VICARIOUS LEARNING AND PERCEIVED SELF-EFFICACY AMONG
PRE-LICENSEURE NURSING STUDENTS
DURING PEDIATRIC END-OF-LIFE SITUATIONS

by

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ABSTRACT

Despite decades of acknowledgement among nursing academics and organizations, end-of-life (EOL) nursing education is significantly lacking. Insufficient EOL care education leaves nursing students feeling ill-prepared to adequately care for clients and their loved ones at EOL. Though the literature reveals a recent increase in didactic and simulation-related EOL education sporadically being integrated into nursing curricula, minimal research addresses important topics of pediatric EOL care and provision of therapeutic communication, considered critical to EOL care. End-of-life clinical experiences, particularly in pediatrics, are limited for pre-licensure nursing students. Though effective, simulations can be costly and timely to execute, are restricted by limited availability of space, and require facilitators who are adequately trained in provision of EOL care. Such barriers prompt the question as to whether there is a more cost and time-effective alternative to active simulation, by which students can gain improved self-efficacy in provision of therapeutic communication during pediatric EOL situations.

The literature has shown vicarious learning to provide students with opportunities to gain experience and knowledge through observation of their peers in simulated settings. This study specifically evaluated the effectiveness of vicarious versus active learning on pre-licensure nursing students’ perceived self-efficacy in providing therapeutic communication during pediatric EOL situations. Data collected over time with baseline Self-Efficacy in Communication During Difficult Situations Scale scores (SECS1), post-EOL simulation self-efficacy scale scores (SECS2), and post-simulation debriefing self-efficacy scale scores (SECS3) revealed no statistically significant differences in perceived self-efficacy within or between the
vicarious and active learner groups. Therefore, vicarious learning seems to be a viable pedagogical approach for providing pre-licensure nursing students important learning opportunities related to pediatric EOL care, as well as improved self-efficacy in providing therapeutic communication during difficult situations.
DEDICATION

“Consider it pure joy, my brothers and sisters, whenever you face trials of many kinds, because you know that the testing of your faith produces perseverance. Let perseverance finish its work so that you may be mature and complete, not lacking anything.”

James 1:2-4

This dissertation is dedicated to my beautiful children, Bryce and Brynna Gautney, and to my loving parents Dan and Patricia Barger. Without your enduring prayers, encouragement, patience, and selflessness, this accomplishment could have not been realized. God has truly blessed me through your love and the sacrifices you have made to help me fulfill my goal of a terminal degree in nursing education. I pray that I make you all equally as proud as you make me and that my drive and dedication inspire you to never give up on pursuit of your dreams. Always remember, with God all things are possible (Matthew 19:26).
**LIST OF ABBREVIATIONS AND SYMBOLS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AACN</td>
<td>American Association of Colleges of Nursing</td>
</tr>
<tr>
<td>ANA</td>
<td>American Nurses Association</td>
</tr>
<tr>
<td>ANOVA</td>
<td>Analysis of Variance</td>
</tr>
<tr>
<td>CARES</td>
<td>Competencies and Recommendations for Educating Undergraduate Students</td>
</tr>
<tr>
<td>$df$</td>
<td>Degrees of freedom</td>
</tr>
<tr>
<td>ELNEC</td>
<td>End-of-Life Nursing Education Consortium</td>
</tr>
<tr>
<td>EOL</td>
<td>End of Life</td>
</tr>
<tr>
<td>$F$</td>
<td>Test to determine if means are statistically different between two populations</td>
</tr>
<tr>
<td>G-Power</td>
<td>General Power Analysis</td>
</tr>
<tr>
<td>ICN</td>
<td>International Council of Nurses</td>
</tr>
<tr>
<td>IOM</td>
<td>Institute of Medicine</td>
</tr>
<tr>
<td>M</td>
<td>Mean</td>
</tr>
<tr>
<td>$n$</td>
<td>Sample size of a particular group</td>
</tr>
<tr>
<td>N</td>
<td>Total sample size</td>
</tr>
<tr>
<td>NCLEX</td>
<td>National Council Licensure Examination</td>
</tr>
<tr>
<td>NCP</td>
<td>National Consensus Project</td>
</tr>
<tr>
<td>$p$</td>
<td>Level of significance representing the probability of the occurrence</td>
</tr>
<tr>
<td>RWJF</td>
<td>Robert Wood Johnson Foundation</td>
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<tr>
<td>SD</td>
<td>Standard deviation</td>
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<tr>
<td>SECS</td>
<td>Self-efficacy in Communication During Difficult Situations Scale</td>
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<tr>
<td>Abbreviation</td>
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<tr>
<td>Sig.</td>
<td>Significance probability</td>
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<tr>
<td>SP</td>
<td>Standardized Patient</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
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ACKNOWLEDGMENTS

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I must also mention a word of thanks and encouragement to my classmates in Cohort Seven. It is so hard to believe we have been in this program five years now. Looking back, the time has truly flown. Though we began this incredible journey in 2013 as strangers, I want you all to know that I feel we are completing it as family.

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CHAPTER I
INTRODUCTION

Therapeutic communication is identified by dying clients and their loved ones as critical to end-of-life (EOL) care (Clayton et al., 2012). Thus, it is imperative for pre-licensure nursing students to have educational opportunities that support improved EOL education and self-efficacy, or one’s perceived ability to be successful under challenging circumstances (Bandura, 1986), regarding this essential element of EOL care. While clinical experiences with adult clients are plentiful for most nursing programs, adequate educational exposure to pediatric clients in clinical rotations can be challenging. Such challenges to pediatric clinical experiences include limited inpatient pediatric client availability, reduced pediatric clinical sites, and the restricted number of students allowed per site (Edwards, Boothby, Succheralli, & Gropelli, 2018; Kenny, Cargil, Hamilton, & Sales, 2016). Unless students are provided opportunities to participate in clinicals within hospitals specializing in critical or terminal pediatric care, pediatric EOL care opportunities for pre-licensure nursing students are extremely rare within clinical settings (Aldridge, 2017; Fabro, Schaffer, & Scharton, 2014).

Because of limited clinical access to pediatric EOL clients and the recognition that teaching pre-licensure nursing students about EOL care is essential (American Nurses Association [ANA], 2016; Institute of Medicine [IOM], 2015; Jeffers, 2014), simulation experiences aid in providing alternative pedagogical methods for EOL education dissemination, knowledge acquisition, enhanced communication skills, and improved self-efficacy (Gillan, Jeong, & Van
Simulations, however, have multiple barriers, including time, expense and laboratory space. Additionally, simulations specific to EOL often lack nursing faculty who are adequately trained to facilitate simulated EOL care situations (Fabro et al., 2014; Gillan et al., 2014). Therefore, the purpose of this research is to explore vicarious learning as a practical alternative to traditional active learning in a simulated pediatric EOL setting. The principal aim is to determine the effectiveness of vicarious learning versus active learning on pre-licensure nursing students’ self-efficacy, related to the provision of therapeutic communication during pediatric EOL care situations.

**Introduction to the Problem**

Over the past several decades, adequate preparation of pre-licensure nursing students regarding the provision of EOL care has taken a back seat to the greater educational emphasis of healing the sick and maintaining human life through whatever aggressive, life-saving measures necessary (IOM, 1997; Mutto, Errazquin, Rabhansi, & Villar, 2010; Shifrin, 2016). Such educational inadequacies regarding EOL care reflect a health care culture that considers client death a failure (AACN, 2018; Germano & Meneguin, 2013) and ignores the professional accomplishment and personal significance equated with caring for the dying and their loved ones (Carman, Sloane, Molloy, Flint, & Phillips, 2016; IOM, 1997). Despite recognition of this educational gap regarding EOL care in nursing academia and a push for EOL education initiatives by leading nursing organizations, such as the IOM (2015) and the ANA (2016), deficiencies in EOL education among pre-licensure nursing programs remain (Ali & Ayoub, 2010; Germano & Meneguin, 2013; Mutto et al., 2010; Shifrin, 2016).

Though it is essential to prepare future nurses to provide highly technical life-saving care that yields rehabilitative and curative client outcomes, of equal significance is EOL education
regarding the intellectual and relational needs of the dying and their loved ones (Germano & Meneguin, 2013; Moreland, Lemieux, & Myers, 2012). Didactic content on EOL care, such as advanced directives, signs and symptoms of the dying process, symptom management, and the provision of post-mortem care can undoubtedly be taught within the academic setting; however, the literature reveals didactic measures alone are not adequate for training therapeutic communication, comprising the emotional, spiritual, and sociocultural support necessary to meet needs of dying clients and their loved ones (Heise & Gilpin, 2016). Therefore, clinical experiences in EOL care are necessary to adequately prepare pre-licensure nursing students to provide therapeutic communication in such difficult situations.

Clinical experiences for observing or participating in actual pediatric EOL care situations are, fortunately, very limited for the dying and their loved ones (Aldridge, 2017; Pauly-O’Neill, Prion, & Lambton, 2013). Though pre-licensure students might encounter a pediatric critical or EOL event during an inpatient or emergency department clinical rotation, it is far more common for students to experience such critical events as cardiac or respiratory arrest in a simulated setting (Aldridge, 2017; Pauly-O’Neill et al., 2013). This lack of clinical opportunity, however, does not excuse the necessity of educating future nurses as to how to care for dying children and their loved ones. Because such learning opportunities are scarce within clinical settings, educators must explore more resourceful pedagogical methods to provide EOL pediatric experiences in which students can learn the critical element of effective therapeutic communication during EOL situations.

A review of the literature reveals simulated EOL experiences in which students are active participants are effective in increasing pre-licensure nursing students’ knowledge, enhancing communication techniques, and improving students’ self-efficacy (Gillan et al., 2014). Though
pediatric EOL simulations may help fill a necessary gap in nursing curricula (Aldridge, 2017). EOL simulations pose several barriers, such as cost, time, and lack of qualified and adequately trained pre-licensure nursing faculty (Gillan et al., 2014). These barriers lead one to consider whether the vicarious learning experience of pre-licensure nursing students viewing a live simulcast pediatric EOL simulation would be as effective as active learning in increasing perceived self-efficacy as it relates to therapeutic communication in pediatric EOL situations.

**Background and Context**

Despite decades of acknowledgement of the importance of adequate EOL nursing education by entities including the International Council of Nurses (ICN), the American Association of Colleges of Nurses (AACN), the IOM, and the End-of-Life Nursing Education Consortium (ELNEC), a substantial deficit remains in preparing future nurses for the daunting, yet imperative, application of therapeutic measures required during EOL care (AACN, 2018; Ali & Ayoub, 2010; Germano & Meneguin, 2013; IOM, 1997; & Shifrin, 2016). Dating back to 1997, the ICN presented a mandate that nurses have a professional obligation to ensure dying clients experience a peaceful death (ICN, 1997). Based upon that mandate, the AACN, supported by the Robert Wood Johnson Foundation (RWJF), met with a group of interdisciplinary health care professionals to establish fifteen competency statements that every pre-licensure nursing student should attain regarding care of the dying (RWJF & AACN, 1998). One of the fifteen competencies specifically mandates that nurses be proficient in communicating effectively and with compassion when working with the client, family, and other health care providers regarding EOL concerns (RWJF & AACN, 1998).

In 2000, the inception of ELNEC, also funded by the RWJF, continued to provide a push toward increased integration of a core EOL educational program designed for nursing faculty,
advanced practice nurses, community educators, and researchers within acute care, hospice, and palliative care settings (AACN, 2018). Over the next fifteen years, ELNEC’s educational programs expanded beyond the initial core program to include specialty-specific curriculum for critical care, geriatrics, veteran care, public hospitals, advanced practice registered nursing, and pediatric palliative care (AACN, 2018). It was not until 2017, however, that an ELNEC curriculum, specific for pre-licensure nursing students, came to be with the creation of the ELNEC Undergraduate online curriculum (AACN, 2018).

The need to improve EOL education about therapeutic communication, along with the push to improve pediatric EOL care education that has spanned over decades (RWJF & AACN, 1998; AACN, 2018; IOM, 1997; IOM, 2003), provides the motivation for this research project. As mentioned, EOL education on advanced directives, signs and symptoms of impending death, physical care of the dying’s needs, along with hard nursing skills, such as pain management and post-mortem care, can be conveniently taught within a classroom setting, using traditional, didactic pedagogical methods, including lecture, PowerPoint slides, or guest speakers, during which students are passive listeners. Soft skills needed for EOL care, however, are more difficult to teach in the traditional, didactic setting. As they relate to the nursing profession, soft skills often encompass therapeutic communication, empathy, interpersonal relationships, active listening, professionalism, and leadership (Liebrecht & Montenery, 2016). Soft skills required for adequately managing relational needs of dying children and their loved ones require clinical experiences, in which pre-licensure students can observe appropriate methods of therapeutic communication (Heise & Gilpin, 2016). Because pediatric EOL clinical experiences are rare for pre-licensure nursing students (Aldridge, 2017; Fabro et al., 2014), other pedagogical methods...
must be explored to provide experiential opportunities for learning the appropriate application of soft nursing skills, specifically therapeutic communication during EOL.

