning technique with more students as well as practicing nurses.	

Driving/Restraining Forces

The driving force for this Capstone Project was the well documented need for a more effective teaching/learning strategy that will not only enhance the students' cognitive knowledge, but also enhance their feelings of self-efficacy in caring for a dying patient and family. Traditional lecture on end-of-life care is an important step in the learning process because it can enhance the student's cognitive knowledge, but traditional lecture alone has historically left the students feeling uncomfortable and ill-prepared to care for the dying patient and family (Lindsay, 2010). Experience in caring for the dying patient and family in the health care agency during a scheduled clinical assignment is another traditional method of providing a learning opportunity for the student nurse. Not every nursing student will receive an opportunity to care for the EOL patient however, and thus this educational strategy is not sufficient to meet the learning needs for all students. Many nursing students graduate from their undergraduate nursing program, never having the opportunity to care for a patient who is dying.

In response to the well documented deficiency of nursing preparation to provide EOL care, simulation has been recommended a viable adjunct learning strategy (Lindsay, 2010). The implementation of a simulated EOL scenario will provide all nursing students with a practice opportunity to provide care to a dying patient and family, in a safe learning environment.

The restraining forces for the implementation of EOL simulated learning opportunities is the expense associated with the technology and the time and expense in faculty training with this sophisticated equipment.   One of the major barriers to the use of this technology is faculty training. Faculty have stated the greatest difficulty in

utilizing high fidelity simulation is lack of time to learn, too many conflicting demands on time, and the extensive time requirements for scenario building and implementation (Akhtar-Danesh et al, 2009). The author of this paper has received extensive training and experience for four years with high fidelity human simulation. The nursing simulation laboratory at the project site was equipped with three high fidelity manikins and a control room with audio and video capabilities. Although there were no immediate restraining forces present for this Capstone Project, continuation of the educational intervention will rely on an institutional commitment for adequate financial support and faculty training.

Needs, Resources and Sustainability

This Capstone Project evaluated the effectiveness of using an EOL simulation experience as a teaching strategy to enhance the student nurses' level of self-efficacy in caring for a dying patient and family. The needs and resources required of this project included the senior level nursing students, the high fidelity simulation manikin, an actor to perform in the role of the daughter, medical supplies, props and costumes to enhance realism, the simulation scenario that was validated and piloted, a reliable and valid self-efficacy questionnaire, and a faculty trained in the use of high fidelity simulation as a teaching modality. Other resources for this project included the end-of-life care expert and a statistician who were consulted. All resources were available for developing, implementing and evaluating this project.

Colorado State University-Pueblo (CSU-Pueblo) nursing program currently incorporates patient care simulation experiences for all undergraduate and graduate nursing students. The administration and faculty of this nursing program value the benefits of simulation as an effective learning strategy. All resources, including the

personnel, equipment, and scenario for the EOL patient were available and there was no added expense to the nursing program for implementing this simulation experience. Maintenance of the simulation laboratory and manikins, as well as on-going faculty training will require a financial commitment from the University. At this time, there is no indication that the financial support for simulation learning will diminish.

Risks and Unintended Consequences

There were no known adverse effects or consequences anticipated in participation in this project. There was a potential risk that the nursing students may feel discomfort in providing care to the dying patient and family during the scenario. Some students also may have felt some discomfort in role playing in a simulated activity.

Immediately following the scenario, a 30 to 45 minute debriefing session took place in which the students and faculty members reflected on the events of the patient case, the care that was provided by the students, and the students' feelings that arose while caring for the dying patient and family. Debriefing following the simulation experience allowed the students to reflect on the events, actions, and emotions during the simulated patient scenario.

Stakeholders and Project Team

The stakeholders for this capstone project included the nursing student, nursing faculty, and nursing program. Other stakeholders included the EOL patient and family and the numerous health care agencies that will be employing the new nurses upon graduation. Hospice agencies may also be stakeholders in this project as it may be a tool for orientation and training for their new staff.

The author of this paper completed the Capstone Project in partial fulfillment of a Doctor of Nursing Practice degree. The author is fortunate to have a team of people who assisted with the successful completion of this project. The Capstone Chair from Regis University and the DNP student's assigned mentor from CSU-Pueblo provided guidance and support. An EOL care expert participated in various stages of this project development and implementation. The EOL care expert reviewed the written scenario prior to the pilot testing. She also observed the simulation scenario as it was implemented in the Summer, 2011 as a pilot for this project and provided feedback regarding the realism and validity of the patient scenario as it was employed. The same EOL care expert presented the didactic lecture to the students in November, 2011, on caring for the dying patient and family. The Laboratory Resource Coordinator performed in the role of the daughter during the simulation scenarios and assisted as needed with any technical difficulties. A statistician was consulted and provided guidance on the measurement tool and assisted with analysis of this project when the data was collected.

Cost/Benefit Analysis

As stated previously, CSU-Pueblo nursing program incorporates patient care simulation experiences for all undergraduate and graduate nursing students. Every nursing student is assigned to complete simulation activities each semester. All resources are available to implement simulation into the nursing curriculum, including trained faculty, simulation manikins, a simulation laboratory and control room, props, costumes, and medical supplies. There were no added expenses to the nursing program to employ an end-of-life simulated patient care experience for the nursing students. The EOL simulation scenario was implemented during the student's scheduled simulation day in

their last semester of the nursing program. Personnel resources did not change based on the integration of an end-of-life simulation opportunity. The greatest expense to the University related to the execution of this particular activity was the time spent in development and implementation of the simulation scenario which was completed by the author of this project.

Although as stated previously, there were no additional costs to the University for integrating the EOL scenario into the scheduled simulation experience, if a budget were required for this activity, the author of this paper estimates a total of $3,025.00 for the initial implementation cost and $2095.00 for implementation with future groups of students.   The cost would include medical supplies, props/costumes, scenario development, use of a simulation center which includes a high fidelity manikin, faculty time for implementation of the activity, a standardized patient who will play the role of the daughter, and consultant fees for the EOL care expert and statistician. The reduction in cost for ongoing implementation of this project is due to the elimination of one-time costs such as scenario development, props and costumes and the consultant fees for the EOL care expert and statistician (See Appendix J).

The anticipated benefit of this project was to ultimately improve quality nursing care for dying patients and family members, thus leading to a more peaceful EOL journey. A secondary goal for this project was to enhance the knowledge, skill and confidence level of nursing students, and eventually practicing nurses, in caring for dying patients and their families.

Student nurses were provided an opportunity to practice providing holistic, compassionate care, in a safe learning environment to enhance their level of self efficacy.

Bandura (1977) stated that people tend to avoid situations in which they perceive inadequate skill. According to Bandura, when a person judges himself capable, he will get involved, even with intimidating situations. It is reasonable to believe that if the student nurse has an opportunity to practice caring for the dying patient and family in a safe learning environment, followed by an opportunity to reflect on the care that they provided, they will feel more capable of caring for this vulnerable population. Another long-range benefit of this project is the applicability to other nursing schools across the state and the nation, as well as the applicability to other health care disciplines.

As stated previously, the cost for implementation of this project was minimal. The University currently commits to the funding for the personnel, upkeep of the simulation laboratory, and manikin maintenance as necessary. There were no additional expenses to the University by including an end-of-life scenario to the simulation experiences already provided for the student. The benefit of this project was difficult to quantify. The benefit may not truly be realized immediately but will be reflected over time with the student nurses as they graduate and are expected to care for the dying patient and family. The author of this project believes that the benefit to nursing students and patients is far greater than the associated cost.

<div align="center">**Project Objectives**</div>

Goal

The goal for this project was to evaluate the effectiveness of using high fidelity simulation as a learning strategy, enhancing the student nurse's level of self-efficacy in caring for the EOL patient and family members. It is believed by the author that an

effective educational strategy in EOL care for baccalaureate nursing students will ultimately lead to a more peaceful EOL journey for the dying patient and family.

Objectives

To meet the goal of this project as stated above, the following outcome objective was identified:

- Senior level nursing students will self-evaluate their level of self-efficacy before and after the didactic presentation and following the end-of-life simulation experience. All three self-efficacy questionnaires to be completed by February 25, 2012.

The process objectives for this Capstone Project included:

- Identify the population that will engage in EOL simulated patient care scenario by June, 2011. The population for this Capstone Project was the senior level nursing students enrolled at CSU-Pueblo.

- Determine the necessary resources for implementation of this Capstone Project by August, 2011. Resources included simulation laboratory with all equipment and props, manikin, actor, simulation scenario, valid instrument for analysis of data, end-of-life care expert for consultation and statistician for consultation.

- Develop, pilot and evaluate a realistic end-of-life simulation scenario by August, 2011.

- Select the members of the team who will be involved in the development, implementation, and evaluation of this Capstone Project by August, 2011. Team members included the author of this paper, the actor, the end-of-life care expert, the statistician, the Capstone Chair and the assigned mentor.

- Obtain Institutional Review Board approval from Regis University and Colorado State University-Pueblo no later than October 31, 2011.

- Obtain consent to participate and demographic information on all participants by November 1, 2011.

- Present a two hour didactic lecture on caring for the dying patient and family to be presented by an EOL care expert to the senior level nursing students. Completed on November 28, 2011.

- Schedule students to participate in an end-of-life simulation scenario during their regularly scheduled NSG 452L Simulation Day in February, 2012.

- Arrange for time following the simulation activity when the student nurses and faculty reflect on the care that was provided to the dying patient and family in the simulated patient scenario.

- Completion of the Self-Efficacy Questionnaire by participants on three separate occasions; prior to didactic lecture, following didactic lecture, and following their simulation experience.

- Analysis of the data from the demographic survey and self-efficacy questionnaires to be completed by the author of this paper and a consulted statistician. Completed by April 1, 2012. Data from the self-efficacy questionnaire to be analyzed in a repeated measures design, using Analysis of Variance (ANOVA) and the Analysis of Covariance (ANCOVA). The covariates for this study will include age, spiritual beliefs, and previous experience with death/dying.

Mission and Vision

The mission of this capstone project clearly articulates the ultimate purpose. The mission was as follows: To effectively prepare nursing students, our nurses of the future, in a supportive simulation laboratory learning environment, with the knowledge, skill and confidence they need to provide quality, holistic, compassionate nursing care to the dying patient and family.

The vision of this Capstone Project was as follows: Through the use of creative and innovative instructional strategies, nurses will provide quality care for dying patients and their family members, thus leading to a more peaceful end-of-life (EOL) journey.

Evaluation Plan

Logic Model

According to the Zaccagnini and White (2011), the DNP prepared nurse must implement evidence based findings to change or improve practice outcomes. The goal of this capstone project was to ultimately improve the quality of nursing care to patients and their families in their EOL journey by enhancing the educational strategy for nursing students.

The conceptual model used for this project was a logic model, based on a University of Wisconsin template (University of Wisconsin, 2002). The logic model illustrates the process of improving quality nursing care for dying patients and family members by first providing student nurses with essential knowledge, followed by an opportunity to practice patient care in a safe learning environment. Traditional lecture, followed by an opportunity to practice caring for a dying patient and family in a simulated laboratory was implemented to enhance the students' level of self-efficacy and

self confidence, ultimately resulting in better quality care and a more peaceful end-of-life journey for the patient and family (See Appendix I).

Methodology

Senior level traditional baccalaureate nursing students from CSU-Pueblo were the recipients of this educational intervention aimed at increasing their comfort level and confidence in caring for patients and families who are in their EOL journey. The author of this paper conducted an information session regarding this project for all nursing students enrolled in the Fall 2011, NSG 420, Care of the Adult II course prior to implementation of the project. The students were informed that they will be the recipients of an innovative educational intervention that will provide them an opportunity to practice caring for a dying patient and family, and that this educational intervention will be evaluated as part of the doctoral program requirements. The students were provided with an information letter and asked to sign a consent form if willing to participate (See appendix C). They were informed that participation is voluntary and they may withdraw from participation at any time.

All nursing students enrolled in the Fall 2011, NSG 420, Care of the Adult II course received a two hour didactic lecture on EOL care, presented by an EOL care expert guest presenter. The presentation included holistic care of the dying patient and family, incorporating physical, emotional and spiritual comfort needs. The lecture took place in November, 2011. Attendance at this presentation was a course requirement. The students were given a demographic survey prior to the lecture (See appendix B). The Bandura C-Scale Self-Efficacy Questionnaire (2006) was also administered to the study participants before and after the lecture on EOL care (See appendix A).

This same group of senior-level nursing students then attended a scheduled day of simulation in February, 2012, as a course requirement for NSG 452L, Comprehensive Nursing Practice Lab. Students attended the simulation day with their clinical group and clinical instructor on a scheduled day arranged by the Clinical Coordinator of CSU-Pueblo. No more than nine students were assigned to each clinical group. During clinical simulation, they were presented with an EOL patient care scenario. The EOL Simulation scenario had been trialed for two semesters with senior level baccalaureate nursing students at CSU-Pueblo. The EOL scenario, originally developed by Pearson Publishing in a simulation resource text called *Real Nursing Simulation Facilitators Guide* (2009), was revised by the Simulation Specialist of CSU-Pueblo. An EOL care expert consulted with this project and has established content validity by observing the trial simulation experience using this scenario.

The simulation experience presented the student with holistic patient care comfort concerns of a dying patient and family, including physical, emotional and spiritual care. The simulation scenario utilized a high fidelity human simulation manikin that was programmed and controlled by the Simulation Specialist who was in an adjacent control room, separated by a one-way mirrored glass. The dying patient (manikin), named Lucille, was mostly unresponsive with occasional groans and moans. An actress, the CSU-Pueblo Laboratory Resource Coordinator, played the role of the daughter in each of the scheduled NSG 452L simulation days.

Prior to the start of the scenario, the students were provided with a history of this patient. The patient was a 59 year old female with a history of ovarian cancer treated with surgery and chemotherapy. The patient also had renal failure secondary to the

chemotherapy agents used. She had been receiving chemotherapy and dialysis for the

past nine months, but recently decided to stop treatments because she was ready to die.

Lucille discussed her wishes with her physician two weeks prior, but had not informed

her daughter. The daughter called the ambulance when she discovered that her mother

was weak, had not been eating, and was fairly non-responsive. The patient was admitted

directly to the oncology unit of the hospital by her regular physician. The scenario began

as the patient arrived onto the oncology unit. The students participating in the scenario

assumed care of this patient upon admission, in the role of the nurse. The physician was

out of town, but informed the nurses by telephone of the patient's expressed desire to stop

all treatments. The nurses were asked to inform the daughter of the discussion between

her mother and the physician and that her mother had a do not resuscitate status. As the

scenario progressed, the daughter had several requests of the nurses: a meal to help her

gain strength, pain medications so she will not suffer, and participation in prayer. The

scenario progressed and Lucille passed away. The daughter was by herself with no other

family and requested that the nurses stay with her for a little while. This scenario

presented the students with holistic concerns of the dying patient and family, including

physical, emotional, and spiritual care.

　Immediately following the scenario, a 30 to 45 minute debriefing session took place

in which the students and faculty members reflected on the events of the patient case, the

care that was provided by the students, and the students' feelings that arose while caring

for the dying patient and family. The Bandura C-Scale Self-Efficacy Questionnaire

(2006) was again administered to study participants following the debriefing session.

The independent variable was the Simulated EOL patient care experience. The dependent outcome variable was the student nurses' perception of self-efficacy in providing holistic, compassionate care for a dying patient and family, following simulation of EOL care. Extraneous variables were prior experience, either personally or professionally, with death and dying and with simulation learning.

Participants

Sixty two senior level baccalaureate nursing students from Colorado State University-Pueblo participated in the educational intervention. The number of participants was determined by the number of students enrolled in the respective courses, NSG 420 and NSG 452L, as all enrolled students were to attend the lecture and simulation activity. Although the nursing students were obligated to attend the lecture and the clinical simulation day as course requirements, participation in data collection for this Capstone Project was voluntary.

Setting

The project took place in the assigned classroom and simulation laboratory at CSU-Pueblo. The simulation laboratory houses three high fidelity human simulation manikins with an adjacent control room, separated by a one-way mirrored glass. Permission was granted from Colorado State University-Pueblo to conduct the study (See Appendix D).

Data Collection Protocol

The Bandura Scale for Self-Efficacy is a tool that has been used in numerous studies. Bandura allows for the self-efficacy scale to be tailored to the particular topic. Bandura offers a template for development of the self-efficacy scale, with specific guidelines for valid tool construction (Bandura, 2006). The scale used for this project

followed Bandura's recommendations for a valid and reliable questionnaire, as the heading of the tool described the topic of caring for a dying patient and family, and the Likert scale responses were from 0 – 100 (See Appendix A).

As stated previously, the Self-Efficacy Questionnaire (2006) was administered to the senior level nursing students on three separate occasions: before the didactic presentation, following the didactic presentation, and following the simulation experience. All students enrolled in the respective courses at the time of this project were invited to participate in the study. Anonymity of the participants was maintained with no name on the Bandura C-Scale questionnaire so that the students felt more comfortable in providing honest assessment of their capabilities. The participants instead used the first three letters of their middle name followed by their age in years on the questionnaires for comparative analysis. Data used in this study was reported as aggregate data.

Data Analysis

Data from the Self-Efficacy questionnaire were summarized and analyzed in a repeated measures design using Analysis of Variance (ANOVA) and Analysis of Covariance (ANCOVA). The covariates for this study included age, spiritual beliefs, and previous experience with death/dying. The covariate data was retrieved from the demographic questionnaire and included in the analysis to control for their confounding effects. The covariates were reported using descriptive statistics. Age and spiritual beliefs were entered as continuous variables; previous experience with death and dying was entered into the ANCOVA model as a fixed factor. Spiritual belief was measured on a five point ordinal scale: no spiritual beliefs = 0; minimal spiritual beliefs = 1; moderate spiritual beliefs = 2; strong spiritual beliefs = 3; and very strong spiritual beliefs = 4.

Previous experience with death and dying was coded as: no experience = 0 and

experience = 1 (See Appendix B). A statistician was consulted to assist with the design

in evaluation of this educational strategy and with the interpretation of the questionnaire

results.

Data were screened for normality and missing values. Normality results indicated

data were within standard limits. Missing data analysis indicated variables were missing

between 14.5% and 17.7% of values, so patterns of missingness were analyzed using

Little's MCAR test to determine if data were missing completely at random. Results

indicated data were missing completely at random (χ^2 = 55.58, df = 45, p = .134).

However, to retain all cases, missing values were imputed using the expectation

maximization method (Baraldi & Enders, 2010). This resulted in a complete dataset used

in the analysis.

Protection of Human Rights

Protection of human rights for this Capstone Project was carefully planned and

implemented. Institutional Review Board (IRB) approval was awarded from both Regis

University and CSU-Pueblo (See attachments F and G). The author of this paper held an

information session for all senior level baccalaureate nursing students enrolled in the Fall,

2011 NSG 420 course. An information letter was distributed (see appendix C) and the

students were asked to sign the consent form if willing to participate. The students were

informed that participation was voluntary and they could choose to withdraw at any time.

The students were informed that participation or nonparticipation in the study would have

no impact on their grade in the course in any way.

Anonymity was preserved by using the students' first three letters of their middle name followed by their age in years for comparative analysis. Surveys and questionnaires are maintained in a locked filing cabinet in the principal investigator's office for a period of three years following the intervention, at which time the questionnaires will be shredded.

Project Findings and Results

The goal for this project was to evaluate the effectiveness of using high fidelity simulation as a learning strategy to enhance the student nurse's level of self-efficacy in caring for the EOL patient and family members. To meet the goal of this project, the identified outcome objective was for senior level nursing students to self-evaluate their level of self-efficacy before and after the didactic presentation and following the EOL simulation experience. All three self-efficacy questionnaires were completed by February 25, 2012.

A convenience sample ($n = 62$) was obtained from senior level baccalaureate nursing students from CSU-Pueblo who were enrolled in NSG 420 in the Fall semester , 2011, and NSG 452L during the Spring semester, 2012. On average, the participants were approximately 26 years old. Almost two-thirds of the respondents reported previous experience, either personal or professional, in caring for a dying person. When asked to identify their spiritual beliefs, respondents reported a mean of 2.8 out of a $0 - 4$ scale. This corresponds closely with strong spiritual beliefs. Details are found in Table 2.

Table 2: Descriptive Statistics

	Mean	SD
Age	26.14	6.42
Spirituality	2.80	0.87
Prior Experience Caring for a dying person	Yes (64.5%)	No (35.5%)

The respondents reported a growth in self-efficacy with each wave of completed questionnaires. The mean self-efficacy score prior to the lecture and simulation activity was 66.80. The respondents reported a mean score of 74.12 following the lecture and 85.29 following the simulation experience. The standard deviation shrank with each wave of completed questionnaires indicating responses grew more consistent among students over the study period. Table 3 provides further details.

Table 3: Mean Self-Efficacy Scores

	Mean	SD
Mean Self-Efficacy Score Baseline	66.80	17.62
Mean Self-Efficacy Score Post Lecture	74.12	16.00
Mean Self-Efficacy Score Post Simulation	85.29	11.16

Repeated measures ANOVA results showed a significant linear growth in self-efficacy over the three waves: Baseline, Post-lecture and Post-Simulation. The analysis shows statistical significance in the trend of improved self efficacy (F=63.04, p=.000). A statistically significant trend is also evident when a comparison is made between each wave of the completed self-efficacy questionnaires. Table 4 provides further detail.

Table 4: Repeated Measures ANOVA Results

Wilks' lambda	*F*	Hypothesis df	Error df	*p*
.479	32.63	2.00	60.00	.000

Pairwise Comparisons	
Linear Growth in Self-Efficacy: Baseline to Post-Simulation	.000
Linear Growth in Self-Efficacy: Baseline to Post-Lecture	.007
Linear Growth in Self-Efficacy: Post-Lecture to Post- Simulation	.000

Data from the Self-Efficacy questionnaires were further analyzed in a repeated

measures design using ANCOVA. The covariates for the study included age, spiritual

beliefs, and previous experience caring for a dying person. The covariates were retrieved

from the demographic questionnaires completed by the participants of the study. After

controlling for the student's age, level of spiritual belief, and prior experience caring for a

dying person, the growth in self-efficacy was no longer statistically significant (*F*=1.06,

p=.307).

Although not the primary focus of the study, several findings with two of the

covariates, spiritual beliefs and prior experience with death/dying, are worth noting.

Analysis of the data showed that those respondents with prior experience caring for a

dying person reported a statistically significantly greater feeling of self-efficacy overall,

as compared to those with no such experience (prior experience mean = 77.30, no prior

experience mean = 70.88, *p* =.029). However, as illustrated in Figure 1, those with no

prior experience caring for a dying person showed greater self-efficacy growth over the

study period. The self-efficacy scores appear on the Y-axis of the figure, and the waves

of the study appear on the X-axis: 1= Baseline, 2= Post-Lecture and 3 = Post-Simulation.

Figure 1: Difference in Efficacy Growth between
Those with and without Prior Experience Caring for a Dying Person
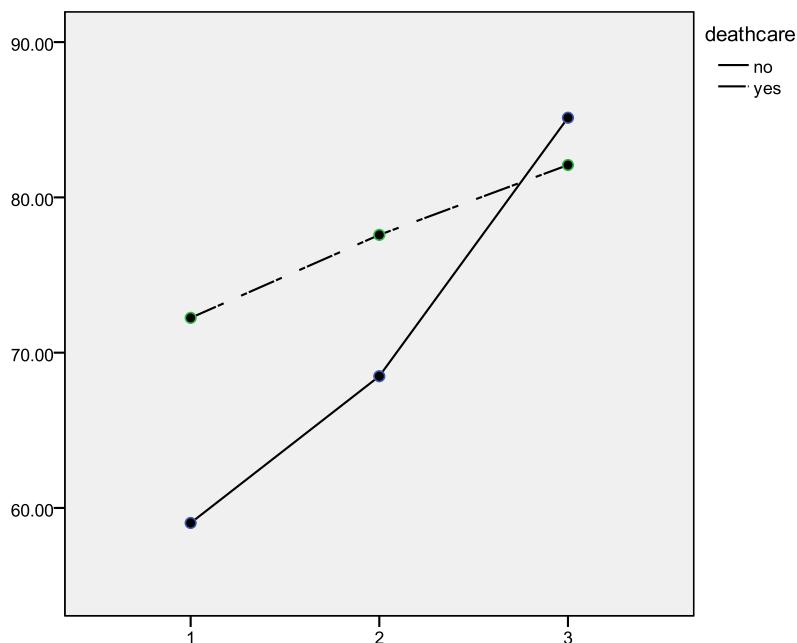
The analysis of the data showed no overall statistical difference in self-efficacy

based on level of spiritual belief; however, there was an apparent difference in self-

efficacy growth based on the level of spiritual belief. When completing the demographic

survey, the participants were asked to identify their level of spiritual belief: No Spiritual

Belief = 0, Minimal Spiritual Beliefs = 1, Moderate Spiritual Beliefs= 2, Strong Spiritual

Beliefs = 3 and Very Strong Spiritual Beliefs = 4. There were no respondents who

identified as having no spiritual beliefs. Those with reported moderate, strong or very

strong beliefs showed similar growth over the study period, but those with minimal

beliefs showed a decline in efficacy between the lecture and the simulation period.   See

Figure 2.

Figure 2: Difference in Efficacy Growth based on Spiritual Belief
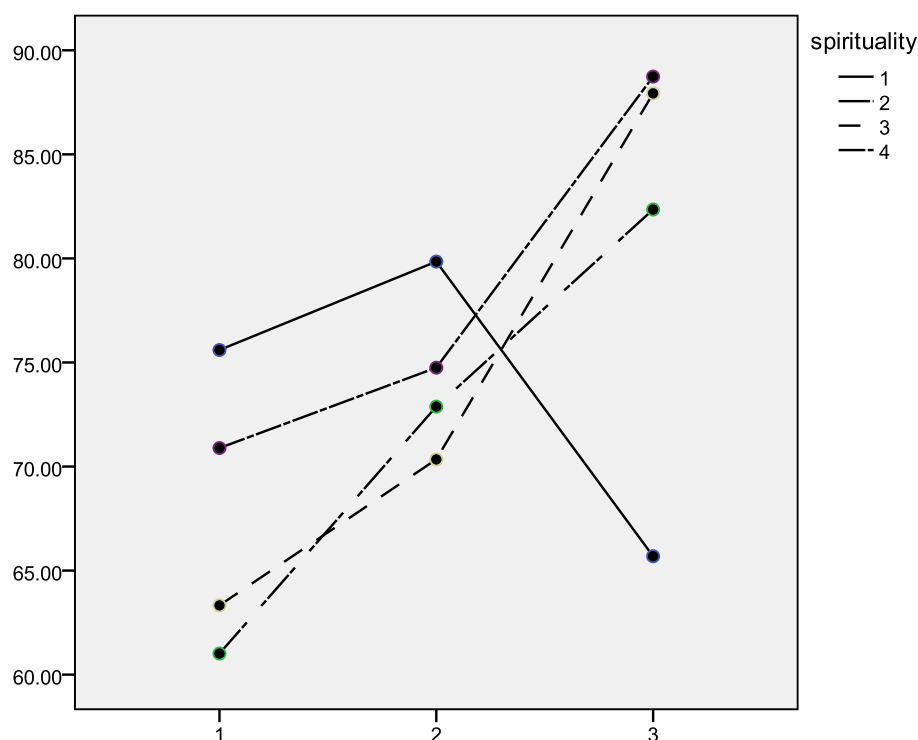
Results in Relation to Problem Question

The question for this Capstone Project was: Will senior level baccalaureate nursing students have a greater level of self-efficacy in providing compassionate care to a dying patient and family if given the opportunity to practice in a hybrid, high fidelity simulation experience, then they did prior to the practice opportunity? The overall mean self-efficacy score improved with each wave of the completed questionnaires, and the ANOVA results showed statistical significance in the upward trend in self-efficacy scores throughout the study.   The greatest growth in self-efficacy scores occurred in the participants with no previous experience caring for the dying patient and family, as illustrated in Figure 1 above.