The loss of a child is the most difficult situation loved ones will likely ever experience (Meyer, Ritholz, Burns, Truog, 2006; Mullen, Reynolds, & Larson, 2016; Pearson, 2010). Therefore, having pre-licensure nursing students practice the delivery of therapeutic communication in actual pediatric EOL situations would not be ideal, as managing the emotional component of loss and learning to communicate therapeutically requires advanced skills (Sheldon et al., 2006). Therefore, simulated EOL experiences, which have been shown in the literature to be effective in increasing pre-licensure nursing knowledge, enhancing communication techniques, and improving student self-efficacy (Gillan et al., 2014), are essential in nursing education. Through simulation, pre-licensure nurses are provided opportunities to practice therapeutic communication during intensely emotional mock situations with the assurance that no actual harm will come from their actions or words (Lee & Dupree, 2007).

Though EOL simulations provide safe environments to practice such relational skills, the cost of carrying out simulations, the time taken to implement simulations in small groups among all pre-licensure nursing students, and the lack of qualified and adequately trained pre-licensure nursing faculty (Gillan et al., 2014) may prevent EOL simulations from being utilized within pre-licensure nursing academia. Nursing faculty must, therefore, consider more cost-effective and efficient ways in which to provide educationally appropriate and equally beneficial clinical practice experiences for pre-licensure nursing students, using pedagogical methods resembling actual pediatric EOL experiences within the safety of a simulated environment. Research on the effectiveness of vicarious learning, as compared with active learning in the simulation setting, is
essential. Such research enables the exploration of a more cost-effective and practical method of improving self-efficacy among pre-licensure nursing students regarding the provision of therapeutic communication during pediatric EOL situations.

**Theoretical Foundation**

Defined by Bandura, self-efficacy is belief in one’s ability to be successful under challenging situations, thus influencing participation in activities students believe they can accomplish well, and avoidance of situations students perceive to exceed their capabilities (Bandura, 1986). One such challenging situation nurses frequently identify is having to communicate therapeutically during difficult conversations, such as discussions surrounding EOL care with clients and their loved ones (Mullen et al., 2015; Sheldon, Barrett, & Ellington, 2006; Wittenberg-Lyles, Goldsmith, & Platt, 2014). According to Bandura (1977), one method for improving self-efficacy is through vicarious learning experiences, such as those experienced during simulated events, which promote learning through observation of active participants perceived to have abilities comparable to those of vicarious learners. This observational style of learning should enable students to transcend self-doubt related to effective performance of similar tasks, thus improving vicarious learner’s perceived self-efficacy in successful task accomplishment (Bandura, 1977). Therefore, it is proposed that vicarious learning through observation of simulated EOL experiences with active participants, who are perceived as analogous to students in vicarious learner roles, will be effective in improving pre-licensure nursing students’ perceived self-efficacy in provision of therapeutic communication during pediatric EOL situations. More discussion on how Bandura’s theory of self-efficacy is suitable as the foundation for this research will follow in the second chapter.
Statement of the Problem

The death of a child is the most distressing and unimaginable form of loss one can experience, completely disrupting the natural order of existence (Meyer et al., 2006; Mullen et al., 2015; Pearson, 2010). Therefore, nurses must be prepared, both didactically and clinically, to meet the specialized needs of the dying child, while providing psychosocial and relational support for the child’s loved ones during such a devastating time of loss. At the point of a child’s imminent death, provision of therapeutic communication with the child’s loved ones becomes the very essence of pediatric EOL care and can significantly facilitate improved bereavement outcomes for the child’s loved ones (Dosser & Kennedy, 2014).

Despite a substantial push for EOL education to be incorporated more heavily throughout nursing curriculum, lack of adequate EOL nursing education and clinical experiences continues to leave students ill-equipped to comfortably and confidently handle provision of EOL care (Carman, et al., 2016; Lippe & Carter, 2015). Lack of educational preparedness on the provision of care to the dying child and the loved ones thus potentiates anxiety and decreased confidence, or perceived self-efficacy, in students’ abilities to communicate therapeutically during EOL situations (Mullen et al., 2015).

Upon entering the workforce, many new nurses will likely experience the death of a client, no matter their chosen field in the nursing profession or the age of clients for whom they will care (Leighton & Dubas, 2009). Nurse educators must emphasize this fact and prepare those students who plan to pursue careers in the field of pediatric nursing that, though seemingly unnatural, death is a realistic possibility when caring for ailing children. Because pre-licensure nursing students may not have opportunities to provide pediatric EOL care in the clinical setting (Aldridge, 2017; Fabro et al., 2014), it is imperative that they be exposed to pediatric EOL
situations in creative and innovative ways, such as simulated experiences. Such exposure is a necessity in attempting to build students’ perceived self-efficacy (Gillan et al., 2014) in successfully managing the seemingly stressful task of providing care in the form of therapeutic communication at pediatric EOL.

Statement of the Purpose

The purpose of this dissertation research is to assess the effect of vicarious learning versus active participant learning on pre-licensure nursing students’ perceived self-efficacy regarding caring for dying children and their loved ones, specific to provision of therapeutic communication. For those nursing students who have not yet experienced death or dying or may never have considered the prospect of having to care for people who are dying, fear and anxiety often surround thoughts of having to provide EOL care (Adesina et al., 2014). Fear and anxiety may negatively affect the provision of therapeutic communication with those who are dying and their families. However, no matter their future areas of practice, nursing students must be made aware that death and dying may inevitably be encountered during their professional careers (Leighton & Dubas, 2009).

Regarding EOL care, many nursing students report generalized anxiety and insufficient educational and clinical experiential preparedness (Adesina, et al., 2014; Carman, et al., 2016; Mutto et. al, 2010). This educational inadequacy related to EOL care stands to exacerbate the already stress-producing task of caring for people at EOL (Ali & Ayoub, 2010; Germano & Meneguin, 2013). Neglecting such issues may adversely affect care students provide to dying children, ultimately causing students to avoid dying children and their loved ones altogether. Furthermore, avoidance of communication or interactions at such a critical time may be reflective of poor perceived self-efficacy toward caring for dying children and their loved ones.
(Mutto et. al, 2010). When students experience poor perceived self-efficacy related to the provision of EOL care, their self-confidence regarding such care is also negatively affected (Lubbers & Rossman, 2016). Left unattended, decreased self-efficacy in provision of EOL care may yield ineffective and potentially damaging communication skills, which have great potential to carry over into professional nursing practice (Mutto et. al, 2010).

Multiple variables may affect nurses’ care of and communication with dying children and their loved ones, including nurses’ feelings regarding death and dying, religious convictions, recent death experiences, and personal philosophies on life and death (Ali & Ayoub, 2010; Weismann, 2011). Most significant to this project is the level of pre-licensure nursing EOL educational experiences, specifically clinical experiences during which the opportunity to provide therapeutic communication to a dying child and the child’s loved ones is presented. Anxiety surrounding death and dying and attitudes regarding provision of EOL care are most often molded by nursing students’ initial exposures to EOL education (Mutto et. al, 2010). As the amount of didactic instruction and clinical EOL experiences increases, nursing students’ anxiety about caring for the dying decreases, and attitudes regarding EOL care improve (Ali & Ayoub, 2010). If students understand that EOL educational experiences decrease anxiety related to provision of EOL care, receptivity to education specific to improving perceived self-efficacy in effective utilization of therapeutic communication during such a difficult situation as a child’s imminent death may ultimately improve (Smith-Stoner, 2009). Receptivity to non-traditional EOL educational opportunities may transform the way in which EOL care has historically been negatively perceived and avoided by pre-licensure nursing students and future nursing professionals, thus promoting understanding of the dire necessity and willingness to participate
in a most difficult discourse (Hamilton, 2010; Moreland et al., 2012; Smith-Stoner, 2009).

**Research Questions**

**Study aims**

The over-arching aim of this study is to determine the effect of vicarious versus active learning on pre-licensure nursing students’ perceived self-efficacy regarding provision of therapeutic communication during pediatric EOL care situations. Prior to a live, fully scripted EOL pediatric simulation, one group of participants will be randomly assigned to the active learner group, fully participating in the live simulation, while remaining participants will be randomly assigned to the vicarious learning group, strictly learning through observation of a live simulcast of the active learner group’s simulated EOL scenario.

In relation to provision of therapeutic communication in EOL care situations, the following research questions are posed:

1. What are the baseline perceived self-efficacy scale scores among pre-licensure nursing students?

2. What are the differences between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores within groups, both active and vicarious learners, as compared to their pre-simulation experience self-efficacy scale scores?

   \[H_1\]: There will be a difference between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores within groups, both active and vicarious learners, as compared to their pre-simulation experience self-efficacy scale scores.

   \[H_0\]: There will be no difference between pre-licensure nursing students’ post-EOL
simulation perceived self-efficacy scale scores within groups, both active and vicarious learners, as compared to their pre-simulation experience self-efficacy scale scores.

3. What are the differences between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores between groups, vicarious versus active learners, as compared to their pre-simulation experience self-efficacy scale scores?

   \( \text{H}_1 \). There will be a difference between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores between groups, as compared to their pre-simulation experience self-efficacy scale scores.

   \( \text{H}_0 \). There will be no difference between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores between groups, as compared to their pre-simulation experience self-efficacy scale scores.

4. What are the differences between pre-licensure nursing students’ post-debriefing perceived self-efficacy scale scores within groups, both active and vicarious learners, as compared to their post-simulation experience self-efficacy scale scores?

   \( \text{H}_1 \). There will be a difference between pre-licensure nursing students’ post-debriefing perceived self-efficacy scale scores within groups, both active and vicarious learners, as compared to their post-simulation experience self-efficacy scale scores.

   \( \text{H}_0 \). There will be no difference between pre-licensure nursing students’ post-debriefing perceived self-efficacy scale scores within groups, both active and vicarious learners, as compared to their post-simulation experience self-efficacy scale scores.
scale scores.

5. What are the differences between pre-licensure nursing students’ post-debriefing self-efficacy scores between groups, vicarious versus active learners, as compared to their baseline self-efficacy scores?

H₁. There will be a difference between pre-licensure nursing students’ post-simulation debriefing perceived self-efficacy scale scores between groups, as compared to their baseline self-efficacy scale scores.

H₀. There will be no difference between pre-licensure nursing students’ post-simulation debriefing perceived self-efficacy scale scores between groups, as compared to their baseline self-efficacy scale scores.

Nature of the Study

This study on voluntary pre-licensure nursing student participants will compare active learners, who participate in a simulated pediatric EOL event, with vicarious learners, who simultaneously observe the simulated pediatric EOL event via live simulcast in a location separate from the simulation setting. All participants will be required to complete a demographics survey, followed by a nine-item, pre-simulation self-efficacy in communication during difficult situations scale (SECS1) (see Appendix C) within one month of the simulation experience. The first post-simulation SECS (SECS2) (see Appendix D) will be administered immediately prior to post-simulation debriefing, to ensure any information shared in debriefing does not influence participants’ perceived self-efficacy. The third SECS (SECS3) (see Appendix E) will be administered immediately following debriefing, to determine if debriefing has any further effect on self-efficacy, beyond that potentially acquired during the pediatric EOL simulation.
Using SPSS 25, the researcher will evaluate participants’ demographic data using descriptive statistics and independent-samples $t$-tests. The researcher will then examine pre- and post-assessment differences, both within and between groups, using paired-samples-$t$ tests and 2x3 mixed-design ANOVA. The 2x3 mixed-design ANOVA examines the interaction effect of time and group. Based upon the literature and using G-Power, it is determined that a total sample size of at least 100 participants will be sufficient to achieve 87% power to detect a medium effect size (partial $\eta^2 = .06$) using a 2x3 mixed ANOVA (within-between interaction and with repeated measures) with two groups and three time points at a 5% significance (Faul, Erdfelder, Lang, & Buchner, 2007).

The within subjects’ variable is the nine-item SECS with three testing time points. The between subjects’ variable is the type of EOL simulation learning participants are exposed to, either vicarious or active. The focus, or experimental, group of the study is the vicarious learner group, while the control group is the active learner group. Participants will be randomized into an intervention group of vicarious learners or into a control group of active learners on the date of their simulation experience. Upon arrival to the pre-simulation conference room, each participant will write his or her first name on small piece of paper, fold the paper, and place it into an envelope. Immediately following the pre-simulation conference, before the simulation begins, the researcher will draw the first name from the envelope. Then, as each successive name is drawn, the participant whose name is drawn will draw the next name, until a total of up to six names are drawn from the envelope. The first names drawn out of the envelope, up to a total of six participants, represent students who will be active learners with assigned roles in the simulated scenario.
Simulation roles (see Appendix G), as well as the coordinating scenario scenes, will be assigned to students in the order in which they line up before entering the simulation lab. Each simulation room will be divided into a mock waiting room and a mock palliative care hospital room. Both mock rooms will be equipped with cameras and microphones, so each live simulation will be simulcast to the conference room where remaining participants, or vicarious learners, will be viewing. Vicarious learners will be instructed to put away all personal belongings, including any books, computers, phones, or other electronic devices throughout their viewing of simulcasts.