When the trend was subjected to consideration of the three covariates, the growth over the study period ceased to be statistically significant.   The loss of significance when

considering the covariates of age, level of spiritual belief, and previous experience caring for a dying person is of interest. The level of spiritual belief appears to significantly interact with self-efficacy as depicted in Figure 2 above. The consideration of spiritual beliefs as a covariate negates the significant growth of self-efficacy gained from the opportunity to practice caring for the dying patient and family in a simulated patient care experience. Differences in spiritual beliefs may have as much of an impact on self-efficacy in caring for the dying patient and family as the independent variable of the simulation experience. Specifically, those with minimal beliefs showed a decline in self-efficacy between the lecture and the simulation activity as compared to all other groups.

As depicted in Figure 2, an upward trend in self-efficacy for those with minimal spiritual beliefs was evident from baseline to post-lecture, however, the trend declines greatly from post-lecture to post-simulation. During the simulation activity the nursing student was confronted with the spiritual aspect of providing care to the dying patient and family. The daughter in the scenario asked the nurse to engage in a prayer with her and her dying mother. During the debriefing session following the simulation scenario, many students discussed their insecurities in meeting the spiritual needs of the patient and family. The author of this project believes that the prayer request during the scenario led to lower levels of self-efficacy in those students with minimal spiritual beliefs.

Limitations, Recommendations, Implications for Change

Limitations

Several limitations of this study have been identified, including the small sample size, the convenience sample, and the missing data. The participants for this Capstone Project were the senior level baccalaureate nursing students from CSU-Pueblo enrolled in

NSG 420 and NSG 452L during the time of the project. All students enrolled in these courses were obligated to attend the lecture and the clinical simulation day as course requirements. Participation in data collection for this Capstone Project was voluntary, although all students agreed to participate (*n*=62). The convenience sample as well as the small sample size, lead to less statistical power and limits the ability to generalize the results of this project.

The missing data for this project were unavoidable. The cause of missingness is a combination of missing questionnaires and missing responses on particular items on completed questionnaires. For this study, questionnaires were missing for various reasons, including student absence from the lecture, student failures from NSG 420 that prohibited progression to NSG 452L, and also students enrolled in NSG 452L who re-entered the nursing program in the Spring semester, 2012,but had not taken NSG 420L in the Fall semester. Variables used in the analysis had anywhere from 14.5 to 17.7% of values missing. However, the statistician consulted for this project screened for missing values and found that data were missing completely at random. Therefore, missing values were imputed using the expectation maximization method resulting in a complete dataset for analysis (Baraldi & Enders, 2010).

Recommendations

Recommendations resulting from this study for consideration include further research and additional investigation into educational strategies to meet the needs of those students who continue to lack self-efficacy in caring for the dying patient and family. The participants for this study were obtained from a convenience sample of Baccalaureate Degree nursing students from CSU-Pueblo. In order to fully appreciate the

significance of simulation to enhance self-efficacy in caring for the EOL patient and family, the study should be replicated with a larger more diverse sample of participants, including Associate Degree nursing students as well as novice practicing nurses.

Another recommendation is to investigate more thoroughly the influence of spiritual beliefs on the nurse's self-efficacy in caring for the dying patient and their family. A more in-depth study targeting the self-efficacy of nurses with minimal spiritual beliefs caring for the EOL patient would be an important step in validating the findings from this project. The level of spiritual belief appears to significantly interact with self-efficacy in caring for the dying patient and family. Those with minimal spiritual beliefs showed a downward trend in self-efficacy after being confronted with a spiritual request from the family of a dying patient. Based on these findings, nurse educators are challenged to implement educational strategies that will assist nursing students with minimal spiritual beliefs to meet the holistic needs of the dying patient and family. According to Bandura (1977), people tend to avoid situations in which they perceive inadequate skill. Thus nurse educators have a responsibility to the dying patient and family to implement educational strategies that will enhance the nurse's self-efficacy in providing quality holistic care to this vulnerable population.

Implications for Change

This project statistically demonstrated that an opportunity to practice providing quality holistic care to the EOL patient and family in a simulated experience will enhance the self-efficacy of nursing students. The overall mean self-efficacy score improved with each wave of the completed questionnaires, and the ANOVA results showed statistical significance in the upward trend in self-efficacy scores throughout the study. These

findings suggest that high fidelity simulation was a viable educational strategy utilized in nursing education to enhance the self-efficacy of senior level nursing students in providing quality holistic care for EOL patients and families. Bandura (1977) describes that the perception of confidence in one's ability affects his/her performance. As such, this project has shown that simulation experience enhanced the confidence of the nursing student and thus will ultimately lead to improved nursing care for the dying patient and family. This Capstone Project resulted in enhanced level of self-efficacy for the student nurses in caring for a dying patient and family and will be integrated into the curriculum for future cohorts of senior level nursing students.

As discussed previously, those with minimal spiritual beliefs showed a downward trend in self-efficacy after being confronted with a spiritual request from the family of a dying patient. The implication of this finding is noteworthy. Nurse educators must be cognizant of the challenge that nurses with minimal spiritual beliefs face when providing holistic care to the dying patient and family. Further investigation is needed in the relationship of confessed spirituality and the care of the dying patient as well as educational interventions to assist this group of nursing students.

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Learning.

Appendix A:

Self-Efficacy Questionnaire

First three letters of your middle name, followed by your age in years:

_____

This questionnaire is designed to help us gain better understanding of the effectiveness of teaching methodologies in caring for a dying patient and family.

 Directions: Using the scale below, please record the number in the blank space that best describe your current ability to provide nursing care as described.

0   10   20   30   40   50   60   70   80   90   100

Cannot	**Moderately**	**Highly certain**
do at all	**certain I could do**	**I could do**

While caring for a dying patient and family…

1. I am certain that the care I can provide
    to the dying patient and family will be correct.   _____

2. I feel that I can perform the compassionate holistic care
    to the dying patient and family without hesitation.   _____

3. My performance in caring for a dying patient and family
    will convince an observer that I am competent at this care.   _____

4. I feel sure that I can perform compassionate,
    holistic care to the dying patient and family.   _____

Appendix B:

Demographic Survey

First three letters of your middle name, followed by your age in years:

  _____

This data sheet has been devised to help us know more about you for the
study.
Please answer the questions as completely and as honestly as possible.
Please fill in the blank.
For questions with more than one choice, put an "x" on the line in front of your response.

1. What is your age in years at your last birthday? _____

2. Do you consider yourself to have:
_____ Very strong spiritual beliefs
_____ Strong spiritual beliefs
_____Moderate spiritual beliefs
_____Minimal spiritual beliefs
_____ No spiritual beliefs

3.   Have you ever cared for a dying person, either personally or professionally?
_____ Yes
_____ No

Appendix C

DATE: 10/12/2011

Education Methodology to Enhance Nursing Students' Level of Self-Efficacy
in Caring for Patients and their Families in their End-of-Life Journey

As a senior level baccalaureate nursing student at Colorado State University-Pueblo, you will be participating in an innovative educational strategy that is designed to enhance your sense of confidence in caring for a dying patient and family. You will also be asked to participate in a study being conducted by JoAnn G. Crownover in partial fulfillment of a Doctor in Nursing Practice degree from Regis University.

The educational activities of this project are part of your required coursework for NSG 420 and NSG 452L. Participation in this study is voluntary and there is no grade associated with this project, no known risks to participation, and participation will not impact your grade in the course. The assumed benefit of participation in this innovative education opportunity will be the enhanced confidence in caring for a dying patient and family, as a student and as a professional nurse.

You will be asked to fill out a demographic questionnaire that contains three questions. You will also be asked to complete a Self-Efficacy Questionnaire on three separate occasions during this academic school year. The self-efficacy questionnaire has four questions and should take you no more than 10 minutes to complete. The information you provide will be used to evaluate the effectiveness of this educational methodology. The information collected may not benefit you directly, but the information learned from your responses should provide benefits to students in future courses. Not completing the questionnaires will not impact your grade in the course. You will be asked to sign a consent form prior to filling out any of the questionnaires. Completion of the questionnaires will then imply continued consent to participate in this project.

Every effort to maintain anonymity will be done. Do not write your name on the questionnaires. You will be asked for the first three letters of your middle name, followed by your age in years for comparative analysis. The data from the questionnaires will be reported as aggregate data and no individual data will be shared. Records will be stored in a locked file cabinet. Only the investigator and others authorized by regulation will have access to the material. The data will be saved for three years and then shredded.

Please answer all questions on the survey honestly. You can withdraw at any time from the study without any impact on your grade for the course. You are free to decline to answer any particular question you do not wish to answer for any reason. If you have any questions about the project, please contact JoAnn Crownover, DNP student, Regis University, at 719-549-2406, or crown194@regis.edu. Dr. Dorothy DeNiro and Dr. A. Louise Suit, Assistant Professor of Nursing, Regis University at 303-458-4187 will be assisting in the project.

DATE: 10/12/2011

**Education Methodology to Enhance Nursing Students' Level of Self-Efficacy
in Caring for Patients and their Families in their End-of-Life Journey**

Principle Investigator: JoAnn G. Crownover, RN, MSN, CNE

I understand the procedures described above. My questions have been answered to my satisfaction and I agree to participate in this study.

_____

Printed Name of Subject

_____   _____

Signature of Subject   Date

Appendix D

Colorado State University Pueblo

DEPARTMENT OF NURSING

September 6, 2011

TO: Whom it may concern

FROM: Dr. Donna Wofford, PhD, RN
             Associate Dean, Nursing

I am aware that JoAnn Crownover is in the process of writing her IRB proposal and will be starting to collect data this semester. JoAnn has my full approval and support to complete her study here at CSU-Pueblo. We look forward to the report of her results and, of course, her successful completion of all requirements for the doctoral degree.

Appendix E

JoAnn Crownover (Member ID: 2288166)

CITI Collaborative Institutional Training Initiative

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Main Menu

■ This is the email address we have for you: joann.crownover@colostate-pueblo.edu. If this is not correct, click here to edit your email address and other account information including your security question and answer.

■ You are affiliated with 1 participating institution(s) on the CITI website. You will have at least one **grade book** per institution to track your progress in meeting the institution's coursework requirements (see below).

Regis University

i View Regis University instructions page

You have enrolled for the following courses:

i My Courses	Status	Completion Reports	CME/CEU Credits	*i* Voluntary Satisfaction Survey
Social Behavioral Research Investigators and Key Personnel, Basic Course	Passed - 06/07/11	Print	CME/CEU Credits	Completed

i **Add a course or update your learner groups** for *Regis University*

Regis University Learner Utilities

Appendix F

Colorado State University-Pueblo IRB Approval

2200 BONFORTE BOULEVARD	PUEBLO, COLORADO 81001-4901
COLLEGE OF HUMANITIES AND SOCIAL SCIENCES	719-549-2625
DEPARTMENT OF PSYCHOLOGY	FAX: 719-549-2705

10 October, 2011

Joann Crownover, RN, MSN, CNE
9 Heaton Place
Pueblo, CO 81001

Re: IRB approval for "Utilizing High Fidelity Simulation to Enhance Nursing Students' Level of Self-Efficacy in Caring for Patients and their Families in their End of Life Journey" study.

Dear Joann,

We have now received both reviewers' feedback on the materials you submitted and have completed the IRB process. Thanks very much for answering the questions we had earlier. You now have IRB approval for a period of 12 months at which time you will need to submit an updated IRB application. Unless there are substantive changes in the protocol that we need to take a closer look at, the extension is granted as a matter of routine. Please let me know if you have any questions regarding your human subjects approval, and we thank you for your application.

Best of luck with your research,

Marc Pratarelli, IRB Chair

Appendix G

Regis University IRB Approval

Signature of Principal Investigator____*JoAnn G. Crownover*_____

(Note: if this document is being sent electronically, your typed signature will be considered as your signature)

Date _____9/8/11_____

The space below this line is for the use of the Institutional Review Board.