The instrument used to measure participants’ perceived self-efficacy is the SECS, based upon a set of nine questions developed by Parle, Maguire, and Heaven (1997) as part of a training model to improve health professionals’ skills, perceived self-efficacy, and outcome expectations when communicating in pediatric cancer situations (Parle et al., 1997). For purposes of this study, the researcher obtained permission to utilize the information table containing the original SECS questions from RightsLink® Copyright Clearance Center. Within the SECS, the researcher changed the word “patient” to “client,” to be inclusive of the pediatric patient’s loved ones as clients. The researcher also added a definition of “collusion” for better understanding of the intent of question #8, which asks students to rate their perceived self-efficacy in managing collusion.

Once all simulation sessions have occurred, the researcher will enter the resulting data into SPSS 25 for analysis to aid in answering five primary research questions. The chosen research questions are posed in an effort to determine if vicarious learning is as effective as active participant learning in improving pre-licensure nursing students’ self-efficacy in provision of therapeutic communication during pediatric EOL situations.
**Definition of Terms**

The following terms are clarified for the reader:

*Active learner:* The active learner is one who synthesizes information gathering, experience, and reflection (Fink, 2003) through direct participation in the simulation experience.

*Client:* The term client refers to both patient and their loved one in a setting of provision of care (AACN, 2009).

*End-of-life:* End-of-life refers to the time that precedes death, whether it be of short or long duration. People at the end-of-life may be aware of impending death, or unaware. This period may encompass the contemplation of death, undergoing the dying process, establishing post-mortem arrangements, or experiencing any of the five stages of grief defined by Kübler-Ross (1969), including denial, anger, bargaining, depression, or acceptance.

*Hard Skills:* Hard skills, as they relate to the nursing profession are those tangible, clinical skills that follow pre-determined, step-by-step procedural guidelines to perform task accomplishment related to needed client care; for example, injections, and Foley catheter insertions.

*Palliative Care:* Palliative care is defined by the World Health Organization (2017) as a multi-disciplinary approach to improving the quality of life of clients and their loved ones facing issues related to terminal illness, through alleviation of physical, mental, and social distress.

*Self-efficacy:* Self-efficacy is defined as one’s confidence in one’s ability to be successful under challenging situations, thus influencing participation in activities one believes one can accomplish well and avoidance of situations one perceives to exceed one’s capabilities (Bandura, 1986).
**Soft Skills:** Soft skills, as they relate to the nursing profession, often encompass such skills as therapeutic communication, empathy, interpersonal relationships, active listening, professionalism, and leadership (Liebrecht & Montenery, 2016).

**Therapeutic Communication:** Therapeutic communication is defined as holistic, client-centered interaction between the health care provider and the client that promotes physiological, psychological, environmental, and spiritual well-being of the client. While establishing a stress-reducing, collaborative relationship between the health care provider and the client, the primary goal of therapeutic communication is to establish trust and encourage meaningful exchange between the health care provider and the client (Martin & Chanda, 2016).

**Vicarious Learner:** The vicarious learner is one who learns through observation of active participants perceived to have comparable abilities, thus enabling the vicarious learner to transcend self-doubt related to effective performance of similar tasks and improve self-efficacy related to being successful in similar task accomplishment (Bandura, 1977).

**Assumptions, Limitations, and Delimitations**

The following assumptions, limitations, and delimitations are included as part of this research to express what the researcher assumes to be true, known or potential weaknesses of this study, and where and why this particular study is restricted. First, the researcher will begin with assumptions.

**Assumptions**

The following assumptions have been acknowledged regarding this study. Though active learning is essential for increased knowledge and improved confidence, the researcher assumes that vicarious learning, as defined by Bandura (1977), will produce similar positive outcomes on student perceived self-efficacy in the provision of therapeutic communication during pediatric
EOL situations. End-of-Life communication is often avoided because of the difficult and uncomfortable nature of death itself. Despite the likelihood that future nurses will find themselves caring for a dying client, nursing students continue to lack adequate preparation in undergraduate programs as to how best to provide therapeutic EOL care.

The researcher assumes that pre-licensure students recognize how feelings of inadequacy and anxiety related to provision of EOL care may be linked to educational deficiencies within current nursing curricula (Carman, et al. 2016). It is assumed this recognition would prompt students’ desires for participation in opportunities intended to improve education about appropriate EOL care and provision of therapeutic communication during difficult situations, such as EOL. It is also assumed that such a desire would stimulate students to willingly volunteer for this research study.

Additionally, the researcher assumes that students will be honest when completing pre- and post-SECS surveys, as well as in their post-simulation debriefing discussion. Having knowledge that the intent of this study is to determine methods to improve perceived self-efficacy in provision of therapeutic communication during pediatric EOL situations, the researcher also assumes that students may be tempted to elevate their post-SECS scores above that of their pre-SECS scores, even if the elevation does not accurately reflect their true perceived self-efficacy assessments. This potential of the Hawthorne effect (Kurtz, 2017) is further discussed in the following limitations section.

**Limitations**

Limitations to this study are important to acknowledge and consider for future studies of like nature, as they are out of the researcher’s control. One potential limitation of this study is that it will be conducted using a voluntary sample of subjects from only two pre-licensure programs
within the southeastern region of the United States. Limiting the study to a geographic region may limit the general applicability of results to pre-licensure students in other geographic locations. Convenience sampling is proposed for utilization, due to participants being enrolled in required maternity and pediatrics courses within the pre-licensure programs, thus potentiating the threat of bias to the study. The study is being conducted with voluntary participants from two southeastern pre-licensure nursing programs where each has different, yet similar, EOL content embedded within its curricula. Because EOL education is integrated didactically, though briefly, throughout curricula in both programs, there is no way to be certain of exact similarities or differences between didactic content exposure students from the two different pre-licensure programs have had prior to the study.

Another potential limitation is the Hawthorne Effect, also referred to as observational bias, whereby study participants or healthcare workers modify behavior due to awareness that their behavior is being monitored (Kurtz, 2017), which could cause participants to falsely elevate or potentially even lower their pre- or post-intervention SECS scores. Likewise, students may increase their SECS scores, simply by assuming the intent of the educational intervention is to improve perceived self-efficacy in therapeutic communication during difficult situations. Students’ own general self-esteem may also alter an accurate reflection of their perceived self-efficacy changes in SECS scores, regardless of the effectiveness of interventions executed during the study. An additional limitation that must be considered is realism of the proposed simulated pediatric EOL simulation. It is important that the simulation be as true-to-life as possible for the study participants to be truly engaged in the experience and to accurately assess the effect of the experience on their perceived self-efficacy in provision of therapeutic communication during a pediatric EOL situation.
One final, but significant, limitation to consider is the large number of participants required to determine a medium effect size with the proposed study methodology. It is estimated that a sample size of at least 100 participants would be sufficient to achieve 87% power to detect a medium effect size (partial $\eta^2 = .06$) using a 2x3 mixed ANOVA (within-between interaction and with repeated measures) with two groups and three time points at a 5% significance (Faul et al., 2007). Because of the large number of required participants, this study will have to be conducted within two different pre-licensure nursing programs at two southeastern universities, thus student demographic differences have the potential to alter validity of between subjects results on the SECS.

**Delimitations**

Delimitations have the potential to limit the scope of the study but are generally within the researcher’s control. They explain where and why a research study may be bound or restricted. One delimitation of this study is the choice of the geographical location of the study. The location of the study is one of convenience, as the researcher is a graduate student at one of the universities being utilized for the study and a fulltime faculty member at the other university. Both universities are within the same state located in the southeast region of the country. These factors may, as mentioned in the limitations section, limit generalizability of the study to other geographic areas within the United States and abroad.

Secondly, the specific focus of the intended study is on pediatric EOL care, which is a topic of very limited curricular dedication within pre-licensure nursing programs. Without much consideration of or pre-exposure to the topic of pediatric EOL care, along with the seriousness of the subject matter being studied, students may be reluctant to voluntarily participate in the study. The choice of study questions is another topic to contemplate when considering delimitations.
Rather than knowledge or performance-based results, which can be externally measured, this study’s questions rely strictly upon participants’ perceptions of changes within their self-efficacy related to the interventions. Such perceptions of the learning experience and the pediatric EOL simulation will also be addressed in post-simulation debriefing, which relies upon participant perceptions, as opposed to clearly measurable outcomes.

Finally, the choice of Bandura’s theory of self-efficacy as the theoretical foundation for this study should be considered as a delimitation. As previously mentioned, self-efficacy is based upon one’s perceptions of one’s abilities to be successful in challenging situations (Bandura, 1986). This theoretical foundation does not allow for external measurement of progress or success but depends strictly upon participants’ perceptions of improvement. Self-efficacy is vital when faced with one of the most difficult professional situations a nurse can encounter when providing care, which in this case is providing therapeutic communication for a dying child and the child’s loved ones during the time of loss.

Therapeutic communication is not a hard skill that can be assessed, ‘by the book’, as being performed correctly or incorrectly, but is a soft skill that is developed through repeat exposure to a vast variety of difficult situations professional nurses are certain to face during their careers. Each nurse-client encounter, from a communication standpoint, is likely to be different than the last, but should, hopefully, continue to build the nurse’s perceived self-efficacy in the ability to provide the therapeutic communication necessary for any given difficult situation.

**Significance of the Study**

Within the literature there is a consistent gap in nursing education regarding EOL care. More specifically, there is a need to evaluate nursing students’ perceived self-efficacy related to provision of therapeutic communication during EOL care. Attempting to narrow this knowledge
gap regarding EOL care among nursing students, this study will assess the effect of vicarious learning on pre-licensure nursing students’ perceived self-efficacy related to provision of therapeutic communication in pediatric EOL care.

Based upon Bandura’s theory of self-efficacy and the principle of vicarious learning, this study aims to inform nursing education as to the effectiveness of two distinctive learning methods intended to improve pre-licensure nursing students’ perceived self-efficacy regarding communication during the provision of pediatric EOL care. Methods include active learning through participation in a live, scripted, pediatric EOL simulation versus vicarious learning through observing the live, scripted pediatric EOL simulation via live simulcast in a location separate from the active-learning simulation lab. In carrying out this study, it is the researcher’s intent to evaluate if vicarious learning is equally effective as active learning in improving pre-licensure nurses’ perceived self-efficacy in provision of therapeutic communication during difficult situations, such as pediatric EOL care.

Should vicarious learning be identified as equally or more effective as active participation in an EOL simulated situation, implementation of added vicarious learning situations in pre-licensure nursing programs could help relieve several needs that currently hinder effective simulated clinical educational experiences. Such hindrances include, but are not limited to, simulation equipment costs, limited laboratory space, inadequate faculty to student ratios, and faculty not adequately trained in EOL care (Fabro et al., 2014). Vicarious learning opportunities could be provided to much larger groups of students at one time than active learning simulations within a lab setting. In doing so, vicarious learning could decrease the need for already limited simulation lab space, time, and funding, as well as the number of adequately trained faculty facilitators to assist with, not only EOL care education, but any situation that may require
effective communication between the health care provider and the client. Revelation of benefits of vicarious learning on students’ perceived self-efficacy may encourage the much-needed increase in EOL education among pre-licensure nursing programs and produce future professional nurses who are self-efficacious in handling those difficult, yet necessary, conversations that they might otherwise have avoided without adequate pre-licensure education.

**Summary and Transition**

In conclusion, the literature reveals a deficiency in nursing curricula related to provision of EOL care that has spread over several decades (IOM, 1997; Mutto et al., 2010; Shifrin, 2016). Such educational gaps in pre-licensure nursing curricula often leave students feeling inadequately prepared to provide therapeutic communication and care to the dying and their loved ones (Carman et al., 2016; Lippe & Carter, 2015; Lippe et al., 2017). These feelings of inadequacy in caring for the dying could carry over into professional nursing practice and lead to inadequate EOL care provision, such as avoidance of the dying and their loved ones (Mutto et al., 2010), if not appropriately addressed during pre-licensure nursing education (Lippe et al., 2017).

Though traditional didactic settings may be adequate for teaching signs and symptoms of impending death and discussing hard-skills of symptom management and post-mortem care, classrooms and lecture halls do not offer ideal environments to practice much-needed soft-skills of therapeutic communication. Because of classroom limitations and EOL clinical experiences being restricted in pre-licensure nursing programs (Aldridge, 2017; Fabro et al., 2014), nurse educators must depend on other pedagogical methods to provide students with a safe place to practice the challenging art of therapeutic communication associated with difficult conversations surrounding EOL care. Therefore, integration of effective, yet feasible, methods to educate pre-
licensure nursing students on soft skills of therapeutic communication at EOL is essential. Such educational opportunities are vital, not only to improve the level of EOL care as perceived by the client and their loved ones, but also to potentially improve students’ perceived self-efficacy in comfortably and effectively providing communication associated with EOL care.