_____

Action of Institutional Review Board:

1. Exempt according to condition _____45CFR46.101.2.(1).(ii)—educational strategy_

2. Approved by expedited review ___D E Roysden, 14SEP2011_____

(reviewer, date)

3. Approved in general and specific details.

4. Approved in general with specific details to be resubmitted.

5. Disapproved for the following reasons:

Signature:

_____

Director, Office of Academic Grants   Date

Appendix H

DNP Project Process Model and Time Table

DNP Project Process Model				
Step	**Tasks:**	**Estimated Start**	**Estimated Finish Date**	**Comments**
Step I: Problem Recognition	Identified Need	Fall, 2010	Fall, 2010	Completed in NR 701 NR706
	Problem Statement	Fall, 2010	Spring, 2011	Completed in NR 706.
	Literature Review	Fall, 2010	Summer, 2011	Completed in NR 706. Continue to review any applicable literature.
Step II: Needs Assessment	Identify Population	Spring, 2011	Summer, 2011	Senior Level Traditional Nursing Students enrolled at CSU-Pueblo
	Identify Sponsors and Stakeholders	Spring, 2011	Summer, 2011	• CSU-Pueblo Nursing Students. • Patients and their families in their end-of-life journey. • Healthcare agencies that hire the students upon graduation.
	Organiz-ational Assessment	Spring, 2011	Summer, 2011	The values and the mission of CSU-Pueblo nursing program are consistent with the purpose of this project.
	Assess Available Resources	Spring, 2011	Fall, 2011	Resources include: • Simulation laboratory with all equipment and props • End of Life Scenario • End of life content expert to validate the simulation scenario • End of life content expert to give a presentation to the students • Volunteer to role play a family member during the simulation scenarios. • Completed in NR706B

	Desired Outcomes	Spring, 2011	Fall, 2011	Desired outcome is to assist the senior level nursing student to feel more knowledgeable and confident in providing quality holistic care for a dying patient and family. Completed in NR 706B
	Team Selection	Summer, 2011	Fall, 2011	Team to include: • Myself • End of Life Care expert • Standardized patient to role play the family member in the scenario. • Statistician
	Cost Benefit Analysis	Fall, 2011	Fall, 2011	Completed in NR 722 Health Care Systems Finance and Marketing.
	Define Scope of Project	Summer, 2011	Fall, 2011	Completed in NR706B.
Step III: Goals, Objectives and Mission Statement	Write goals, objectives and mission statement	Summer, 2011	Summer, 2011	Completed in NR706B.
Step IV: Theoretical Underpinnings	Determine theoretical Framework	Summer, 2011	Fall, 2011	Will utilize Albert Bandura's concept of self-efficacy, a central concept of his Social Cognitive Theory.
Step V: Work Planning	Project Proposal	Spring, 2011	Summer, 2011	PICO question and discussion of project was on-going with faculty and advisor.
	Develop Timeline	Spring, 2011	Spring, 2011	Completed in NR 706
	Develop Budget	Summer, 2011	Fall, 2011	Completed in NR722
Step VI: Evaluation Plan	Develop evaluation plan	Summer, 2011	Fall, 2011	Final approval of evaluation plan in NR706B
Step VII: Implementation	IRB Approval	Summer, 2011	Fall, 2011	Approval received from both Regis University and Colorado State University-pueblo

	Determine Threats and Barriers: Preplanning	Summer, 2011	Fall, 2011	Threats and barriers identified. Interventions to eliminate of decrease threats and barriers were also identified and implemented.
	Determine Threats and Barriers: Unforeseen	Summer, 2011	Spring 2012	Unforeseen threats and barriers must be identified during the implementation of the project and analysis of the data.
	Implement-ation Phase	November, 2011	February 29, 2012	EOL care expert scheduled to present didactic lecture in November 2011. First round of questionnaires and surveys were completed at this time. Simulation scheduled during the month of February. All surveys and questionnaires collected by the end of February, 2012.
	Project Closure	February 29, 2012	February 29, 2012	All project activities complete by February 29, 2012
Step VIII: Giving Meaning to the Data	Data Analysis	March 1, 2012	March 30, 2012	All data scheduled to be analyzed and interpreted by March, 30, 2012
Step IX: Utilizing and Reporting Results	Written Dissemin-ation of Capstone Project Results	March 15, 2012	April 9, 2012	Written project due on April 9, 2012 in NR706C

Time Table					
TASK	Fall, 2010	Spring, 2011	Summer, 2011	Fall, 2011	Spring, 2012
Identified Need	X				
Problem Statement		X			
Literature Review			X		
Identify Population			X		
Identify Sponsors and Stakeholders			X		
Organizational Assessment			X		
Assess Available Resources				X	
Desired Outcomes				X	
Team Selection				X	
Cost Benefit Analysis				X	
Define Scope of Project				X	
Write goals, objectives and mission statement			X		
Determine theoretical Framework				X	
Project Proposal			X		
Develop Timeline		X			
Develop Budget				X	
Develop evaluation plan				X	
IRB Approval				X	
Determine Threats and Barriers: Preplanning				X	
Determine Threats and Barriers: Unforeseen					X
Implementation Phase					X
Project Closure					X
Data Analysis					X
Written Dissemination of Capstone Project Results					X

Appendix I

Logic Model

Problem Identification:
Senior Level Nursing Students feel hesitant and uncomfortable in caring for patients and family members in their end-of-life journey.
Situation:
Traditional Lecture alone does not adequately prepare nurses to feel comfortable in providing holistic, compassionate care to the dying patient and family members.

INPUT	**OUTPUT**		**OUTCOMES**		
	Activity	**Participants**	**Short Term**	**Long Term**	**Impact**
• End-of-life content expert • Didactic Content • Simulation Specialist • Simulation Scenario • High Fidelity Simulation Manikin • Volunteer Standardized family member • Simulation Laboratory • Props and laboratory equipment • Statistician	• Didactic Instruction on end-of-life care presented by content expert for the senior level nursing students. • Developed end-of-life simulation scenario validated by content expert. • Practice opportunity provided for the senior level nursing students to care for a dying patient and family in a simulated laboratory experience • Debriefing session immediately following simulation experience • Data collection using Bandura C Scale for Self-Efficacy.	• Senior level baccalaureate level nursing students from Colorado State University-Pueblo • Content Expert • Simulation Specialist • Standardized Patient	• Nursing students will have an increase in knowledge regarding holistic care of the dying patient and family. • Nursing students will practice caring for a dying patient and family. • Nursing students will be able to reflect on the experience and gain personal and professional insight into this complex nursing care issue. • Nursing student will have an increased level of self-efficacy in providing holistic compassionate care to the dying patient and family.	• Practicing nurses will feel comfortable and confident in their abilities to provide holistic, compassionate care to dying patients and family members. • Practicing nurses will not be hesitant in caring for dying patients and their families	Dying patients and their families will receive quality nursing care leading to a more peaceful end of life.

Appendix J

Cost Analysis

Initial Implementation of Capstone Project			
	Cost per Unit	**Unit**	**Total**
Props/Costumes		Hat, gown	$10.00
Scenario Development	$40.00 per hour	8 hours	$320.00
Use of Simulation Center (includes use of manikin)	$100.00 per hour	14 hours	$1400.00
Medical Supplies (Simulated Medications)	$5.00	7 Sessions	$35.00
Nurse Faculty Time for Implementation	$40.00 per hour	14 hours (2 hrs per group)	$560.00
Acting Daughter in the scenario	Honorarium		$100.00
End-of-Life Care Expert	Honorarium		$100.00
Statistician	$50.00 per hour	10 hours	$500.00
Total Cost			**$3025.00**

Ongoing Implementation of Capstone Project			
	Cost per Unit	**Unit**	**Total**
Use of Simulation Center (includes use of manikin)	$100.00 per hour	14 hours	$1400.00
Medical Supplies (Simulated Medications)	$5.00	7 Sessions	$35.00
Nurse Faculty Time for Implementation	$40.00 per hour	14 hours (2 hrs per group)	$560.00
Acting Daughter in the scenario	Honorarium		$100.00
Total Cost			**$2095.00**

Appendix K

Systematic Review of the Literature

Systematic Review Evidence Table Format [adapted with permission from Thompson, C. (2011). Sample evidence table format for a systematic review. In J. Houser & K. S. Oman (Eds.), Evidence-based practice: An implementation guide for healthcare organizations (p. 155). Sudbury, MA: Jones and Bartlett.]

Article Title	"The Level of Comfort Among Nursing Students During Sexual Counseling to Patients Who Have Chronic Medical Cond-itions"	"The Influence of End-of-Life Education on Attitudes of Nursing Students"	"Simulator Effects on Cognitive Skills and Confidence Levels"	"High Fidelity Nursing Simulation: Impact on Student Self-Confidence and Clinical Competence"	"Affective Learning in End-of-Life Care Education: The Experience of Nurse Educators and Students"	"Simulation-Based Learning in Nurse Education: Systematic Review"
Journal	Published online: Springer Science Business Media.	International Journal of Nursing Education Scholarship	Journal of Nursing Education.	International Journal of Nursing Education Scholarship	International Journal of Palliative Nursing.	Journal of Advanced Nursing.
Author/ Year	Akinci, A., Yildiz, H., Zengin, N. (2011)	Barrere, C., Durkin, A. & LaCoursiere, S. (2008)	Brannan, J., & Bezanson, J. (2008)	Blum, C., Borglund, S. & Parcells, D. (2010).	Brien, L., Legault, A.& Tremblay, N.	Cant, R. & Cooper, S. (2009)
Database & Keywords	Cinahl Nursing Students & Level of Comfort	Cinahl Nursing Students & End of Life Care	Cinahl Simulation & Nursing Students.	Cinahl Simulation & Nursing Students.	Cinahl Nursing Students & End of Life Care.	Cinahl Simulation & Nursing Students.
Research Design	Descriptive Quantitative Design	Quasi-experimental, longitudinal repeated measures	Prospective, quasi-experimental Pretest and post test comparison.	Quasi-Experimental, quantitative Design	The intervention discussed in this article was not based on a research design. The article was describing a pedagogy used to encourage affective learning in end-of-life care.	Systematic review of literature on quantitative evidence regarding simulation as a teaching strategy.

Level of Evidence	Level 4	Level 4	Level 4	Level 3	Level 7	Level 5
Study Aim /Purpose	Determine level of comfort in discussing sexual concerns with patients who have a chronic illness	Looked at the influence of the integration of the ELNEC curriculum on the attitudes of nursing students regarding the dying patient	To compare the effectiveness of two instructional methods on care of the patient with an acute myocardial infarction. The two instruction methods were traditional lecture versus high fidelity simulation. Specifically the authors looked at cognitive skill and confidence level following each of the interventions	Purpose was to detect differences in entry-level student confidence and clinical competence based on two learning environments; simulation based learning versus traditional task trainers and student volunteers	The purpose of the intervention was to implement experiential and reflective activities addressing the affective domain of learning end-of-life care with undergraduate nursing students	The aim of this study was to review the quantitative evidence that compares medium to high fidelity simulation with other educational strategies
Population Studied/ Sample Size/ Criteria/ Power	Third and Fourth year nursing students 161 students participated. Participation was voluntary among students taking the following courses: Internal Disease, Surgical Disease Women's Repro-	Senior baccalaureate nursing students from both a traditional track and an accelerated track 73 nursing students participated. 53% from the traditional track and 47% from the accelerated track Convenience Sample from	Junior level baccalaureate nursing students enrolled in the Adult Health Nursing Course Total sample size was 107 students 53 students received the traditional lecture intervention, and 54 students received the Simulation	Baccalaureate nursing students enrolled in their first semester of a clinical course 59 students (100%) consented to participate 53 students were in the final sample 6 students were excluded due to attrition or lack of completing instruments for the study	197 second-year Undergraduate nursing students. Participation was mandatory as part of the intensive workshop on end-of-life care	12 Articles were included in the review based on inclusion criteria pre-set by the authors

	ductive Health Problems	one University

No control group was used. | intervention

Criteria were based on the semester of enrollment into the program.

The students enrolled in the Fall received traditional lecture, and those enrolled in the Spring received the Simulation intervention. | Participation was voluntary

100% of the students volunteered

The students were randomly assigned to a clinical group. There were three groups

One group was the control group (traditional teaching/learning strategies), and two groups utilized Simulation for their teaching / learning methodology | | |
| **Methods/ Study Appraisal/ Synthesis Methods** | Data collection survey developed by the researchers.

Comfort level of students during sexual counseling was assessed on a 5 point scale from 1, very comfortable, to 5 very uncomfortable

Statistical analysis included descriptive statistics, comparative (the | Pretest/Post test using the Frommelt Attitudes toward Care of the Dying Scale for Nurses (FATCOD).

The tool was administered before the start of the curriculum integration of ELNEC, and again after the students received all of the ELNEC modules.

Statistical analysis included multiple linear | Pretest was given to each group prior to the intervention, and a posttest was given following the intervention. The pretest / posttest included a measure of cognitive skill and confidence level | As stated above, the students were assigned to a clinical group. One group had traditional methods of instruction, and two groups utilized simulation in their learning.

The course was 13 weeks in length, and the groups met one day each week, for seven hours each day.

During the midterm and final weeks, the students and assigned faculty completed a Lasater Clinical | Experiential and reflective activities were organized over a four week period of time.

Activities include personal reflection, viewing a documentary film and role-play simulation.

Data was gathered via qualitative and quantitative means.

Comments from workshop facilitators were gathered. Students completed a | The authors of this study performed a systematic review of the literature on the topic of simulation in healthcare between the years 1999 to 2009.

They found 2019 articles based on their broad search. The authors then reviewed the abstracts of the articles for inclusion criteria, which consisted of: -Quantitative Study Design. -Manikin based medium or high fidelity |

	ANOVA and the Kruskal-Wallis test) and Pearson's Correlation.	regression to identify predictors of student's attitudes. Descriptive statistics were examined. T tests were done to assess group differences. Pearson Correlations were also done		Judgment Rubric (LCJR). The student's rubric was a self-reflection of their confidence, whereas the faculty rubric was a judgment of the student competence. Statistical methods used included Cross-tabulations, Pearson's Correlations, Cronbach's Alpha and Paired-Samples t-tests	Likert scale questionnaire that included 3 open questions. Students also were required to journal during the experience. The Frommelt Attitudes Towards Care of the Dying (FATCOD) scale was also administered to the students pre and post interventions.	simulation. -Comparison of simulation to other educational strategy. -Experimental or Quasi Experimental design. Following this review, 12 articles were included in the review.
Primary Outcome Measures and Results	Level of Comfort. More than half of the students usually feel comfortable or slightly comfortable providing sexual counseling to patients with chronic illness	The researchers found that the ELNEC Curriculum statistically positively affected the attitudes of the nursing students regarding care of the dying patient. Attitude change was most significant in the younger student, and the student with no previous experience to death. Gender, degree, previous death education and type of	Following the intervention, the Simulation Intervention group scored higher than the Traditional Lecture group on cognitive skill. However , there was no significant difference on the level of confidence between the two groups	All students, in each group showed positive change in both self confidence and competence. There was no statistical significant difference between the mean self-confidence scores or the competence scores of students in the control or the intervention groups	The results from the facilitators and the students were conflicting. The facilitators believed the students to be uninvolved, and generally lacked participation. From the students perspective however, they felt the workshops were very beneficial and recommended strongly that these activities continue for classes in the future	All 12 studies showed that simulation techniques are a valid method of education. Only half of the studies were able to show with a statistically significant difference that simulation resulted in additional gains in knowledge, critical thinking and perceived clinical confidence, when compared with another teaching strategy. When compared with traditional lecture,

		program were not significant in attitude change				simulation did show significant differences in gains of knowledge. When compared with other active learning strategies, there were not statistical differences
Author Conclusions / Implic-ations of Key Findings	Author stresses that Nursing Education should include the topic of sexual counseling in their curriculum	Authors believe that the findings from this study are consistent with other studies that show that End-of-Life education interventions can improve the attitudes toward care of the dying patient and family	The authors stressed the importance of active, experiential learning methodologies. The Simulation Intervention group showed statistically greater gains in gaining cognitive skills. The point was made that simulation as a teaching strategy is best done in small groups, and thus is difficult to accomplish with large class sizes. The authors suggested that a good follow-up study would look at the difference in	The authors found that student self-confidence and competence increased during the semester, regardless of traditional or simulation laboratory enrollment. The lack of statistical significance in student self-confidence and clinical competence across laboratory groups indicated that these entry-level learners progressed equally regardless of the teaching mode. The authors stated that there should be further consideration into the use of expensive simulation	The authors felt the reflective and experiential learning activities were beneficial in teaching end-of-life care to nursing students. They recommend that this study be repeated with a research framework in the future	All included studies reported that simulation is a valid teaching learning strategy. Simulation does show significant advantages over traditional lecture

			the two intervention groups when actually care for a client with an MI	equipment with student learning foundational skills, and perhaps the place for simulation is with students who are more advanced in the nursing curriculum		
Strengths/ Limitations	Majority of participants were female.	The author states that a major strength of this study is its relevance to current trends in healthcare and the emphasis to improve care for individuals who are dying.	The students were not randomly assigned to the intervention group.	Well designed study. Limitations included the relative small samples.	Not a research design.	Limitations: Only one of the 12 studies reviewed was a high quality level II design. The rest were level III evidence or lower. Inadequate sample size.
Funding Source	Not discussed.	None discussed	None discussed	None discussed	None discussed.	None.
Comments	My interest in this article was to see how others are measuring "level of comfort" among nursing students. This researcher used a Likert scale	This article is very relevant to my topic. I will research the tool that was used on "Attitudes" and possibly change my PICO question to address the "attitudes", rather than the "level of comfort"	This article is relevant to my topic. I liked the example of the "Confidence Level" tool that was used	Interesting study. Not sure of the applicability to my capstone	Interesting article. Good comments on the difficulties we have in teaching the affective content in a nursing curriculum	This article has numerous great points that justify the use of simulation in nursing education

Article Title	"Comfort Levels of Nursing Students Regarding Clinical Assignment to a Patient with AIDS"	"Expanding Simulation to Teach Family Nursing"	"Stress Sources in Nursing Practice. Evolution During Nursing Training"	"The Simulation Imperative of End-of-Life Education"	"An Exploration of the Relationship Between Knowledge and Performance-Related Variables in High-Fidelity Simulation: Designing Instruction That Promotes Expertise in Practice"	"Education on End-of-Life Care in the medical Curriculum: Students' Opinions and Knowledge"
Journal	Nursing Education Perspectives	Journal of Nursing Education	Nurse Education Today	Clinical Simulation in Nursing	Nursing Education Perspectives	Journal of Palliative Medicine
Author/ Year	Durkin, A. (2004)	Eggenberger, S. & Regan, M. (2010)	Gorostidi, X., Egilegor, X., Erice, M., Iturriot, M., Garate, I., Lasa, M. & Cascante, X. (2007)	Hamilton, C. (2010)	Hauber, R., Cormier, E. & Whyte, J. (2010)	Hesselink, B. Pasman, R., Van Der Wal, G., Soethout, M. & Onwuteaka-Philipsen, B. (2010)
Database & Keywords	Cinahl Nursing Students & Level of Comfort.	Cinahl Simulation & Nursing.	Cinahl Nursing Students & Stress	Cinahl Simulation and End of Life Care.	Cinahl Simulation	Cinahl End of Life Care
Research Design	Descriptive, non-experimental	Descriptive, non-experimental	Prospective, Cohort Study.	Not a research article	Quasi Experimental	Retrospective, descriptive, non-experimental
Level of Evidence	Level 5	Level 6	Level 4	Level 7	Level 4	Level 6
Study Aim /Purpose	To determine the comfort level of nursing students in caring for patients with HIV/AIDS.	To determine if simulation is an appropriate pedagogy for educating nursing students on family nursing care.	The purpose of the study was to determine the student nurse perception of stressors associated with clinical experiences.	Review of the literature on end-of-life nursing care for a patient and family. The article defends the use of simulation as an effective strategy for teaching student nurses all aspects of	To look at the relationship between measures of knowledge and ability to transfer that knowledge to nursing practice.	To determine the opinions of medical students regarding: -Quantity and content of education on end-of-life care in the curriculum. Determine the medical student's

				end-of-life care.		knowledge of different aspects of the euthanasia act.
Popula-tion Studied/ Sample Size/ Criteria/ Power	A non-randomized sample of nursing students from three baccalaureate nursing programs. 122 students were sent question-naires, and all students participated. Participation was voluntary and anonymous.	Nursing students enrolled in Pediatric, Medical Surgical, Critical Care and Emergency clinical courses. The number of students participating in the study was never mentioned.	Entire nursing student population that was registered for the first year courses during the 1999-2000 academic school year. Participation was voluntary and question-naires were anonymous. Of the 130 students who were enrolled, 69 students completed all four surveys and were counted in the study.	NA	Participants were randomly selected from a pool of nursing students who volunteered to participate. The sample consisted of 15 students who were in the beginning of their third semester of nursing courses in a baccalaureate nursing program. Each student had completed a semester of fundamental nursing course and one semester of the adult health I course.	Out of 204 medical students enrolled in their final year of medical school, 176 responded to a questionnaire. Convenience sample, not randomly selected. There were a variety of experiences related to palliative care and end-of-life among the participants. One quarter of the students had previously taken an elective course, "Terminal and Palliative Care".
Methods/ Study Appraisal/ Synthesis Methods	122 students were sent a questionnaire with a cover letter. Students were to return the questionnaire (voluntary). The author modified the Nursing Care Comfort Scale. Students were to rate their personal comfort level regarding 18 items on a 5-point Likert	Simulation scenarios were constructed that included a family component. Two students at a time were assigned a scenario based on the specialty of their clinical course. Simulation experiences were implemented and video-taped.	Three year study. Stressor Questionnaires (KEKAK & STAI) were administered to students on four separate occasions; at the beginning of course-work, at the end of the first year of nursing school, at the end of the second year, and at the end of their	NA	A clinical scenario related to congestive heart failure was developed by the authors, and validated by other faculty members. The students had to admit the client and complete all tasks in the admission orders while responding to the client needs.	204 medical students at the VU University Medical School in Amsterdam were given a questionnaire. 176 students returned the questionnaire. In the questionnaire, students were asked their opinions regarding quantity and content of end-of-life care education

	Scale. Scores on individual items were tabulated.	Two students played the role of the family members. Two students were observers and made comments on the scenario and the care of the family. Two faculty members viewed the videotapes of the scenario, looking for family skills and competencies in family nursing care. There were no tools mentioned in the article for student-observer or faculty evaluations.	nursing school program. Mann-Whitney U test and Wilcoxon test were used for statistical analysis		Participants were videotaped and recorded. Transcripts of verbal reports were made. Access to the audio and video tapes as well as the transcripts was limited to immediate research team. Two physiologic variables most associated with the patient outcomes, mean arterial blood pressure and oxygen saturation were used as indicators of clinical performance during the simulation exercise. Student performance in the simulation experience was compared, using bivariate correlations, to student course grades and scores on standardized assessment tests. The purpose was to determine if there was a relationship between knowledge and clinical performance. Scores from Fundamentals	on a three-point Likert scale. Questions were also included regarding the knowledge about the euthanasia act and other end-of-life issues. Descriptive statistics were used to derive the data.

					and Adult Health I were used in comparison of the performance.	
Primary Outcome Measures and Results	The author felt the comfort scale shed light on the comfort level of the nursing students in caring for HIV/AIDs patients.	The authors of this project described the following as results: Students exhibited varying levels of competence in providing family nursing care. Some students recognized the central nature of the family in the illness experience, whereas others paid no attention to the family. Students had divergent viewpoints of the role of the family in assessment and teaching interventions. Students who played the role of the family gained an understanding and appreciation for the importance of family care. Faculty who viewed the video tape felt the experience was	Factors which appear to be the most stressful at the beginning of studies, remain most stressful at the end, and in the same order of importance. Results showed that in general, situations cause less stress at the end of studies than in the beginning. Factors that were perceived to be the most stressful included: • Lack of competence • Uncertainty and impotence • Emotional involvement • Being harmed by the relationship with patients • Lack of control in relationships with patients • Contact with suffering	NA	Adult Health I grade showed a direct relationship between knowledge and performance, suggesting that acquisition of knowledge played a role in performance that will be associated with better patient outcomes. However, success in the Fundamentals course was not associated with high levels of clinical performance.	Almost all of the students indicated that it is important to include palliative care and euthanasia content in the curriculum. 55% of the students indicated that the quantity of education on end-of-life care in the basic curriculum was moderate. 60% of the students believe that insufficient attention was paid to specific topics such as advanced directives, commun-ication skills and palliative sedation.

		beneficial and should be continued as a means of teaching family nursing care.	These findings are consistent with other studies in the past. The factor students reported feeling most stressful about is lack of competence. Factors which significantly decrease do so during the first two years of studies. Slight increase in the stressor ratings from the end of the second year to the end of the third year (prior to graduation). There are some insecurities and fears that occur upon finishing training and starting professional activities.			
Author Conclusions/ Implications of Key Findings	The author believes that educational interventions can improve students' attitudes and comfort levels, and therefore suggests that faculty find ways to effectively educate	Author believes that even with much discussion in lecture regarding the importance of including the family in the care of the patient, students showed limited ability	Authors found that lack of competence was the number one stressor from beginning to end of the nursing program. Author stresses that clinical training	The author calls for all nurse educators to better prepare student nurses to care for patients in their end-of-life journey. Following a review of the literature, the authors state that most textbooks and	The authors found that students who excelled in the Adult Health I course achieved superior performance ratings in simulation, however, the same did not hold true for those students	Almost all medical students (98%) were of the opinion that education on palliative care is important. Students also felt that education on communicatio n with terminal patient was

	patients on sensitive topics such as HIV/AIDs.	to care for the family in the simulation experience. Therefore, the author believes that traditional lecture is not sufficient in teaching concepts such as family care. Author believes that simulation is an effective pedagogy capable of teaching family nursing.	should allow "time to learn".	most nursing curriculums do not adequately address all aspects of end-of-life care. The students be given an opportunity to anticipate personal reactions and develop appropriate coping mechanisms prior to graduation. The authors advocate for the use of simulation as an effective strategy to teach all aspects of end-of-life care.	who excelled in Fundamentals. The authors believe that Fundamentals course focuses on mastery of procedural skills and relies on implicit memory. The authors believe that courses that rely on memory do not encourage transference into clinical practice.	lacking. The author believes that more attention must be given to this topic in medical schools.
Strengths/ Limitat-ions	This study was only a survey that was used to determine the students level of comfort.	The study design was extremely weak.	Limitations: This study was done in Spain. There may be a cultural component that may not extrapolate to other cultural settings.	NA	Small sample size. There is a possibility that students shared information with each other because this study was run over a two week period of time.	This study focuses only on one medical school in the Netherlands.
Funding Source	None	None	None mentioned	None	None	A grant from the Dutch Ministry of Health.
Comments	This non-experimental study used a Comfort Scale to assess level of comfort. I need to find this tool.	This article is applicable to my capstone because the students will be expected to primarily care for the family in my end-of-life scenario.	This article will help to show that the nursing student is vulnerable.	Great article for my Capstone project. This is a thorough review of the subject, including student nurse fears and anxiety, the importance of allowing the students the	Good article. This article is applicable to my capstone because it focuses on transference of what is learned in class, to nursing practice.	This study is not directly related to my capstone project, but does show that inadequate attention is given to end-of-life care in Medical Schools. Through the review of

				opportunity to experience end-of-life care in a safe environment, and the use of simulation to address the issue.		literature, the author states that only 11% of the medical schools in the United States require a mandatory rotation in palliative medicine, compared to 64% in the United Kingdom, 14% in Canada, and 19% in Europe.