Though simulation laboratories and simulated EOL experiences can offer pre-licensure nursing students opportunities to practice therapeutic communication during difficult conversations, economic, space, time, and faculty barriers often prevent utilization of simulation experiences for such purposes (Fabro et al., 2014; Gillan et al., 2014). Therefore, other innovative educational methods to provide pre-licensure students with opportunities to learn soft skills of therapeutic communication at EOL must be explored.

According to Bandura (1977), vicarious learning experiences provide opportunities for improved self-efficacy through observation of successful task accomplishment by active participants believed to be of comparable capabilities to observers, or vicarious learners. Additionally, according to Bandura (1977), improved self-efficacy may be the first step toward improved performance. If this is so, the researcher anticipates pre-licensure nursing students in the role of vicarious learners should have improved self-efficacy regarding provision of therapeutic communication during EOL care, after observing active student participants therapeutically provide EOL communication needs to the dying client and/or the client’s loved one(s) during a simulated scenario. Should vicarious learning prove to be as effective in improving pre-licensure nursing students’ self-efficacy in provision of therapeutic communication at EOL, simulation barriers such as limited financial resources, time and space limitations, low faculty to student ratios, and faculty who are not adequately trained to facilitate
EOL simulations could potentially be alleviated. Additionally, positive future client care outcomes may improve and the risk for nursing burnout could be decreased.

Though there is a fair amount of literature on pre-licensure nursing EOL care education, which will be discussed further within chapter two, it is primarily focused on EOL symptom management of the adult client and post-mortem care. Literature on pre-licensure nurse pediatric EOL care education is scant, at best, and no literature has been found that specifically addresses pre-licensure nurses’ self-efficacy regarding therapeutic communication with the dying child and their loved ones. Therefore, this research is strictly focused on the effect of vicarious learning on pre-licensure nursing students’ self-efficacy regarding provision of therapeutic communication during pediatric EOL situations.

Moving forward, chapter two will present a more thorough explanation of the theoretical foundation chosen for this study, Bandura’s theory of self-efficacy (1986), and how the theory’s principle of vicarious learning applies to the significance of the study and specific research questions. Using the literature, the researcher will review the state of EOL education in pre-licensure nursing programs, movements that have called for improved EOL education, and current methods of EOL education being incorporated into nursing curricula, while also evaluating recommendations for EOL care nursing education, specific to the pediatric population. Within the literature review, the researcher will explore the soft skill of therapeutic communication as an essential component to EOL care, specific to communication with the dying child, the child’s loved ones, interdisciplinary care team members, and nurses, themselves.
CHAPTER II
REVIEW OF LITERATURE

Over the past several decades, there has been a documented scarcity of pre-licensure nursing student education regarding the provision of EOL care (IOM, 1997; Mutto et al., 2010; Shifrin, 2016) and even more limited literature specific to pediatric EOL education. Despite ongoing acknowledgement of educational inadequacies related to EOL care and a substantial ongoing push for EOL education initiatives by entities such as the AACN, RWJF, IOM, and ELNEC, deficiencies in EOL education among pre-licensure nursing programs remain (Ali & Ayoub, 2010; Germano & Meneguin, 2013; Mutto et al., 2010; Shifrin, 2016).

One can argue that it is essential to prepare future nurses for provision of highly technical, life-saving, hard skills that promote rehabilitative and curative client outcomes. Yet, one must recognize, of equal importance, is EOL education regarding soft skills of therapeutic communication, empathy, and relational needs of the dying and their loved ones (Germano & Meneguin, 2013; Moreland et al., 2012). Though didactic content on EOL care, such as signs and symptoms of the dying process and skilled symptom management, can undoubtedly be taught within the traditional academic setting, the literature reveals didactic measures alone are not adequate for training pre-licensure nursing students in effective provision of therapeutic communication (Heise & Gilpin, 2016). Therefore, alternative educational methods must be implemented to provide students’ opportunities to observe and practice soft skills that do not come with clear, procedural steps, but that must be developed through observation, practice, and individualization to each EOL situation.
Because EOL learning opportunities are scarce within clinical settings (Aldridge, 2017), educators must become even more resourceful in providing EOL pediatric experiences, during which students can learn and model the critical skills related to effective therapeutic communication during EOL situations. The literature shows simulated EOL experiences, in which students are active participants, provide resourceful avenues for enhancing communication techniques and improving student self-efficacy among pre-licensure nursing students (Gillan et al., 2014). Unfortunately, barriers including high costs, limited simulation laboratory availability, and lack of faculty adequately qualified to facilitate EOL simulation experiences often accompany simulation experiences (Gillan et al., 2014).

Such barriers fuel consideration as to whether the vicarious learning experience of students viewing a live simulcast pediatric EOL simulation would be equally as effective in increasing perceived self-efficacy in provision of therapeutic communication during pediatric EOL situations as when students actively participate in live EOL simulation experiences. Therefore, the purpose of this dissertation research is to assess the effect of vicarious learning versus active participant learning on pre-licensure nursing students’ perceived self-efficacy regarding caring for dying children and their loved ones, specific to provision of therapeutic communication, considered critical to a positive EOL experience (Clayton et al., 2012).

Through the remainder of this literature review, the researcher will revisit, in depth, the theoretical foundation supporting this research; expound upon the aforementioned need for improved pre-licensure nursing EOL education, specific to the pediatric population; discuss the importance of the soft skill of therapeutic communication during EOL care; explore previous utilization of simulation in EOL education, specific to therapeutic communication and self-efficacy; and examine how the theoretical foundation of self-efficacy and the subset of vicarious
learning are reflected in EOL nursing education. The researcher will conclude by summarizing the ways in which the principle of vicarious learning applies to the significance of the study and specific research questions, as well as provide recommendations for further research, based upon this review.

**Literature Search Strategy**

A search of published literature, including current full-text, peer-reviewed articles within the past eight years, attempting to keep articles within the current decade, as well as seminal literature, was conducted using the following databases: CINAHL Complete, CINAHL Plus, Cochrane Collection Plus, EBSCOhost, ERIC via ProQuest, Joanna Brig, Medline, Nursing & Allied Health, OVID LWW Nursing & Health Professions Premier Collection, PsycARTICLES, PsycINFO, PubMed, and Science Direct.

Search terms included, but were not limited to: nurs* AND (education OR learning OR teaching OR preparation OR training OR instruction OR simulation) AND (end-of-life OR "end of life" OR palliative OR dying OR terminal OR hospice); nurs* AND ("end-of-life" or palliative or hospice or terminal and treatment or therap* communication or care) AND (pre-licensure OR undergraduate OR baccalaureate) AND (education or learning or teaching or training or instruction or confidence or self-efficacy or outcomes); (nurs*) AND ("end-of-life" OR palliative OR hospice AND treatment OR therap* OR care) AND (pre-licensure OR undergraduate OR precertification) AND (education OR learning OR teaching OR training OR instruction OR simulation) AND (confidence OR self-efficacy OR outcomes) AND (child* OR pediatric OR parent OR family); Bandura AND (self-efficacy OR vicarious) AND ("end-of-life" OR communication OR ther* communication OR difficult communication OR care OR dying
child*) AND (pre-licensure OR undergraduate OR baccalaureate); and vicarious AND (nurs* education OR simulation).

**Theoretical Foundation**

The theoretical foundation for this study is based upon Bandura’s theory of self-efficacy, which is belief in one’s ability to be successful under challenging circumstances (Bandura, 1977). Perceived self-efficacy influences behavior, specifically influencing students to participate in activities they believe can be accomplished well and avoiding situations believed to exceed their capabilities (Bandura, 1986). Individuals with high perceived self-efficacy hold the belief that they can perform a given task successfully and are likely to approach difficult tasks as something to be mastered, as opposed to something to be avoided.

Bandura (1977) categorizes four primary sources of self-efficacy development: performance accomplishment, verbal persuasion, emotional arousal and vicarious experience. Performance accomplishment is based upon personal mastery. Remaining task-oriented in the face of difficult situations is a necessity. Those who face difficult situations and are surrounded by self-doubt regarding their abilities to accomplish a seemingly insurmountable task tend to become more illogical in their ways of thinking, decrease their aspirations, and, ultimately, diminish the quality of their performance. However, those who have a high level of self-efficacy tend to welcome challenging circumstances and use rational and critical thinking approaches that result in performance accomplishments (Bandura, 1994). Successes increase mastery expectations, while recurrent failures lower them (Bandura, 1977).

Verbal persuasion is a second primary source for strengthening self-efficacy. Verbal persuasion influences human behavior through the power of positive suggestion and reinforces coping capabilities in situations that appear overwhelming (Bandura, 1977). When students are
verbally persuaded of their abilities to master certain tasks, they are likely to exert more effort and sustain the necessary effort to accomplish those tasks. As verbal persuasion stimulates successful task accomplishment, self-efficacy improves, promoting continued development of skills and providing ongoing motivation (Bandura, 1994).

Emotional arousal, a third primary source of self-efficacy development, is a feeling of anxiety, accompanied by self-doubt during difficult situations. Such anxiety may be exhibited as physical symptoms of fatigue or pain or as other signs of disability relative to negative mental dispositions (Bandura, 1994). Repeated exposure to events perceived as stressful during observational learning experiences can lessen emotional arousal, improve self-efficacy expectations, and increase willingness to attempt previously avoided performance (Bandura, 1977).

Vicarious experience, a final source of self-efficacy promotion, improves confidence in performing tasks previously thought to be unachievable by exposing students to influential and relatable role models who succeed at task accomplishment. During vicarious learning experiences, students witness constructive use of cognitive behaviors, skills, emotions, and methods for coping with or transcending particular situations (Bandura, 1997). Observing like social models succeed in perceivably difficult situations stimulates students’ beliefs that they are capable of successfully accomplishing similar tasks. The more relatable role models are to students, the greater persuasiveness role models’ successes have on students’ perceived self-efficacy. In addition to providing a social standard against which students can evaluate their own proficiencies, competent role models disseminate knowledge of effective skills and tactics for managing various situations through demonstrated behaviors and cognitive expressions in those situations (Bandura, 1994).
The State of EOL Education

Current EOL literature suggests that up to 80% of recent nursing graduates are ill-prepared to care for the dying (Adesina et al., 2014). Though the necessity of equipping our future nurses to provide therapeutic EOL care is acknowledged within nursing academia, significant curricular deficiencies have remained over several decades related to EOL education for the pre-licensure nurse (Ali & Ayoub, 2010; Germano & Meneguin, 2013; IOM, 1997; & Shifrin, 2016). In 1997, the International Council of Nurses (ICN) mandated that nurses have a professional obligation to ensure dying clients experience a peaceful death (ICN, 1997). Based upon that mandate, AACN, supported by the RWJF, met with a group of interdisciplinary health care professionals to establish sixteen competency statements within the Peaceful Death document that every pre-licensure nursing student should attain regarding care of the dying (RWJF & AACN, 1998). In 2016, based upon the Peaceful Death competencies, the AACN CARES developed a total of seventeen competencies, specific to the provision of EOL care (Ferrell, Malloy, Mazanec, & Virani 2016). Throughout the CARES competencies, importance of various therapeutic relationships between the health care provider, client, family, and interdisciplinary team are emphasized, including demonstration of respect for client’s views and wishes, interdisciplinary collaboration, and assisting the client, family, health care team, and one’s self to cope with bereavement and suffering in EOL care. The fifth competency specifically mandates that nurses be proficient in communicating effectively and with compassion when working with the client, family, and other health care providers regarding EOL concerns (see Appendix A) (Ferrell, et al., 2016).

In 2000, the inception of ELNEC, also funded by the RWJF, continued to provide a push toward increased integration of a core EOL educational program designed for nursing faculty,
advanced practice nurses, community educators, and researchers within acute care, hospice, and palliative care settings (AACN, 2018). Focused on essential components of palliative care at EOL, ELNEC curriculum covers an introduction to palliative care, followed by topics of pain and symptom management; communication; cultural and spiritual considerations; ethical and legal issues; loss, grief and bereavement; and care provision during the final hours of life (ELNEC, 2018; Ferrell et al., 2016).

Since 2000, ELNEC’s educational programs have expanded beyond the initial core program of training nursing faculty to include specialty-specific curriculum for critical care, geriatrics, veteran care, public hospitals, advanced practice registered nursing, and pediatric palliative care (Ferrell et al., 2016). ELNEC curriculum, specific for pre-licensure nursing students, however, did not become available until 2017, following a 3-year Cambia Health Foundation Grant awarded to ELNEC in 2015 (AACN, 2018; Ferrell et al., 2016). In addition to the undergraduate online ELNEC curriculum, the grant funded a review of the current state of undergraduate palliative care in nursing education and an update to the AACN’s Peaceful Death document (Ferrel et al., 2016).