Article Title	"Situating Theory in Practice: Student Views of Theory-Practice in Project 2000 Nursing Programmes"	"Systematic Review of Nursing Simulation Literature for Use of Learning Theory".	"New Graduate Nurse Perceptions of the Effects of Clinical Simulation on Their Critical Thinking, Learning, and Confidence".	"End of Life Issues Action: Impact of Education".	"Management of Common Symptoms at End of Life in Acute Care Settings".	"Simulated Death: An Innovative Approach to Teaching End-of-Life Care".
Journal	Journal of Advanced Nursing	International Journal of Nursing Scholarship	Journal Continuing Education for Nursing	International Journal of Nursing Education Scholarship	The Journal for Nurse Practitioners	Clinical Simulation in Nursing
Author/ Year	Hislop, S., Inglis, B., Cope, P., Stodart, B. & McIntosh, C. (1996)	Kaakinen, J. & Arwood, E. (2009)	Kaddoura, M. (2010)	Kurz, J. & Hayes, E. (2006)	Lee, N. & Washington, G. (2008)	Leighton, K. & Dubas, J. (2009)
Database & Keywords	Cinahl Nursing Student & Practice & Clinical	Ebsco Host Nursing Simulation	Cinahl Simulation & Nursing	Ebsco Host End of Life	Cinahl End of Life & Management	Cinahl Simulation & End of Life

Research Design	Qualitative Exploratory interviews	Systemic Review of Literature	Exploratory Qualitative Descriptive Design using a semi-structured interview method.	Quasi-Experimental, longitudinal study.	Not a research article	Non Experimental Discovery
Level of Evidence	Level 6	Level 5	Lever 6	Level 3	Level 7	Level 6
Study Aim /Purpose	Determine how the students relate content learned in didactic course to clinical practice. The authors believe that the majority of students have difficulty relating the course content to practice.	The purpose of this review of the literature was to determine how learning theory is used to design and assess learning that occurs in simulation. The other purpose for the review of the literature was to determine if nurse educators view simulation as a teaching modality as a learning opportunity.	The purpose of the study was to explore new graduate nurses' perceptions of factors that helped to promote critical thinking, learning, and confidence throughout a six month critical care nursing orientation. The author wanted to know how the new graduates characterize the role of clinical simulation in influencing critical thinking, learning and confidence.	Measure the End-of-Life Nursing Education Consortium (ELNEC) Program's impact on the death anxiety, death attitudes and death knowledge scores of registered nurses.	The purpose of this article is to provide guidance on managing the common symptoms that are experienced in the end-of-life. The authors discuss treatment of the following symptoms: Pain Constipation Delirium Dyspnea Depression Fatigue	The purpose of this article is to gain insight into the success of this experimental teaching method.
Popula-tion Studied/ Sample Size/ Criteria/ Power	10% sample of the students enrolled. 10% would be 20 students. 19 students agreed to be interviewed. No mention was made on	The authors searched four literature databases looking for articles related to simulation and education between the years of 2000 – 2007. They	Convenience sample of ten new baccalaureate nursing graduates who were hired into the ICU over a one year period of time.	The authors used an intervention and a control group for this study. The Intervention group included 26 registered nurses who attended the ELNEC	NA	Sixteen students enrolled in a one credit elective undergraduate nursing course titled, "Caring in Times of Death, Dying and Bereavement".

	how the students were selected.	found 650 articles on their first broad search, then narrowed the search further looking for nursing simulation articles, written in English. The search then yielded 120 articles. The authors further narrowed their search looking for articles that mentioned a learning theory associated with simulation. They found 16 articles that met their search criteria.	The participants had to graduate from an accredited nursing school and pass their NCLEX examination. They were expected to be novice nurses, without previous experience as a registered nurse. Participation was voluntary and participants signed an informed consent. 100% of the new graduates hired to work in the ICU consented to participate. The study setting was a large hospital with a well-developed clinical simulation center.	Program. The Control Group consisted of 34 nurses who attended an unrelated nursing conference, offered by the same organization. Both groups were 100% female with an average age between 48 – 49 years. Both groups were primarily Caucasian. No significant education difference between the intervention and control group.		All students in the course were included. Students were Sophomore, Junior and Senior level nursing students.
Methods/ Study Appraisal/ Synthesis Methods	Qualitative approach, using a semi-structured interview was conducted. The interviewers first asked general questions related to the	The authors reviewed the 16 articles and made an evidence table, which included the authors, purpose of the simulation, evaluation	The participants filled out a demographic questionnaire at the beginning of the critical care nurse orientation program. The training	All participants completed a demographic sheet. Knowledge was measured using a Visual Analog Scale (VAS). Death anxiety was measured using the Revised	The article focused on symptom management for the patient in their end-of-life journey. The goal of the article is to enhance quality of life for the	The teaching strategies in this elective course included lecture, videos, readings, case studies, student presentations and a

course and clinical. Interviewers hoped that the participants would feel relaxed during the questioning, so the initial questions were very general. Following the general questions, the interviewers asked the students more specific questions on whether the course material was useful in clinical.	method, learning theory, findings relative to student learning and if the theory actually supported the simulation purpose.	lasted six months, and included eight full days of simulation experience, followed by debriefing and evaluation. Semi-structured interviews were conducted at the end of the training program, at a convenient time for the participant. Interviews were recorded and transcribed.	Death Anxiety Scale (RDAS). Death attitude was measured using the Death Attitude Profile-Revised (DAP-R) scale. The intervention group completed surveys prior to the program, at the end of the program, six and twelve months following the program. The control group volunteered to complete the same set of surveys during the same time points. Data were analyzed using t-tests, and chi-square tests to measure differences between research and control groups at each time point. The ANOVA and Bonferroni method were conducted to examine differences within groups across time.	terminally ill patient. The authors present statistics from numerous studies that support the premise that symptoms are not addressed effectively in this population and most patients experience symptoms that could have been controlled with appropriate treatment.	simulated clinical experience. This article focused on the students' responses to the simulation experience. The scenario depicts a middle-aged woman with metastatic ovarian cancer. Her daughter is present at the bedside. The scenario progresses through death of the patient, followed by notification of the family and comforting the bereaved. Students were expected to assess the patient and family, evaluate data, intervene and document their care. Following the scenario, debriefing took place which allowed the students to reflect. Student responses and an evaluation tool were used to compile the data for this article.

Primary Outcome Measures and Results	Most participants answered the questions similarly. Students provided examples in their discussions of when and how their theory content was relevant in clinical practice.	The learning theories that were used in these articles, included: *Experimental Situated Learning (Kolb) Experiential Learning (Kolb) Situated Learning (Lave & Wenger) Adult Learning Theory (Knowles) Change Theory (Lewin) Confidence/Self Efficacy Theory (Dewey/Radwin) Multiple Cognitive Style Theorists (Pask & Scott, Biggs) Self-Efficacy Theory (Bandura) Reflective Thinking and Feedback (Brookfield) Novice to Expert (Benner) Constructivist Learning Approach (Fosnot, Driscoll) Learning through Reflection (Oliffe) Information Processing (Biggs)*	The results of the study showed that the participants viewed simulation as a key factor in developing critical thinking skills, learning and building confidence. Most of the participants perceived simulation as a strategy that enabled them to fill the gap between theory and practice. The participants believed that the debriefing (verbal feedback) following each simulation experience assisted their learning.	Intervention group death anxiety score increased immediately post-program, decreased 6 months later and returned to pre-program levels at 12 months. Death attitudes varied. Knowledge levels improved significantly. The control group had steady increases in death anxiety scores.	The authors present treatment options for the symptoms of pain, constipation, fatigue, depression, dyspnea and delirium.	Three major themes emerged from the analysis of the evaluation data, which included impact of family presence, value of realism and self-efficacy. The students commented that the presence of the family positively affected their learning by allowing them an opportunity to practice providing support to the family and assisting them with their grief. The students commented that the realistic nature of the experience also positively affected their learning. Students also commented that the simulation activity made them think and assisted their learning.

		Out of the 120 articles found on nursing simulation, the authors found that 94 of the articles was referring to simulation as a teaching method or strategy, as opposed to a learning opportunity (with a learning theory). Therefore the authors conclude that simulation is most commonly used as a teaching modality.				
Author Con-clusions/ Implicat-ions of Key Findings	The main conclusion that the authors cited from the interviews, was that timely and relevant practice is necessary to make meaning out of the theory concepts. Without timely practice, the theory content remains nebulous. The authors suggest that clinical practice is crucial and	The authors encourage faculty who are involved in the development of simulation to initially reflect on the purpose of the simulation. Simulations that are focused on student-centered learning may benefit from the framework of a learning theory. The authors state that learning-based	The author concluded that the new graduate nurses perceive clinical simulation as an effective strategy to promote learning, leadership skills and critical thinking skills. The authors encourage the use of simulation to assist student nurses and registered nurses to gain experience in dealing with	The authors were surprised by the increase in the death anxiety scores immediately after the intervention with the research group. They recommend that evaluation is not done immediately following an educational offering.	NA	The authors concluded that the simulation exercise following the didactic presentation helped to enhance the learning. The authors recommend that more studies should be done to determine the impact of this exercise.

	must be timely.	simulations provide opportunities to enhance higher-order thinking and critical problem-solving.	varied complex disease processes and advanced nursing skills.			
Strengths/ Limit-ations	Small group of students. This study was done in Scotland.	This is not a research study, just a review of the literature looking at theory-supported simulation designs.	Small sample size from one agency.	Limitations: High subject attrition, lack of data depth, non-random sampling, lack of male representation.	Not a research study. This article does discuss best practices in end-of-life care.	Very weak research. No tools were specifically developed or used, although the authors did post the debriefing questions that were asked following the simulation experience.
Funding Source	None mentioned	None	None	None mentioned	None	None
Comments	This study supported the Situated Cognition hypothesis, that states that abstractions lose meaning out of context. This study was relevant to my capstone because I believe that the students will benefit from practicing in the simulation lab following a traditional lecture on end-of-life care. I believe that lecture	This article provides an overview of how various theories can be used to support simulation.	Good article on the benefits and participant perceptions of simulation. Also a good article that discusses Qualitative Research Designs.	Great article on the benefits of education regarding end-of-life issues.	Great article. Includes appropriate treatment options to enhance quality of life for patients in their end-of-life journey.	Great article and very applicable to my capstone. Not a strong research article, but otherwise has great information.

	content does not transfer easily into a clinical setting, whereas experience in the simulation lab will be more likely to positively allow transference.					

Article Title	"Assessing Nurses' Attitudes Toward Death and Caring for Dying Patients in a Comprehensive Cancer Center".	"Simulated Death: An Innovative Approach to Teaching End-of-Life Care".	"Introducing Nursing Students to Pediatric End-of-Life Issues Using Simulation".	"Care of the Dying: A Positive Nursing Student Experience".	"Nursing Education: The Experience, Attitudes, and Impact of Caring for Dying Patients by Undergraduate Argentinean Nursing Students".	"Global Efforts to Improve palliative Care: The International End-of-Life Nursing Education Consortium Training Programme".
Journal	Oncology Nursing Forum.	Clinical Simulation in Nursing.	Dimensions of Critical Care.	MedSurg Nursing.	Journal of Palliative Medicine.	Journal of Advanced Nursing.
Author/ Year	Lange, M., Thom, B. & Kline, N. (2008)	Leighton, K. & Dubas, J. (2009)	Lindsay, J. (2010)	Mallory, J. & Allen, C. (2006)	Mutto, E., Errazquin, A., Rabhansl, M. & Villar, M. (2010)	Paice, J., Ferrell, B., Coyle, N., Coyne, P. & Callaway, M. (2007)
Database & Keywords	Cinahl. FATCOD Scale	Cinahl Simulation & End of Life	Cinahl Simulation & End of Life	Cinahl Nursing Students & End of Life	Cinahl Nursing Students & End of Life	Cinahl End of Life & Best Practices
Research Design	Descriptive, Quantitative.	Non-experimental Discovery	NA	NA	Descriptive, Quantitative	Descriptive Quantitative
Level of Evidence	Level 6	Level 6	Level 7	Level 7	Level 6	Level 6
Study Aim /Purpose	To assess how nurses employed in a	The purpose of this article is to gain	This was not a research project. The	The goal of this article was to provide a	The goals of the study were to establish:	The goal of this study was to determine

	comprehensive cancer center feel about death and caring for dying patients. Examine the relationship between the nurse's attitudes toward caring for the dying patient and demographic factors.	insight into the success of this experimental teaching method.	author shared her strategy of using simulation in the classroom to teach Pediatric End-of-Life issues.	guide to staff nurses and clinical instructors on how to best assist a nursing student to care for a dying patient and family. With appropriate guidance during an end-of-life experience, the nursing student can gain greater personal growth and better attitudes in caring for the dying patient.	1. Undergraduate nursing students' experience and attitude toward dying patients and training in end-of-life issues. 2. Students' wishes regarding care of terminally ill patients and their future caring approaches in the relationships with them 3. The opinion about the quantity and content of end-of-life care in the curriculum.	feasibility and effectiveness of the ELNEC International training conference in providing training and support materials so that end-of-life care world-wide can improve.
Population Studied/ Sample Size/ Criteria/ Power	Convenience sample of 355 inpatient and outpatient oncology nurses who work in a 432 bed comprehensive cancer center in New York. All registered nurses employed throughout the hospital were invited to participate during annual RN competency review days or in new employee	Sixteen students enrolled in a one credit elective under-graduate nursing course titled, "Caring in Times of Death, Dying and Bereavement". All students in the course were included. Students were Sophomore, Junior and Senior level nursing students.	This teaching/learning strategy has been used for six semesters to the students in a Pediatric Course. Over the six semesters, the population has grown to include medical students and respiratory therapy students.	Nursing students, practicing nurses and clinical instructors were the target of the article. There was no study performed.	680 nursing student who were enrolled at eight schools of nursing in Buenos Aires, Argentina, during the 2008/2009 academic year. These eight schools share a similar curricula of 5 years. Education on palliative care is not included in the curricula in any of the eight schools. The students were from first to fifth year in	Convenience sample of 38 nurses from 14 Countries. The sample were participants of the first ELNEC-International Conference. A call for attendees was distributed world-wide through various institutes. Criteria for inclusion were that they had to be nurse leaders, and had to be able to speak, read

	orientation. 93% of the participants were female. 75% of participants had been a registered nurse for more than 5 years.				their nursing education program. Students were chosen randomly, although the article does not say how that was done. Participation was voluntary and anonymous. Of the 680 students chosen for the study, only 1.5% did not return the surveys. The participants were primarily female (86%) and the mean age of the participant was 28 years.	and comprehend English. More than 60 applications were received, and 38 were accepted, from 14 different Countries. None of the participants reported having any palliative care content in their basic nursing education. The evaluation tools were coded to protect anonymity of the participants.
Methods/ Study Appraisal/ Synthesis Methods	Participation was voluntary and anonymous. Each participant received two instruments (FATCOD and DAP-R) and a demographic questionnaire. Data was collected over a one-year period of time. Complete surveys were to be returned to a labeled box. Descriptive statistics were used to	The teaching strategies in this elective course included lecture, videos, readings, case studies, student presentations and a simulated clinical experience. This article focused on the students' responses to the simulation experience. The scenario depicts a middle-aged women with	At the time the article was written, the author had implemented this classroom simulation six semesters. Lindsay uses a baby high fidelity simulation manikin and student actors to play the roles of parents, physician, respiratory therapy, pharmacy… Following a lecture presentation	NA	A "semi-structured" 24 question tool was distributed to the participants. Some questions were rated on a 10 point Likert Scale, other questions required a "yes/no" response, and some questions required essay-type answers. The statistical analysis was completed using ANOVA.	The program evaluation plan for ELNEC-International paralleled that of the core ELNEC project. The plan included a Course Evaluation Form and Follow-Up evaluations in 6 and 12 months. The participants also were required to report on their activities related to end-of-life education at 4, 8 and 12

	analyze demographic information. The Kruskal-Wallis and the Mann-Whitney U tests were used to analyze survey data.	metastatic ovarian cancer. Her daughter is present at the bedside. The scenario progresses through death of the patient, followed by notification of the family and comforting the bereaved. Students were expected to assess the patient and family, evaluate data, intervene and document their care. Following the scenario, debriefing took place which allowed the students to reflect. Student responses and an evaluation tool were used to compile the data for this article.	on pediatric end-of-life, the simulation is presented which ends in a code and loss of the infant. The feedback from all students and faculty has been extremely positive.			months. All data was entered into SPSS and descriptive statistics were retrieved.
Primary Outcome Measures and Results	Results of the study were consistent with the Dunn et al. study of 2005. Years of working as an RN, age and years employed at a cancer center all emerged as the	Three major themes emerged from the analysis of the evaluation data, which included impact of family presence, value of realism and self-efficacy. The students	This activity has grown over the six semesters to include students and faculty from other disciplines	NA	Significant differences were evident between first and fifth year students. Fifth year students reported a less-satisfying relationship with their dying patients, and considered it as a less gratifying	The participants rated the program extremely high. The overall opinion of the program was 4.9 on a 1 – 5 point Likert Scale.

| | strongest indicators for a positive attitude toward caring for dying patients. | commented that the presence of the family positively affected their learning by allowing them an opportunity to practice providing support to the family and assisting them with their grief. The students commented that the realistic nature of the experience also positively affected their learning. Students also commented that the simulation activity made them think and assisted their learning. | | | occupation. Fifth year students also showed greater preference for avoiding emotional involvement with those patients, compared to first year students. The reason cited by the fifth year nursing students as the reason for the discomfort in caring for this population, is the inadequacies of preparation. 97% of the students surveyed considered that death and care of dying patients should be part of the professional nurse training, and the majority believed they had not received any training on end-of-life care. Students used terms like "sadness", "vulnerab-ility", "helplessness" when describing their feelings in caring for the dying patient and family. Students stated | |

					that they felt unprepared to care for the dying patient.	
Author Con-clusions/ Implicat-ions of Key Findings	The authors stress the point that the absolute number of our population who are elder will continue to increase. Nurses must be competent at caring for terminal patients and families. Authors recommend educational programs regarding care of the dying patient to foster a more positive attitude in younger, inexperienced nurses.	The authors concluded that the simulation exercise following the didactic presentation helped to enhance the learning. The authors recommend that more studies should be done to determine the impact of this exercise.	The future goal of the project is to build on the interdisciplin ary participation and address issues related to interdiscip-linary communic-ation.	The authors of the article provided a fairly thorough review of the literature on the inadequacies of end-of-life education in undergraduate nursing programs, the effects of education on the students' attitudes toward caring for the dying patient, and best practices in caring for terminally ill patients. The authors provided a review of the Transformative Learning Theory and its' application to end-of-life education for nursing students. The authors provided a case study example of how the staff nurse can methodically guide a student nurse in caring for a dying patient. Examples were provided on what the student nurse could say to the family, etc. The authors	The authors conclude that End-of-Life Care should be included in the curriculum and that accrediting bodies should require this content. Authors believe that students with more experience in dealing with terminally ill patients, without proper training, try to protect themselves in order to avoid emotional involvement. Students are more likely to withdraw from the care of the dying and tend to limit the relationship to the strictly necessary if not properly educated on end-of-life care.	The authors concluded that the conference was beneficial to all participants and should continue in the future. All participants came from very diverse cultures and healthcare environments, and English was a second-language for all of them. The discussions were lively and respectful. The authors state that there is an urgent need to improve the care of the dying throughout the world.

				suggested role play as a means to give the students an opportunity to practice caring for a dying patient in a safe environment.		
Strengths/ Limitat- ions	Respondents were primarily female. Majority of participants had more than 5 years nursing experience.	Very weak research. No tools were specifically developed or used, although the authors did post the debriefing questions that were asked following the simulation experience.	This is not a research article. The author should do some research on this strategy.	This is not a research article. The authors should do some research based on recommendatio ns provided.	Limitations: The authors did not cite any limitations, however, I believe the limitations to include: The "semi-structured" tool The large sample of women in the study. The study was in Argentina	Limitations: This study was basically looking at course evaluation results. There seems to be little statistical significance.
Funding Source	None mentioned	None mentioned	None mentioned	None mentioned	None mentioned	ELNEC was funded through a grant by Robert Wood Johnson Foundation. No mention was made on who funded this International activity.
Comments	Not directly related to nursing students or simulation, however is great information recommendin g education in end-of-life.	Great article and very applicable to my capstone. Not a strong research article, but otherwise has great information.	Good article. Depicts clearly a strategy using classroom simulation to address pediatric end-of-life issues.	This is another great article that is applicable to my capstone. It clearly states that nursing students and practicing nurses feel uncomfortable in caring for the dying patient and	Another great article that portrays the issue that nursing students feel ill-prepared to care for the dying patient and family. The results were interesting because the	Not real applicable to my capstone. Does describe the ELNEC curriculum somewhat. Also reinforces that undergraduate nurse training is inadequate.

| | | | | family. The literature review was great! Examples are provided on how best to assist students to care for the dying patient. Although there is no mention of simulation as a means to educate students, the author discusses role-play in a safe environment as an effective strategy. | fifth year students were more withdrawn and more uncomfortable than the first year students because they felt they were not prepared adequately. | |

Article Title	"Character-istics of Effective Simulated Clinical Experience Instructors: Interviews with Undergrad-uate Nursing Students".	"The Perceptions of Undergraduate Student Nurses of High-Fidelity Simulation-Based Learning: A Case Report from the University of Tasmania.	"Theory-Based Research of High Fidelity Simulation Use in Nursing Education: A Review of the Literature".	"Theory Construction Based on Standards of Care: A proposed Theory of the Peaceful End of Life".	"Investigating the Use of Simulation as a Teaching Strategy".	"Integrating Simulated Teaching/ Learning Strategies in Undergraduate Nursing Education".
Journal	Journal of Nursing Education	Nurse Educator Today	International Journal of Nursing Education Scholarship	Nursing Outlook	Nursing Standard	International Journal of Nursing Education Scholarship
Author/ Year	Parsh, B. (2010)	Reilly, A. & Spratt, C. (2007)	Rourke, L., Schmidt, M. & Garga, N. (2010)	Ruland, C. & Moore, S. (1998)	Shepherd, C., McCunnis, M., Brown, L. & Hair, M. (2010)	Sinclair, B. & Ferguson, K. (2009)
Database & Keywords	Cinahl Nursing Students & Simulation	Cinahl Simulation & Nursing Students.	Cinahl Nursing Students & Simulation	Cinahl End-of-life & theory	Cinahl Nursing Students & Simulation	Cinahl Nursing Students & Simulation

Research Design	Qualitative Exploratory interviews	Qualitative Exploratory interviews	Review of the Literature.	This is not a research article, but rather discussed the development of midrange theories, and more specifically, Peaceful End of Life.	Longitudinal comparative quasi-experimental design.	Quasi-experimental , mixed method study (Quantitative and Qualitative)
Level of Evidence	Level 6	Level 6	Level 5	Level 7	Level 6	Level 3
Study Aim /Purpose	This study examined nursing student perceptions of the characteristics of an effective instructor in the simulation environment. Simulation has been shown to be an effective learning strategy, but is ineffective if improper planning and implementation are factored in.	To investigate the perceptions of nursing students and nursing faculty of their first exposure and experience with high-fidelity simulation	The purpose of this literature review was to gauge the extent to which theory-based research is contributing to our understanding of High Fidelity Simulation use in nursing education.	Purpose of the article is to discuss development of the middle range nursing theories from Standards of Care. The Peaceful End of Life theory is used as a prototype example.	The aim of the study was: 1. Compare the performance of two groups of pre-registration nursing students exposed to two different methods of simulation (role play versus the use of a manikin). 2. Provide an evidence base to assist in the selection of appropriate teaching methods within pre-registration nursing programs. 3. Inform resource allocation with regard to teaching clinical skills.	The purpose of this study to determine the effect of an educational strategy that combines classroom and simulated learning activities on nursing students: • Perception of self-efficacy for nursing practice • Satisfac-tion, effective-ness and consistency with their learning styles and the interven-tion.

Popula-tion Studied/ Sample Size/ Criteria/ Power	8 students from two universities in Northern California. All participants had experience with human patient simulation. There was no mention of the level of nursing student or how they were chosen for participation. Anonymity was assured.	Second year undergraduate nursing students enrolled in a case-based curriculum. An invitation to participate was extended to all second-year undergraduate nursing students. The researcher limited the participants to 21. There was no discussion on how the selection was made. None of the students had any experience with high fidelity simulation.	Out of 87 articles, 47 were determined to be theory based.	NA	All third year students in a baccalaureate program were invited to participate, of which, 28 students agreed. Students then were allocated to a site (A or B). Participation was voluntary and the students were informed that they could discontinue participation at any time.	Convenience sample of 250 undergraduate baccalaureate nursing students, in their second year of the nursing program. This school has two sites, and therefore the students from site A, were the intervention group and the students from site B were the control group. There were 125 students at each site. Although the students were required to attend lecture and simulation activities, completion of the questionnaires and reflective reviews were voluntary and anonymous. None of the students had any prior experience with simulation.
Methods/ Study Appraisal/ Synthesis Methods	The students were interviewed. They had the option of face-to-face, telephone or e-mail interviews. The participants were asked three open-	Two scenarios were designed and implemented using the Laerdal Vital-Sim technology. Scenarios were developed collaborativel	Literature review was conducted on CINAHL using the search words: high-fidelity simulation and nursing. The authors looked for any article between 1989	This middle range theory was created from clinical practice standards that were developed by a group of nurses who worked on a surgical gastroenter-ology unit.	The 28 students were divided into two groups, A (role play) and B (high fidelity simulation). The study took place in two phases, the first was June, 2008 and the	Five lecture topics were chosen for this study. The control group attended a two hour lecture on each of the five topics. The intervention group attended

ended questions about characteristics of effective Simulation Instructors. From review of the interviews, six themes emerged as important characteristics of a simulation instructor.	y with content experts. The students were paired and completed two scenarios in a 40 minute timeframe. Following the scenarios, the students were provided with verbal feedback as well as a written log of the activities accomplished during the scenario. Following the scenarios, each student participated in two focus group interviews. One interview was three days after the simulation experience, and the second interview was eight weeks later. The focus of the interviews was on the students' perception of the simulation experience, and whether they believed it to influence their learning in clinical practice. Focus group	and 2009. This beginning search yielded 87 articles. From those articles, the authors excluded any that were not empirical research, in which data had been systematically collected and analyzed to answer a research question. The authors ended up with 47 articles that met the inclusion criteria. The authors then divided the articles up into three categories: 1. Adequate use of theory 2. Minimal use of theory 3. No use of theory	Half of the patient population cared for by these nurses were diagnosed with cancer and were considered terminal, yet the nurses had no clinical guidelines to provide end-of-life care. Within the Peaceful End of Life Theory, nursing interventions are aimed to promote positive outcomes in five areas, which include - being free from pain - experiencing comfort - experiencing dignity and respect - being at peace - experience a closeness to significant others and those who care These five areas are identified as the concepts of the Peaceful End of Life Theory. The five concepts of the Peaceful End of Life Theory are further	second phase was January, 2009. During each phase, nursing scenarios were implemented that focused on measuring and assessing vital signs. The scenarios were designed to assess the students' knowledge, understanding, decision making and problem solving related to taking and analyzing the vital signs. The students performance in the scenarios were recorded and viewed by two external assessors competent in clinical skills. Phase 2 was implemented after the students had six months of clinical practice. The study sought to establish whether there were any significant differences in performance between the two sites, measuring in the cognitive, motor and affective domain. Quantitative	a one hour lecture, and a one hour simulation experience for each of the five topics. Each simulation activity required the students to assess the patient, determine priorities for patient care, perform appropriate nursing interventions and evaluate patient responses. A ten minute debriefing took place after each simulation activity. Participants completed: - Demographic questionnaire - Modified "Baccalaureate Nursing Student Teaching-Learning Self-Efficacy Questionnaire. The Self-Efficacy questionnaire was administered pre and post lecture for the control