The review of the current state of undergraduate palliative care nursing education included a textbook assessment of 11 undergraduate nursing textbooks, with specific attention to specialty areas such as fundamentals of nursing practice, medical surgical nursing, community health, ethics, pediatric nursing, mental health, and geriatric nursing. The review revealed palliative and EOL care page content had increased from 2% to 18%, and the number of chapters devoted to the topics increased from 1% to 7%, since the original analysis in 1999 (Ferrel et al., 2016). Despite improvements in the amount of palliative and EOL care content within textbooks, some
texts exhibited notable gaps and errors in accurate and current palliative care and EOL information (Ferrel et al. 2016).

Also included in the review was a faculty survey of 71 nursing faculty in attendance at a 2015 national ELNEC conference, addressing faculty perceptions of how well pre-licensure nursing programs prepared students for the provision of palliative care. The survey revealed inconsistencies in the implementation of ELNEC training curriculum, which those surveyed attributed to limited time and space in the nursing curriculum and limited knowledge among faculty regarding EOL content (Ferrel et al., 2016). Finally, the NCSBN knowledge survey was distributed to evaluate newly licensed nurse, faculty, and nurse supervisors’ perceptions of the importance of knowledge regarding palliative and EOL care. Though participants acknowledged importance of pain management and professional communication, the survey revealed a need for increased awareness of the importance of meeting psychological, social, and spiritual needs of the dying and their loved ones (Ferrel et al., 2016). Additionally, the National Council Licensure Examination’s (NCLEX) content reflects these findings, incorporating an increased number of palliative care content questions on the NCLEX (Ferell et al., 2016).

Addressing the remaining facet of the Cambia Health Foundation Grant, a summit was held in 2015, during which 25 participants reviewed and revised the original Peaceful Death document, reflecting the dramatic increase in palliative care over nearly two decades. From this summit and document review, the new Palliative CARES document evolved and is now the leading framework for pre-licensure nursing student palliative and EOL care education, identifying 17 palliative care competencies student nurses should attain prior to graduation. These 17 competencies directly correlate with the previous 16 AACN competencies (see Appendix A) with the addition of #17, which states, “Recognize the need to seek consultation
(i.e. from advanced practice nursing specialists, specialty palliative care teams, ethics consultants, etc.) for complex patient and family needs” (Ferell et al., 2016, p. 330, Table 3). The revised Palliative CARES document goes on to specify in which courses certain facets of palliative and EOL care education should be incorporated. For example, prenatal demise and fetal death should be integrated into the maternal/newborn course curriculum, and emphasis on importance of interdisciplinary teamwork and collaborative communication regarding palliative and EOL client care needs should be incorporated into the leadership or capstone curriculum (Ferell et al., 2016).

Though these proposed competencies and recommendations for integration of palliative and EOL care into pre-licensure nursing curricula are vital to the much-needed improvements in the current state of EOL education, they remain recommendations and have yet to be enforced. Resources for integration of palliative and EOL care curriculum are now readily available to colleges of nursing, but without faculty and nursing program buy-in to the value of implementing curricular changes that incorporate increased and improved EOL education, educational inadequacies will continue to exist. As such, nursing academia will continue to provide inadequate pre-licensure student education related to appropriate and therapeutic provision of EOL care.

**Pediatric EOL Education for Pre-licensure Nursing Students**

EOL care is often associated with the elderly, but we must remember that death does not discriminate based upon age. Though rare in children, the leading cause of death by disease beyond infancy among children in the United States is cancer. In 2018, alone, more than 10,500 children under the age of fifteen are expected to be diagnosed with cancer, and nearly 1,200 children are expected to die of the disease (American Cancer Society, 2018). Although greater
than 80% of children with cancer survive five or more years, cancer remains the second leading cause of death, after accidents, in children (American Cancer Society, 2018). Though this may not seem to be an alarmingly high death rate in comparison to the overall death rate, we must remember that the focus here is on children who will never reach their fifteenth birthdays. We must also consider that cancer, unfortunately, is not the only cause of death in children within our country. In fact, due to various etiologies or accidental injury, approximately 55,000 children die in the United States each year, with over half dying during the first year of life (Meyer et al., 2006).

It is said that the death of a child is the most distressing and unimaginable form of loss one can experience, completely disrupting the natural order of existence (Meyer et al., 2006; Mullen et al., 2015; Pearson, 2010). Therefore, nurses must be prepared, both didactically and clinically, to meet specialized needs of the dying child, while providing psychosocial and interpersonal support for the child’s loved ones during such a tragic time of loss. Though similar to adult EOL care education, pediatric EOL care has distinctly different facets that must be considered, such as the unnatural timing of pediatric death, unclear or difficult prognoses, diverse developmental stages of the clients, and significant implications of the death on the child’s loved ones (Price et al., 2017).

Despite a substantial push for EOL education to be incorporated more heavily throughout nursing curricula, lack of adequate EOL nursing education and clinical experiences continue to leave students ill-equipped to comfortably and confidently handle the provision of EOL care (Carman, et al., 2016; Lippe & Carter, 2015). Not only does this educational deficit subject loved ones of terminally-ill children to ineffective, inconsistent, and incompetent EOL care necessary to fulfill their psychosocial and relational needs (O’Shea et al., 2015), but it also leaves
pre-licensure nursing students, who are expected to provide EOL care, feeling inadequately prepared (Adesina, DeBillis, & Zannettino, 2014; Lippe, Volker, Jones, & Carter, 2017; Mullen et al., 2015). Lack of educational preparedness on provision of care to the dying child and the loved ones thus potentiates anxiety and decreased confidence, or perceived self-efficacy, in students’ abilities to communicate therapeutically during EOL situations (Mullen et al., 2015).

**Therapeutic Communication**

For students who have not yet experienced death or dying or may never have considered the prospect of having to care for people who are dying, fear and anxiety often surround thoughts of having to provide EOL care (Adesina, et al., 2014). Fear and anxiety may negatively affect the provision of therapeutic communication with those who are dying and their families. However, no matter their future areas of practice, pre-licensure nursing students must be made aware that death and dying will likely be encountered during their professional careers (Leighton & Dubas, 2009).

Regarding EOL care, many nursing students report generalized anxiety and insufficient educational and clinical experiential preparedness (Adesina, et al., 2014; Carman, et al., 2016; Mutto et. al, 2010). This educational inadequacy related to EOL care stands to exacerbate the already stress-producing task of caring for people at EOL (Ali & Ayoub, 2010; Germano & Meneguin, 2013). Neglecting such issues may adversely affect care students provide to dying children, ultimately causing students to avoid dying children and their loved ones altogether once they enter professional practice. Furthermore, avoidance of communication or interactions at such a critical time may be reflective of poor perceived self-efficacy toward caring for dying children and their loved ones (Mutto et. al, 2010).
When students experience poor perceived self-efficacy related to provision of EOL care, their self-confidence regarding such care is also negatively affected (Lubbers & Rossman, 2016). Left unattended, decreased confidence in provision of EOL care may yield ineffective and potentially damaging communication skills, which have great potential to carry over into professional nursing practice (Chmura, 2016; Mutto et. al, 2010). Therefore, it is imperative that pre-licensure nurses be aware of how, at the point of a child’s imminent death, provision of therapeutic communication with the child’s loved ones becomes the very essence of pediatric EOL care and can significantly facilitate improved bereavement outcomes for the child’s loved ones (Dosser & Kennedy, 2014).

Multiple variables may affect nurses’ care of and communication with dying children and their loved ones, including nurses’ feelings regarding death and dying, religious convictions, recent death experiences, and personal philosophies of life and death (Ali & Ayoub, 2010; Weismann, 2011). Most significant to this project is the level of pre-licensure nursing EOL educational experiences, specifically clinical experiences, during which the opportunity to provide therapeutic communication to a dying child and the child’s loved ones is presented. Anxiety surrounding death and dying and attitudes regarding provision of EOL care are most often molded by nursing students’ initial exposures to EOL education (Mutto et. al, 2010).

As the amount of didactic instruction and clinical EOL experiences increase, nursing students’ anxiety about caring for the dying decreases, and attitudes regarding EOL care improve (Ali & Ayoub, 2010). If students understand that EOL educational experiences decrease anxiety related to provision of EOL care, receptivity to education specific to improving perceived self-efficacy in effective utilization of therapeutic communication during such a difficult situation as a child’s imminent death may ultimately improve. Acceptance of non-traditional EOL
educational opportunities may transform the way in which EOL care has historically been negatively perceived by pre-licensure nursing students, thus promoting a greater understanding of the necessity and willingness to participate in care and conversation surrounding EOL (Hamilton, 2010; Moreland et al., 2012; Smith-Stoner, 2009).

When facing the imminent death of a child, nurses must acknowledge the importance of a triad of trust between the terminally-ill child, the child’s parents, and the interdisciplinary members of the health care team. Promoting such a triad enables an open environment for discussion with understanding that all discussions about the child’s prognosis first take place between parents and health care providers, outside of the child’s presence (Pearson, 2010).

**Communication with the child**

Although parents’ wishes should be respected, nurses must remember their first priority of advocating for their client, the dying child. Therefore, being honest with all involved is of the utmost importance, especially during discussions about EOL options. Preferences of the child, along with age and maturity level should be considered. Whereas some children desire very detailed information regarding their prognosis, others are distressed by the same information (Hinds et al., 2005). When there is a noted discrepancy between the child’s wishes and those of the loved ones, nurses and other interdisciplinary team members must be available to advocate for the child as well as the loved ones (National Consensus Project (NCP), 2013).

**Communication with parents**

Even after being delivered devastating news about a child’s prognosis, parents often maintain a sense of hope for their child’s survival (Hinds et al., 2005). Effective care of dying children calls for nurses and the health care team to determine when it might be in the child’s best interest to initiate comfort measures, even when pursuing aggressive treatment measures to
improve the child’s quality of life (Konrad, 2008) and parents’ peace of mind. In addition to communicating clearly and advocating for the child’s best interest, it is important that nurses show respect for parents’ hopes, while attempting to ground them in the reality of their child’s terminal diagnosis (Harwood, 2007; Hinds et al., 2005). When parents feel the health care team has given up on their child, they may be reluctant to trust professional caregivers during important decision-making discussions (Hinds et al., 2005).

Communication about a child’s terminal prognosis is very difficult, but it is a discussion that must be had. Avoidance of discussing a child’s terminal prognosis and choosing to focus on heroic treatments limit parents’ preparation time for what is likely to be their most difficult loss (Konrad, 2008; Pearson, 2010). Though parents cannot be forced to inform their child of the prognosis, they can be educated that nearly 30% of parents who do not disclose the terminal status to their child later report regret (Hinds et al., 2005). Alternatively, parents who are honest with their child about the terminal prognosis did not report regret in having that disclosure with their child (Hinds et al., 2005).

Following the death of a child, therapeutic communication and care must continue for parents. Parents and other loved ones should be allowed to spend time with the child’s body, allowing them the space and privacy they need. Parents may express negative emotions outwardly toward the health care team; therefore, it is important that nurses are aware of various stages of grief (Dosser & Kennedy, 2014), and how to recognize and effectively encourage appropriate bereavement, as well as de-escalate negativity that may turn volatile.

Communication with siblings

Often, in addition to parents, siblings are left to process the untimely loss of a brother or sister. Siblings may feel neglected due to their parents’ grief and may feel a sense of isolation
from the experience (Pearson, 2010). Loved ones and other support networks, such as hospital or community bereavement services, should be brought in to assist siblings of deceased children. Parents should be encouraged to have honest, age-appropriate discussions with siblings of the dying or deceased child (Pearson, 2010), as this avoids future emotional instability that approximately one-third of children experience following loss of a sibling (Hinds et al., 2005).

**Communication with health care providers**

Although the triad of communication between children, parents, and health care providers is viewed as vitally imperative to continuity and quality of care, many parents of dying and deceased children report they believe frequent and correct communication among nurses and other health care providers to be of equal importance (Reinke et al., 2010). Examples of poor interdisciplinary communication reported by parents include being asked the same questions repeatedly by different providers, miscommunication on the child’s prognosis and treatment options, and interdisciplinary team members not being notified after the child’s passing (Widger & Picot, 2008). These examples further emphasize the need for consistent and accurate communication among all members of the child’s interdisciplinary health care team.

Interdisciplinary teams of health care providers include professionals knowledgeable in palliative and EOL care, with appropriate client-specific education, experience, and credentials, along with specialized skills to meet not only physical needs of the child and loved ones, but also psychological, social and spiritual needs. Such teams include, but are not limited to nurses, chaplains, physicians, social workers, bereavement coordinators, and pharmacists (NCP, 2013). This call for an interdisciplinary approach to meeting palliative care needs emphasizes the fact that pre-licensure nursing students should be provided with educational opportunities that
promote interprofessional teamwork when caring for those at EOL (Lippe, Johnson, Mohr, & Kraemer, 2018).

One particular example of the need for interdisciplinary collaboration in palliative or EOL care is helping parents deal with grief. Nurses should be knowledgeable of referral services for families in need, including the interprofessional team of social workers and chaplains trained to assist with bereavement services (NCP, 2013). Ideally, nursing staff will have time to develop a trusting relationship with the family that will help them determine which bereavement service referrals will best accommodate needs of loved ones left behind. Even if time does not allow development of a relationship between the nurse and family, bereavement services should be arranged by the nurse immediately. Should adequate bereavement follow-up not be carried out, parents often report feeling abandoned after their child’s death (Widger & Picot, 2008). Despite the most effective bereavement efforts, it is reported that between one-fourth and one-third of bereaved parents suffer marital distress, while many report life-long emotional suffering, potentially placing themselves at risk of premature death from natural or unnatural causes (Hinds et al., 2005).

A part of bereavement services that nurses can help families with is offering mementos that parents or siblings may desire to have as a keepsake of their loved one. Such keepsakes that should be offered might include hand or footprints, tasteful photographs of the deceased, a piece of clothing or favorite stuffed animal that was with the child when he or she died, a lock of hair, or even hospital bracelets worn by the deceased child (Widger & Picot, 2008). Though some families may decline, it is important that the offer is made and carried out if accepted.
Therapeutic communication for the nurse

One often neglected aspect of care related to caring for terminally-ill children is the emotional and mental wellbeing of nursing staff and other health care team members (Pearson, 2010). It is of great importance that nurses not become hardened to deaths of children and that they seek regular emotional support, enabling them to continue to deliver the best possible care to their own children and families (Pearson, 2010). Families facing the loss of a child depend greatly on health care providers to exhibit support, kindness, and compassion throughout their loss experience. To provide a dignified and supportive death for a pediatric child and family, nurses must make sure their own emotions are taken care of first (Lee & Dupree, 2007; Pearson, 2010). By not making their own emotional health a priority, nurses who care for dying children stand to display deficient, problematic, or even damaging communication, leaving parents with a perceived lack of caring by the nurse and insufficient delivery of care to their child in the final days (Konrad, 2008). Such perceptions may lead to lingering guilt, regret, and emotional distress among parents (Hinds et al., 2005).

Simulation and therapeutic communication

End-of-life encounters, though fundamental to EOL education, are not guaranteed experiences to pre-licensure nursing students within clinical settings (Fabro et al., 2014). However, upon entering the workforce, many new nurses will likely experience the death of a client, no matter their chosen field in the profession or the age of clients for whom they will care (Leighton & Dubas, 2009; Lippe & Becker, 2015). Nurse educators must emphasize this fact and prepare those students who plan to pursue careers in the field of pediatric nursing that, though seemingly unnatural, death is a realistic possibility when caring for ailing children.
Because pre-licensure nursing students may not have opportunities to provide EOL care in the clinical setting (Aldridge, 2017; Fabro et al., 2014), it is imperative that they be exposed to real-to-life EOL situations in creative and innovative ways, such as simulated experiences, which help fill a significant gap in nursing curricula (Aldridge, 2017). Enabling students to practice communication skills during perceived difficult situations, while in the safety of a simulation lab, can decrease student anxiety and promote therapeutic communication practice for future actual clinical situations (Sleeper & Thompson, 2008). Such exposure is a necessity in attempting to build students’ perceived self-efficacy (Gillan et al., 2014) in successfully managing the seemingly stressful task of providing care in the form of therapeutic communication during a pediatric EOL scenario.

One method that has proven successful in promoting therapeutic communication opportunities in EOL simulation is inclusion of a loved one of the dying child, played by a standardized patient (SP) (Gillan et al., 2014). Standardized patients may be faculty, students, or standardized actors trained to portray a role in a simulated learning experience, allowing for increased realism and emotional response in simulations focused on soft skills, such as therapeutic communication or other psychological factors (Fink, Linnard-Palmer, Ganley, Catolico, & Phillips, 2014). In addition, involving SPs to play the role of loved ones in a pediatric EOL simulation promotes a focus on other soft skills of family-centered care and interpersonal interaction with students (Aldridge, 2017).

**Use of Simulation as a Strategy to Improve Self-Efficacy**

If sufficient perceived self-efficacy in provision of EOL care is not achieved during pre-licensure nursing education, nurses may enter the profession feeling ill-prepared and may avoid caring for dying clients, yielding poor client outcomes and eventual nursing burnout (Adesina et
This is of great concern, considering more than 63% of Australian nursing students in the final year of their degree had low self-efficacy regarding caring for the dying (Adesina et al., 2014). Of even greater concern is that, in a study within the United States, 46% of practicing oncology nurses admitted to sometimes, often, or always avoiding communication with their dying patients because they were uncomfortable giving bad news (Wittenberg-Lyles et al., 2014). These findings clearly demonstrate the need to head-off negative client outcomes and nursing burnout, through adequate EOL education in pre-licensure nursing programs that promote improved perceived self-efficacy in provision of EOL care, prior to graduation and entry into the workforce.

Although EOL care has historically been discussed in didactic and clinical settings, a variety of educational methods could be utilized to emphasize the importance of adequate EOL care and to provide students with hands-on, realistic experiences. Experiential learning is a method that has been utilized in preparing nursing students for appropriate EOL communication. This type of pedagogy provides students with situational experiences that promote active learning, as well as personal and professional growth (Bambini, Washburn, & Perkins, 2009), while enhancing communication techniques and self-efficacy (Hsu, Chang, & Hsieh, 2015). Such experiences include overcoming personal anxiety related to caring for people who are dying; employing active and therapeutic communication with children, loved ones, and other interdisciplinary team members; and increasing students’ overall perceived self-efficacy in providing EOL care (Kameg, Clochesy, Mitchell, & Suresky, 2010; Moreland, et al., 2012).

End-of-life simulation has been shown to improve knowledge, attitudes, and self-efficacy regarding EOL care in pre-licensure students (Lippe & Becker, 2015; Moreland et al., 2012). As a form of experiential learning, simulation comprises a variety of teaching/learning methods for
clinical practice outside of actual clinical settings. These simulated experiences provide learning opportunities for students to integrate theory and practice in clinical nursing skills, teamwork, decision making, and problem solving within a mock clinical setting without fear of harm to an actual client (Dunn, Osborne, & Link, 2014; Thidemann & Soderhamn, 2013). Simulation experiences also provide opportunities for development of communication and collaboration skills (Thidemann & Soderhamn, 2013), while improving nursing students’ perceived self-efficacy related to meeting physical, emotional, and communication needs of a child and loved ones at EOL, considered crucial to pediatric EOL care (Bloomfield, O’Neill, & Gillett, 2015; Kopp & Hanson, 2012; Smith-Stoner, 2009; Tuxbury, McCauley, & Lement, 2011).

Additionally, experiential learning promotes self-discovery of participants regarding the value of life and the importance of meeting needs of people who are dying (Kopp & Hanson, 2012). End-of-life simulations are directed toward promoting active learning and peer interaction, while drawing upon previously learned knowledge and nursing skills related to EOL care (Kopp & Hanson, 2012). One additional benefit of simulation as a method for improving students’ perceived self-efficacy, is provision of therapeutic communication during EOL care within a safe environment that encourages students to utilize critical thinking and make clinical judgments, without fear of real-life consequences (Dunn et al., 2014; Kopp & Hanson, 2012; Thidemann & Soderhamn, 2013).

**Self-Efficacy and Vicarious Learning in Nursing Education**

Though there are minimal studies on the topic, a review of the literature reveals simulated EOL experiences, in which students are active participants, to be effective in increasing pre-licensure nursing knowledge, enhancing communication techniques, and improving student self-efficacy (Gillan et al, 2014). Unfortunately, end-of-life simulations are equated with several
barriers to their efficiency of use, such as high cost of simulation production, extensive time to prepare and execute the simulation, limited simulation laboratory availability, and lack of pre-licensure nursing faculty who are qualified and adequately trained in EOL education (Gillan et al., 2014). These barriers prompt consideration as to whether implementation of a vicarious learning experience, in the form of pre-licensure nursing students viewing a live simulcast pediatric EOL simulation, would be as effective in increasing perceived self-efficacy in the delivery of therapeutic communication during pediatric EOL situations as compared with pre-licensure nursing students who actively participate in the same EOL simulation.

Vicarious learning enables one to learn through observation of experiences of another, while promoting active listening and reflective thinking (Thidemann & Soderhamn, 2013). When promoting vicarious learning during a simulated scenario, fidelity and realism in the scenario and the simulated setting appear to have a positive impact on pre-licensure students as vicarious learners. Vicarious participation in realistic scenarios and settings stimulates the imagination and the ability to learn through observation of active simulation participants (Thidemann & Soderhamn, 2013).

In one study on effects of active participation versus vicarious learning through viewing a video-recording of a live event, quantitative findings yielded significant increases in both groups between pre- and post-event cognitive changes (Ford, March, Cheshire, & Adams, 2013). When comparing the mean post-test scores between groups, the vicarious learning group’s scores were surprisingly higher than those of the active participants. The researchers credited increased scores among vicarious learners to decreased distractions while watching the recorded event, as opposed to being immersed as an active participant in the live event. The researchers also concluded that vicarious learning through viewing a recorded live event is both cost and time
effective, while providing consistency of instruction for both active and vicarious learners (Ford et al., 2013).

**Debriefing**

Debriefing is an invaluable part of the simulation experience immediately following the simulated scenario, when students and facilitators or faculty convene to discuss initial impressions and feelings related to the experience and to critically reflect upon parts of the simulation that went well; actions students might do differently, given another opportunity; and how the simulation experience increased student knowledge or confidence that they will take into the clinical environment (Ryoo & Ha, 2015). Clinical facilitators and faculty play a vital role in post-simulation debriefing with pre-licensure students, aiding in reflection upon the simulated experience and promoting a sense of salience, or an understanding of the most important take-aways and how they apply to real-world, EOL nursing practice (Heise & Gilpin, 2016). The ability of students to participate in critical reflection during post-simulation debriefing is directly influenced by the students’ perceived self-efficacy in their abilities to think critically and reflect upon a given situation (Kennedy, Murphy, Misener & Alder, 2015). High levels of perceived self-efficacy for critical reflection in post-simulation debriefing correlate with high general levels of perceived self-efficacy among pre-licensure nursing students during future similar simulated and clinical experiences (Tutticci, Coyer, Lewis, & Ryan, 2017).

**Recommendations for Further Research**

Most articles discussed in this literature review made clear recommendations regarding the significance of continued and improved future research on the topic of EOL care. Several authors identified similar gaps in the literature in need of further study, including curricular integration of EOL education at all levels within pre-licensure nursing programs; increased
opportunities for practice of therapeutic EOL communication in nursing education; use of simulated scenarios to improve students’ perceived self-efficacy related to real-world application of skills observed or practiced in EOL care; use of vicarious learning to improve knowledge, attitudes, and perceived self-efficacy as an alternative to strictly active participant simulation; and most specific to this study, importance of increased pediatric EOL education, specific to soft skill needs of the child and loved ones. These topics have significant relevance to this research study, as the study specifically addresses the effect vicarious learning has on nursing students’ perceived self-efficacy in providing therapeutic communication during pediatric EOL care.

Summary and Conclusions

In summary, literature reviewed in preparation for this study revealed several predominant themes related to the ongoing lack of EOL education throughout pre-licensure nursing curricula, despite a push for improvement, spanning several decades, and available materials for curricular integration (Ali & Ayoub, 2010; IOM, 1997; Mutto et al., 2010; Shifrin, 2016). Nurses, who are inadequately prepared to provide EOL care during pre-licensure education, exhibit anxiety and decreased self-efficacy regarding care of the dying once in practice, thus potentiating poor client outcomes and burnout in the profession (Adesina et al., 2014). Not only do pre-licensure nurses need to be educated on care of the elderly at EOL, but on EOL care as it relates to clients of all ages, as well as the clients’ loved ones. With approximately 55,000 pediatric deaths in the U.S. per year (Meyer et al., 2006), it is vitally important that pediatric EOL care be included in pre-licensure nursing curricula. While clinical skills regarding EOL symptom management are undeniably important in pre-licensure nursing education, even more crucial to appropriate provision of EOL care is the ability and self-efficacy needed to perform soft nursing skills, such
as therapeutic communication with both the dying clients and their loved ones (Heise & Gilpin, 2016).

Because EOL experiences that provide the best opportunities for pre-licensure nursing students to acquire these skills are limited in actual clinical settings (Aldridge, 2017), nursing programs must implement other educational methods to allow students to practice and learn the art of therapeutic communication during such difficult situations as EOL. While simulation provides such a pedagogical avenue for experiential learning, cost of simulation production, limited laboratory time and space, and few faculty who are adequately trained to facilitate EOL simulation, provide barriers to the efficiency of simulation for students who so desperately need such educational experiences (Gillan et al., 2014).