	interviews were audio-taped and transcribed. Data from the focus group interviews were analyzed.			defined, and prescriptors (nursing interventions) are suggested as a means to accomplish the five concepts.	and Qualitative data was gathered. Quantitative data was analyzed by a statistician using an independent sample t-test. The qualitative data was analyzed thematically by the researchers.	group, and pre & post lecture / simulation for the inter-vention group. This tool is a Likert scale and the students rate themselves from "Not confident at all" to "Very confident". • Satisfaction survey developed by the researcher. This survey looked at effective-ness, satisfaction and consistency with learning style. The intervention group was also asked to complete a reflective review of their learning after all five simulated learning activities.
Primary Outcome Measures and Results	Themes that emerged, include: 1. Personal-ity: patience, respect, support, sense of	Students were extremely positive regarding the simulation experience. They believed the experience to	The authors found that out of the 47 articles: 10% were rated "Adequate use of theory" 45% were rated	The Peaceful End-of –Life Theory is a middle range theory designed to provide practicing nurses with a	In the cognitive and motor domain, there was no significant difference between groups A (role play) and B	Quantitative Findings: • Groups were similar in age and composition. • All but one of the simulation

	humor. 2. Teaching Ability: Being able to explain pathophys-iology and app-ropriate patient care. Instructors should be able to foster critical thinking. 3. Evaluat-ion: Students prefer the simulation experience to be a "learning" environme nt whereas they believe that their clinical experience s are more for evaluation 4. Nursing Competen ce: The instructors should be knowledge able when develop-ing the scenarios and debriefing the students. 5. Inter-personal Relation-ships: Effective simulation instructors	increase their confidence and better prepare them for clinical practice. Students stated that active participation enhanced their learning. One student stated that her "adrenaline was going like it would have been in a real situation". Students commented that they prefer interactive learning to lecture type learning. Students also voiced that they liked being able to practice and make errors in a controlled environment.	"Minimal use of theory", and 45% were rated "no use of theory". A table is provided in the article that describes the various theories that were used by the researchers.	guide to care for this vulnerable population. The theory is very applicable and easy to assimilate.	(high fidelity simulation). However, in the affective domain (communicatio n and interpersonal skills), group A (role play) scored significantly higher than group B.	activities resulted in a significant increase in pretest/postt est self-efficacy scores for the intervention group. • 91% of the intervention group reported lecture/ simulation activity was effective or highly effective. Whereas 68% of the control group rated the lecture as effective or highly effective. • The intervention group noted 91% consistency between the lecture/ simulation activity and their individual learning style. Whereas the control group rated the learning style consistency for lecture alone as 76%. Qualitative Findings: Reflective reviews were

	engage the whole group of students in form-ulating decisions. They allow the students to feel more comfortable and more confident. Instructors should make the students feel more like a member of the team, as opposed to "just a student". One student said that a simulation instructor should be like a coach, who is engaging all members of the team and wants them all to succeed. Realism: The students mentioned the import-ance of realism in the clinical scenario.					completed by 12 students, at the researchers' request. The intervention group was extremely positive about the lecture / simulation combination. The control group participants requested more interaction and interactive activities in the classroom. Students asked for different teaching methods besides power-point.

Author Con-clusions/ Implicat-ions of Key Findings	Students interviewed appreciated the opportunity for student independence during simulation. They appreciated the gentle guidance of the simulation instructor.	Students appreciated the active learning opportunity. Authors believe that this learning strategy is advantageous, though more research is needed.	The authors concluded that theory-based research is minimal. Only 10% of the research studies were adequately based on a theoretical foundation. The authors recommend a wider application of theory-based research in nursing educations' use of simulation. The authors make the point that they are not criticizing inductive or descriptive research, but that the body of research is "tipped too heavily" toward descriptive studies.	Nursing students, as well as practicing nurses, need a framework that will assist in providing holistic care to the dying client. Ruland and Moore (1998) state that "The development of this theory is significant because it can guide nurses in selecting interventions that alleviate suffering and help patients make the last stage of their lives a meaningful experience" (p. 174). The Peaceful End-of-Life Theory contains relational statements that are measurable.	The authors found that both types of simulation were beneficial. They found that in the cognitive and motor domain, there was no significant difference between role play and high fidelity simulation. The researchers did find a significant difference in the affective domain between the two groups; role play scored significantly higher than high fidelity simulation. The authors recommend that educators should be mindful when selecting the most appropriate method of simulation.	Both lecture and the interventional strategy of lecture/simulation increased self-efficacy, but the intervention group showed a greater increase. The intervention group also showed greater scores on satisfaction with their learning and consistency with their learning style. The authors recommend active learning strategies to engage the student and enhance learning. There is not a lot of research on using simulation in the classroom and the authors believe this investigation should continue.
Strengths/ Lim-itations	Limitations: This study only included eight students. There was no mention of what level these students were in school. There was no mention of how these	Limitations: Small cohort of students. Strengths: The authors believed that this study was important because it provided pedagogical research to inform best practices in	Thorough review of the literature.	NA	Limitations: Small sample size from one institution.	Limitations: The authors report that this teaching methodology was extremely time-consuming and labor intensive for the faculty.

	students were chosen.	education.				
Funding Source	None mentioned.	None mentioned	None mentioned	None mentioned.	None mentioned	None mentioned.
Comments	Good article on effective character-istics of a simulation instructor. I felt it was weak research, but good information.	Good article. Relates well to my capstone.	Not directly applicable to my capstone, but I was looking for the various theories that are being applied to research in simulation.	The majority of this article focuses on how to develop middle range theories from Standards of Care. This is not applicable to my capstone project. However, the prototype theory that is discussed is the Peaceful End of Life Theory. This is the theory that will most likely guide my capstone project. I can find very little information on this theory. This article was written by Ruland, who is one of the original developers of the theory.	Interesting comparison between role play and high fidelity simulation. Justifies the significant learning that can take place with simulation. The authors make the point that student nurses must be ready for practice at the time of graduation/ registration. Employers are asking nurse educators to do a better job or preparing students for the real world of nursing. The authors suggest that simulation can bridge that gap. That is also my assertion in my capstone project.	Great article and great study. I saw a lot of similarities between this study and what I would like to do for my capstone. I could use this design as I move into planning my capstone.

Article Title	"Psychosocial Vital Signs: Using Simulation to Introduce a New Concept".	"The Power of Pretend: Using Simulation to Teach End-of-Life Care".	"Dealing with Death: First Encounters for First-year Nursing Students".
Journal	Nurse Educator	Nurse Educator	British Journal of Nursing
Author/ Year	Spade, C. (2008)	Sperlazza, E. & Cangelosi, P. (2009)	Terry, L. & Carroll, J. (2008)
Database & Keywords	Cinahl Simulation & Psychosocial	Cinahl Simulation & End of Life Care	Cinahl Nursing Students & End of Life Care
Research Design	This is not a research study, rather development of a concept	NA This is not a research study, but rather an article describing the use of simulation as an effective strategy for teaching end-of-life care to nursing students.	Qualitative: Descriptive phenomenology.
Level of Evidence	Level 7	Level 7	Level 6
Study Aim / Purpose	The purpose of the article was to introduce the concept of psychosocial vital signs.	Purpose of this project was to determine an effective education strategy for teaching end-of-life care to nursing students. Faculty wanted to design a realistic, nursing-focused, end-of-life simulation scenario. End-of-life experiences for nursing students are difficult to come by in a clinical situation. Not every student nurse will have an opportunity to care for a dying patient while in nursing school. Simulation can provide the opportunity for students to gain experience caring for this vulnerable population, in a safe environment.	The purpose of this study was to investigate first year nursing students' encounters and reactions to patient deaths.
Population Studied/ Sample Size/ Criteria/	NA	First year students of an Associate Degree Nursing Program in a rural community. Some of the students had	307 first-year nursing students from England were invited to participate in this study. Of the 307

Power		prior personal experience with dying persons.	students, 184 students participated.
Methods/ Study Appraisal/S ynthesis Methods	The author introduced the concept of Psychosocial Vital Signs (PVS). The universally accepted vital signs of blood pressure, heart rate, respiratory rate, temperature and oxygen saturations measure the patients' physical health. Incorporating this additional vital sign, PVS, guides the nurse to view the patient more holistically, including emotional, social, economic and spiritual aspects. PVS, a concept developed by the author, includes specific psychosocial cues that may affect health. These cues include: • Patient perception • Situational support • Coping • Anxiety The author believes that simulation is the perfect methodology to use for introduction of this concept. The author of this paper has developed what she calls the "PVS Content Bundle". The PVS Content Bundle contains three simulation scenarios, including learning objectives for 4 levels of nursing student competency, post-simulation discussion and debriefing questions and a list of references. Each scenario focuses	The goal of the project was to design, implement and evaluate an end-of-life scenario for first year nursing students. The goal was to develop an introductory level of exposure to death/dying. Included in the scenario were physiological, psychological, and ethical considerations related to death/dying. The role of the nurse in caring for the dying patient was stressed as well as the function of palliative and hospice care. The simulation was first piloted by 30 students, divided into groups of 4-6 students for each simulation. Each activity lasted 2 hours.	Between September and December, 2006, 184 students completed the questionnaire. They were then asked to participate in tape-recorded focus group discussions exploring their experiences of death. One researcher transcribed the interviews and both researchers checked them for accuracy. The two researchers independently analyzed the transcripts and determined central themes. The researchers then collaborated and merged their data and central themes.

	on an adult patient who is adjusting to a new diagnosis and treatment plan. The author provides examples of questions that the student or practicing nurse could ask of the patient when assessing the PVS. For example: • Patient Perception: "What does this mean for you?" • Situational Support: "Who is someone on whom you can depend in this situation?" • Coping: "How will you get through this?" • Anxiety: "How is this situation affecting you"?		
Primary Outcome Measures and Results	The author of this article shares that a group of accelerated nursing students who were exposed to PVS using simulation through a pilot project had positive responses.	The authors reported that: • This simulation activity heightened students' awareness of palliative and hospice care • Students' expressed increase in knowledge and comprehension of physical signs that occur with the dying patient, such as mottling and cold extremities • Many students were so moved by this experience that they had tears and felt emotion-ally challenged • Students reported appreciate-ion for this experience • The debriefing period allowed the students a chance to voice their fears and concerns in	The two major themes that emerged were abandonment and emotional impact. Abandonment included the student feeling abandoned by the clinical nurse, as well as feelings that the patient was being abandoned by the staff. Emotional distress resulted from personal distress and distress of the family. This distress affected student behaviors.

		caring for a dying patient	
Author Conclusions / Implicat-ions of Key Findings	The author states that PVS should be a taught as a fundamental skill because it will guide nursing students to view their role as more holistically.	The author concluded that simulation was an appropriate method of educating nursing students on end-of-life care. The author feels that students need some preparation before this simulation activity because of the huge emotional response exhibited during the scenario and debriefing.	The author believes that first death experiences have a lasting impact on nurses. The authors state that the difficulty is due to the caring role and not the individual's personal fear of death. Modeling of professional behaviors from the staff nurses had a big impact on the students. Students reported that the overall care of the dying patient was often "not good". Students interpreted that the staff often tried to stay busy with other tasks so they could avoid the dying patient.
Strengths/ Limitations	Limitations: The author shares that there is a need for further development of PVS incorporation into nursing curriculum. She encourages feedback from any faculty members who incorporate PVS into their curriculum.	This is not a research study, but could develop into one.	Limitations: Further research is needed. There is a national concern in England, just as there is in the United States that end-of-life care is inadequate.
Funding Source	None mentioned.	Simulation lab was funded through several grants. Funding source for this project was not specifically mentioned.	None mentioned.
Comments	I was extremely impressed with this additional vital sign and could see huge promise in guiding students to incorporate holistic care for their clients. I like the idea of having specific questions that could be asked of the	This is very applicable to my capstone. There are very few articles that talk about the use of simulation to teach end-of-life care.	This is a good article discussing the emotional impact that death and dying has on student nurses. The suggestion is made loud and clear that we, as educators, need to be aware of the impact that students feel following this experience.

patient/family either in simulation or in clinical. I often have students tell me that they don't know what to say to the patients. This article is indirectly related to my capstone project. I would like to teach the student ways of assessing the patient/family holistically and providing them with cues on appropriate things to say in difficult times.		

Levels of Evidence:

Level 1:	Systematic reviews/meta-analysis of all randomized controlled trials; clinical practice guidelines based on randomized controlled trials
Level 2:	Evidence from one or more randomized controlled trial
Level 3:	Evidence from a controlled trial; no randomization
Level 4:	Case control or cohort studies
Level 5:	Systematic reviews of descriptive /qualitative studies
Level 6:	Single descriptive or qualitative study
Level 7:	Expert opinion

Zaccagnini, M., & White, K. (Eds.). (2011). *The Doctor of Nursing Practice essentials: A model for advanced practice nursing*. Sudbury, MA: Jones & Bartlett Learning.