Though the literature is scarce on effectiveness of improved self-efficacy among vicarious learners in simulated situations, it has been proven to be equally as effective as active simulation participation in increasing student knowledge, attitudes, and self-efficacy (Bloomfield et al., 2015; Hsu et al., 2015; Kopp & Hanson, 2012; Smith-Stoner, 2009; Tuxbury et al., 2011). In addition, the literature reveals vicarious learning to be even more effective than active learning in some cases, as well as more efficient, cost effective and consistent than live simulation (Ford et al., 2013).

What appears to be the greatest gap in the literature is pediatric EOL education among pre-licensure nursing students, specifically regarding the provision of therapeutic communication to the child and the loved ones, considered crucial to pediatric EOL care. Through this study, the researcher plans to explore a practical method for implementation of a pediatric EOL simulated experience, with a focus on improving pre-licensure nursing student self-efficacy in providing therapeutic communication during difficult situations. By using both active participants and
vicarious learners, it is the researcher’s intent be able to allow twice the number of students to participate in a simulated activity as would normally be allowed. Analysis of findings will reveal whether vicarious and active learners acquire improved perceived self-efficacy in provision of therapeutic communication during a pediatric EOL simulation, and if one participant group improved more than the other, depending upon their group assignment. Should analysis reveal that both groups have a comparable increase in self-efficacy post-simulation, this study will help fill the gap in the literature on efficacious method to provide pre-licensure nursing students with pediatric EOL care experience that will enhance their perceived self-efficacy in the necessary provision of therapeutic communication during care of the dying child and loved ones.

Next, Chapter three will clearly illustrate the methodology chosen for this study, including the rationale for the selected research design and a detailed description of implementation of the chosen methodology. Additionally, the population being studied will be identified, along with sampling, recruitment, and data collection procedures. Steps of the intervention will be revealed in detail, followed by the data analysis plan, potential threats to the study’s validity, and ethical considerations.
CHAPTER III

RESEARCH METHODOLOGY

This chapter describes the study purpose, participant population, procedures for recruitment and protection of human subjects, instrumentation, implementation, data collection and analysis, validity, ethical concerns, and research questions being assessed.

The purpose of this proposed dissertation research was to assess the effect of vicarious learning versus active learning on pre-licensure nursing students’ perceived self-efficacy regarding caring for dying children and their loved ones, specific to provision of therapeutic communication. The within subjects’ variable is the nine-item SECS, while the between subjects’ variable is the type of EOL simulation learning students are exposed to, either vicarious or active. The focus of the study was the experimental group, which was the vicarious learner group, while the control group was the active learner group. Using a 2x3 mixed-design ANOVA and samples-t tests the researcher examined pre- and post-SECS assessment differences, both within and between groups. This approach examined baseline SECS scores for both groups, as well as the interaction effect of both time and group.

Population

Participants for this study included a randomly assigned convenience sample of senior-level pre-licensure nursing students in baccalaureate degree programs, who were at least 18 years of age and enrolled in a maternity or pediatric nursing course at one of two southeastern United States universities during spring 2018. In selecting two separate pre-licensure programs in
which to conduct the study, the researcher ensured similarity of EOL curricula students had been exposed to in each respective program up to the point of the study. To ensure the two programs’ EOL curricula were congruent, the researcher determined that both pre-licensure nursing programs offer a one-hour lecture on EOL care during the first semester of nursing education, with no other formal EOL education integration until later in the final semester of the program, which occurs after the study simulation intervention dates. Aside from any clinical experiences with EOL care students may have participated in or observed, the researcher found both programs to be didactically congruent regarding EOL education.

The large number of approximately 200 total senior students enrolled in two nursing programs enabled the researcher to initially recruit 131 consenting participants, which was comfortably over the recommended sample size of 100 participants for this particular study. Though a total of 131 total students consented to participate upon initial recruitment at both universities, attrition over the few weeks leading up to simulation intervention and follow up SECS survey completion at each respective campus yielded an exact total of 100 participants who completed the study in its entirety.

**Procedures**

Upon first being approved by the nursing program directors and Institutional Review Boards for each university where the study took place, recruitment of participants was done during face-to-face meetings with senior pre-licensure nursing students at their respective universities. Students were informed that there was no cost, nor any expected physical risk associated with study participation; however, they were informed that EOL simulations may bring about unease or emotions linked to any previous death experiences they may have encountered (Leighton, 2009). There was a chance that students who chose to participate may have recently experienced
the death of a friend or loved one, specifically a child or sibling, as enacted in the simulation scenario. Because of these concerns, students were made aware of the sensitive nature of the study and were informed of the option to cease voluntary participation at any point, without question. Students were also informed of the availability of on-campus counseling services. By meeting students in their institutions of higher learning, it was posited that participation was encouraged through convenience for students and helped to ensure student comfort by being able to participate in a study conducted within familiar surroundings.

Upon concluding a review of study details, students were asked to access the electronic version of informed consent for study participation via a Qualtrics software link provided by their pediatric or maternity instructors within each university’s learning management system. At the end of the electronic version of informed consent, toggle buttons for study participation consent or declination were available. If students selected “no” to study participation, they did not move any further in the study. By selecting “yes” students moved forward in the study and, first, were directed to a link that provided instructions, as developed by Damrosch (1986), prompting development of unique, self-generated identification codes (see Appendix K). These anonymity codes were the students’ only identifiers for the remainder of the study and not linked in any way to students’ names or email addresses. Following face-to-face recruitment meetings, all further communication with participants was done via email to their course instructors, who then linked information provided by the researcher on the electronic learning management systems used for the students’ pediatrics and maternity courses.

Once students developed their anonymity codes, they were provided a link to the Qualtrics software demographics survey that assessed multiple variables such as age, sex, and previous EOL care experiences (see Appendix B). Following the demographics survey, participating
students continued to a Qualtrics link for completion of a pre-test on perceived self-efficacy using the Self-Efficacy in Communication Scale (SECS) (Parle et al., 1997) (see Appendix C). Following completion of the initial SECS (SECS1), students were directed to a SignUp Genius link, housing dates, times, and locations of the scheduled simulations for them to choose from, as well as a link to the pre-simulation required reading, “Caring for Pediatric Patients’ Families at the Child’s End of Life” (Mullen, Reynolds, & Larson, 2015). Though students registered for their simulation experience on SignUp Genius using their given names, there was no way to link those names to anonymity codes and resulting SECS results. Additionally, no notes were made by the researcher as to names of the participants, rather, only the number of participants who signed up for each simulation date and time were noted.

Within approximately one month of participant registration, simulation interventions took place at each university, consisting of a preconference meeting with all students prior to each scheduled simulation. Upon entering the preconference meeting, students were asked to write their first names on a small piece of paper, which they then folded and placed into the participant envelope. During the preconference meeting, excerpts from the assigned pre-simulation article, specifically including recommendations for communication and non-verbal communication techniques (see Appendix L) (Mullen et al., 2015), were reviewed with participants.

Following review of article excerpts, randomization into active and vicarious learners occurred by a drawing of students’ first names from the participant envelope. Evidence informing simulation practice suggests keeping the active participant group size between four and six (Adamson, 2015); therefore, the first student names randomly drawn from within the envelope, up to a total of six, were assigned to active learner roles in the simulation scenario. Active learners were then instructed to form a line outside of the designated simulation lab suite.
to await simulation role and scene assignments. Meanwhile, remaining students, in groups of no more than six participants, were assigned to vicarious learner roles and instructed to clear all belongings from their desks, turn off all electronic devices, and to remain in the conference room for observation of the EOL simulation via live simulcast.

Simulation suites were fitted with cameras and microphones, allowing vicarious learners to view two scenario scene locations, a conference room and the child’s palliative care hospital room, via live simulcast in the conference room. Upon entering the simulation lab suite, active learners were assigned one of six roles from within the simulation matrix (see Appendix G) and instructed as to which scenes they were to interact with the physician and the client’s mother, played by live actors, as well as the dying child. The child was represented by a mannequin and remained unresponsive throughout the scenario. Active learners, who were not involved in specific scenes, were standing by in close proximity to the simulation action, where they could see and hear the live action and be prepared to assist in the scenario as it played out at any given time.

After each scheduled simulation, active and vicarious learners reconvened in the conference room, accessed and completed an immediate post-simulation SECS (SECS2), via a Qualtrics survey link. Next, all learners participated in a debriefing session that was guided by standardized set of debriefing questions (see Appendix J). Following debriefing, the participants were provided a final Qualtrics survey link and asked to complete the final post-debriefing SECS (SECS3). The SECS survey was worded exactly the same at all three time points throughout the study.
Instrument

The instrument used to measure participants’ perceived self-efficacy was the SECS, based upon a set of nine questions developed by Parle et al. (1997). The questionnaire was originally used as part of a training model to improve health professionals’ skills, self-efficacy and outcome expectations when communicating in pediatric cancer situations (Parle et al., 1997). Parle et al. (1997) found that participants from the first workshop maintained the positive effects of self-efficacy at follow-up post-testing as far out as twelve months after the initial workshop. For purposes of this study, the researcher obtained permission to utilize the information table containing the nine SECS questions from RightsLink® Copyright Clearance Center. Within the SECS, the researcher changed the word “patient” to “client,” to be inclusive of pediatric patients’ loved ones as clients and provided an explanation of “collusion” for better understanding of the intent of question #8, which asks students to rate their perceived self-efficacy in managing collusion.

Following the tradition of the original SECS application, students rated their communication confidence from 0 (not at all confident) to 100 (totally confident) on nine communication tasks. This included basic tasks like initiating discussions to more complex tasks such as dealing with uncertainty and breaking bad news. Participant scores from the SECS have previously been used to analyze effectiveness of programs intended to improve communication skills among multiple types of health care providers including nurses, physicians, and students in other health care professions (Ammentorp et al., 2007; Bagard & Etienne, 2010; Doyle, Copeland, Bush, Stein, & Thompson, 2010; Erickson, Blackhall, Brashers, & Varhegyi, 2015; Frojd & Von Essen, 2006).

The reliability of the SECS has been assessed in several studies. In 2006, Frojd and Von Essen used Parle et al.’s (1997) SECS scale to have physicians rate how confident they felt in
their successful ability to handle each of the nine SECS tasks, yielding a Cronbach’s alpha for the nine questions of 0.9. In 2009, Doyle et al. (2010) performed a study assessing how a seven-hour course on how to handle difficult communications in their daily work impacted performance and self-efficacy. Within this study, the SECS, administered as a post-test, following the seven-hour course, yielded a Cronbach’s alpha-coefficient score was 0.88 (Doyle et al., 2010). Most recently, an assessment of the efficacy of a 26-item interview on communication and stress-management for medical residents, based on Parle et al.’s SECS, yielded a Cronbach’s alpha-coefficient score of 0.85 and test-retest correlations were 0.51 (p < .001) for communication (Bragard & Etienne, 2010). Within each of these studies, the nine items of the SECS were scored individually, whether administered as pre- and post-test or only as post-test questionnaire items. None of the studies presented a cumulative score from the nine individual SECS components.

**Data Collection and Analysis**

Data for the demographic survey and pre- and post-intervention SECS was collected electronically using the Qualtrics system. Statistical analysis of collected data was performed using the statistical software package, Statistical Package for the Social Sciences (SPSS) version 25. Regarding demographic data of study participants, a descriptive statistical analysis using the SPSS software was performed to evaluate distributions of demographic factors, including age, race, sex, and any inherently different previous EOL experiences. In addition, utilizing a 2x3 mixed-design ANOVA and samples t-tests, pre- and post-SECS scores were examined within both participant groups, and to determine the interaction of group and time over three time intervals. Results aimed at answering the research questions, which were posed in an effort to determine if vicarious learning is as effective as active participant learning in improving pre-
licensure nursing students’ self-efficacy in provision of therapeutic communication during pediatric EOL situations.

**Intervention**

The pediatric EOL simulation intervention was developed, including the simulation goal statement and objectives (see Appendix F), client background (see Appendix G), and simulation matrix (see Appendix H), based upon the nine components of the SECS, with special care to include opportunities for participants to address each of the nine SECS components at least once during the scenario matrix. Once developed, the goal statement and objectives, client background, scenario matrix, and the SECS were reviewed by two subject matter experts in the field of EOL care, as well as the nursing simulation coordinator at a southeastern university and a pediatric nurse practitioner, who is also a pediatrics nursing instructor at a southeastern university, to ensure fidelity and reliability of the pediatric EOL scenario matrix.

In preparation for the pediatric EOL simulation and based upon the staged areas needed for the simulation matrix, the simulation lab suites within each college of nursing were arranged to have a small conference area and a palliative care hospital room. Cameras and microphones were strategically placed within the simulation lab suites, enabling full view and audio access to the live simulcast simulations for vicarious learners seated in the conference room during each simulation.

As mentioned in the procedures section, on the day of the scheduled pediatric EOL simulation intervention, both vicarious and active participant groups convened for a pre-simulation conference. The purpose of the pre-simulation conference was to review the goal statement and objectives of the simulation experience, as well as the client background. In addition, the pre-simulation conference allowed time to review excerpts from the required pre-
simulation article, “Caring for Pediatric Patients’ Families at the Child’s End of Life” (see Appendix L). Because students at each participating university had only experienced one lecture on EOL care prior to the simulated experience, the article was assigned to familiarize participants with the topic of pediatric EOL care and to provide guidance that could perhaps ease participants’ concerns related to unfamiliar and potentially anxiety-producing conditions in an EOL simulation. Additionally, in an effort to promote active participant involvement during each scene within the simulation matrix (see Appendix I), the preconference article review allowed time to explore recommendations for verbal and physical communication, found to be specifically therapeutic to parents of a dying child (Mullen et al., 2015). Other topics briefly covered included the importance of interdisciplinary communication, bereavement referrals, and post-mortem comfort measures for the parents of the deceased.

Immediately following the pre-simulation conference, vicarious learners remained in the conference room, where they observed the simulation via live simulcast, while active participants were taken to the simulation lab suite and assigned one of six nursing roles within the simulation matrix (see Appendix H). Once roles were assigned to active participants, the Pediatric EOL simulation commenced.

In addition to six nursing roles for active participants were two other roles: the physician and the dying child’s mother. The researcher portrayed the role of the physician and also acted as the simulation facilitator, to prompt or guide participants when necessary. A pediatric nursing instructor from one of the study’s universities acted out the scripted role of the child’s mother at both study sites. These two roles were played by the same faculty facilitators for all simulations to help ensure consistency with the experience across all simulation interventions. Upon completion of each simulation, both vicarious and active participant groups reconvened in the
conference room to immediately complete the SECS2, using their anonymity codes, via a Qualtrics Software survey on their smart phones or laptops. Next, students engaged in a debriefing session, guided by set debriefing guidelines (see Appendix J). Though not directly related to the research questions pertaining to this study, field notes were taken during each debriefing session by the pediatrics nursing instructor, who played the role of the dying child’s mother. In an effort to identify themes and ideas for potential future study, the researcher reviewed field notes following data analysis for this study.

**Threats to Validity**

**Internal validity**

Internal validity assesses whether the effects observed in a study result from the manipulation of the independent variable and yield a direct causal relationship between the independent and dependent variable. For this study, the independent variable is the use of vicarious learning as a means to affect the dependent variable of pre-licensure nurses’ perceived self-efficacy in provision of therapeutic communication during a pediatric EOL situation. In addition to the independent variable, other threats to internal validity that were considered included: history, maturation, and testing (LoBiondo-Wood & Haber, 2010). Specific to the design of this study, participant exposure to EOL care experiences prior to or during the time of the study may have directly impacted the student’s self-efficacy assessment, regardless of which learner group they were assigned.

To avoid maturation being a problem, the study procedural timeline was established so that there was very limited time between volunteering for the study, taking the SECS1, participating in the simulation intervention, and taking the SECS2. Limiting the time between these steps of
the study helps to decrease the risk of outside influences, such as personal or clinical EOL experiences, thus reducing the risk of maturational bias.

Repeating the same SECS pre- and post-intervention increased the likelihood of familiarity and sensitization to the SECS assessment tool. This prompted the question as to whether increased SECS scores on the post-intervention assessment were truly reflective of the intervention, or whether they reflected familiarity and experience gained from completion of the SECS1. As mentioned previously, several weeks passed between the SECS1 and SECS2 administration, which hopefully reduced the likelihood of familiarity and sensitization to the tool. However, SECS2 and SECS3 were administered on the same date as the participants’ simulation, with only the simulation debriefing session between the two assessments.

Instrumentation, mortality, and selection bias are further threats to internal validity that had to be addressed (Lo-Biondo-Wood & Haber, 2010). Instrumentation threats were minimal within this study design, by the implementation of a single assessment tool and objective assessments by outside raters. The students supplied their own assessment data, eliminating the risk of objective influence by outside raters, following implementation of the intervention. Mortality, or the loss of study subjects from SECS1 to SECS2 was attempted to be minimized, by allowing only a short time span between SECS1, the EOL simulation, SECS2, debriefing, and SECS3. Finally, selection bias was a concern for this study, as individuals determined whether or not to voluntarily participate in the study; therefore, it was assumed that only those motivated to learn more and be more self-efficacious in the delivery of EOL care, specific to the pediatric population, were more likely to participate than those pre-licensure students who had no interest in the subject matter. In addition, those who were motivated to participate may have unintentionally increased their SECS scores, as with the Hawthorne Effect (Kurtz, 2017).
**External validity**

External validity reflects the generalizability of a research design to larger populations. Five potential threats to external validity were recommended to be considered regarding this research study (Polit & Hungler, 1999). First, the Hawthorne Effect occurs when participants manipulate certain behaviors based upon the awareness that their behavior is being monitored (Kurtz, 2017). To minimize the Hawthorne effect, the SECS1 and SECS2 surveys were administered on different dates, to minimize familiarity with the tool and to decrease the likelihood students would recall the precise SECS1 ratings they self-assessed. Additionally, the SECS2 was administered immediately following the pediatric EOL simulation, to assess students’ initial post-intervention self-efficacy scores before there was time for any discussion amongst participants regarding the simulation and before any information discussed during the debriefing session may have influenced changes to their initial thoughts on their SECS2 scores. The SECS3, however, was administered on the same date and within a short timespan following SECS2, in an effort to capture the immediate effect of post-simulation debriefing on participants’ perceived self-efficacy.

Novelty effects, which include enthusiasm and skepticism, were also considered (Polit & Hungler, 1999). While participants may exhibit improvement in self-efficacy related to the novel experience of provision of therapeutic communication at pediatric EOL following this study, there is no guarantee that such improvements will continue over time, especially if repeat exposure to like situations does not present itself to the participants after entering the nursing profession. Interaction of history and treatment was not a particular concern with this study, as nurses caring for the dying and their loved ones is not a time-restricted event, but rather something that will be certain to continue. As long as there is life, there will be death.
Experimenter effects may occur if the researcher subconsciously communicates expectations or projects bias on participant behavior. As a hospice nurse and nurse educator, the researcher was a subject matter expert and passionate about EOL education. As such, the researcher remained cautious to not interject personal expectations of behavior, but to allow the participants to reflect their individual experiences, without interruption. The researcher was present during each simulated intervention and acted in the facilitator role. To promote fidelity and avoid bias, the researcher remained as consistent as possible, using scripted information throughout each stage of the study, including the pre-simulation conference, the simulation matrix, and post-simulation debriefing. Any outlying circumstances or questions that might have prompted experimenter bias were noted and addressed with the individual participants, following the post-debriefing SECS (SECS3), so as not to affect the SECS scores in a positive or negative way.

Finally, measurement effects provided a potential threat to external validity (LoBiondo-Wood & Haber, 2010). This study was specifically designed to assess self-efficacy before and after an intervention between two types of learners. Parle et al.’s (1997) SECS tool has been demonstrated to be effective in assessing the intended measurement of perceived self-efficacy in communication during difficult situations among medical residents, physicians, nurses, and other health professional students (Bragard & Etienne, 2010; Doyle et al., 2010; Frojd & Von Essen, 2006) and, therefore, should be generalizable to future studies of like nature. One potential threat related to the measurement effect was the administration of a pre- and post-SECS, as pre-testing has the potential to affect the post-test results and generalizability outside the study (LoBiondo-Wood & Haber, 2010).
**Ethical Considerations**

In any research project, there are certain ethical issues that must be considered related to the population being studied, recruitment of participants, provision of informed consent, the site of data collection, methods of data collection, and management of that data. This research study consisted of participants answering self-efficacy surveys after actively participating in an EOL pediatric simulation or observing a live, scripted pediatric EOL simulation via simulcast, and then participating in a debriefing session following the simulation intervention.

Meeting students in their own institutions of higher learning helped to ensure students were in familiar surroundings that were comfortable to them. Participants’ comfort throughout this study was of great importance, especially considering the delicate nature of the subject matter being studied. As an added mode of emotional support, students were provided contact information for each university’s respective student counseling services department, should there have been any observed or perceived difficulties in coping with experiences throughout the study.

In addition to maintaining participant confidentiality via use of anonymity codes, participants were instructed of the need for strict confidentiality of shared emotions and statements of others expressed during post-simulation debriefings. Participants were instructed not to discuss anything that occurred or was discussed during debriefing sessions, but beyond that, what was discussed between participants outside the debriefing room was unable to be controlled. Should participants have felt uncomfortable answering debriefing questions among other study participants, they were informed of the right to not answer any or all questions, or to arrange to be interviewed privately. In addition to risks and benefits discussed within the participants’ informed consents, information regarding the confidentiality of all SECS responses
was also disclosed. All collected data was securely stored within the researcher’s university electronic Box Storage System and used only for purposes consistent with this research. Additionally, participants were informed that no individual data would be released, but, rather, aggregate results would be compiled, eliminating any risk of participant identification.

Summary

In summary, the following research questions and hypotheses were considered:

In relation to provision of therapeutic communication in EOL care situations:

1. What are the baseline perceived self-efficacy scale scores among pre-licensure nursing students?
   
   \( H_0 \): There will be no difference between groups on their baseline perceived self-efficacy scale scores among pre-licensure nursing students.
   
   \( H_1 \): There will be a difference between groups on their baseline perceived self-efficacy scale scores among pre-licensure nursing students.

2. What are the differences between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores, as compared to their pre-simulation experience self-efficacy scale scores?
   
   a. Within the total sample
   
   b. Within vicarious and active learner groups
   
   \( H_0 \): There will be no difference between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores within groups, as compared to their pre-simulation experience self-efficacy scale scores.
   
   \( H_1 \): There will be a difference between pre-licensure nursing students’ post-EOL
simulation perceived self-efficacy scale scores within groups, as compared to their pre-simulation experience self-efficacy scale scores.

3. What are the differences between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores between groups, vicarious versus active learners, as compared to their pre-simulation experience self-efficacy scale scores?

   H₀. There will be no difference between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores between groups, as compared to their pre-simulation experience self-efficacy scale scores.

   H₁. There will be a difference between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores between groups, as compared to their pre-simulation experience self-efficacy scale scores.

4. What are the differences between pre-licensure nursing students’ post-debriefing perceived self-efficacy scale scores within groups, as compared to their post-simulation experience self-efficacy scale scores?

   a. Within the total sample

   b. Within vicarious and active learner groups

   H₀. There will be no difference between pre-licensure nursing students’ post-debriefing perceived self-efficacy scale scores within groups, as compared to their post-simulation experience self-efficacy scale scores.

   H₁. There will be a difference between pre-licensure nursing students’ post-debriefing perceived self-efficacy scale scores within groups, as compared to their post-simulation experience self-efficacy scale scores.
5. What are the differences between pre-licensure nursing students’ post-debriefing self-efficacy scores between groups, vicarious versus active learners, as compared to their baseline self-efficacy scores?

H₀. There will be no difference between pre-licensure nursing students’ post-simulation debriefing perceived self-efficacy scale scores between groups, as compared to their baseline self-efficacy scale scores.

H₁. There will be a difference between pre-licensure nursing students’ post-simulation debriefing perceived self-efficacy scale scores between groups, as compared to baseline self-efficacy scale scores.

The intent of this research study was to inform the literature as to the effect of vicarious learning on pre-licensure nursing students’ perceived self-efficacy regarding provision of therapeutic communication during pediatric EOL care. Specifically, two educational interventions were implemented. One intervention was active learning as participants in a live, scripted pediatric EOL simulation, while the second intervention was vicarious learning as observational participants of a simulcast live, scripted EOL pediatric simulation. Within a month of the SECS1, participants participated as either a vicarious or active learner in a simulated pediatric EOL situation, completed the SECS2, participated in a post-simulation debriefing, and, finally, completed the SECS3. SECS1 scores, prior to any intervention, were analyzed using descriptive statistics. The second and fourth research questions were analyzed using within group measures paired-samples t-tests. The third and fifth research questions were analyzed using descriptive statistics and a mixed ANOVA with repeated measures. Though not related to this particular research project, field notes taken during debriefing sessions were later evaluated for themes of potential areas for future study or interventional improvements.
CHAPTER IV

RESULTS

The purpose of this research study was to assess the effect of vicarious learning versus active participant learning on pre-licensure nursing students’ perceived self-efficacy regarding caring for dying children and their loved ones, specific to provision of therapeutic communication. In this chapter, a description of study participants is presented. In addition, results of statistical data analysis of the five research questions will be provided and described.

Description of Participants

The population for this study included senior level pre-licensure nursing students currently in either a maternity and/or pediatric nursing course and enrolled at one of two southeastern universities, determined to have similar EOL education curricula. Some students who consented to participate during recruitment ($n = 31$) chose not to complete the study for various reasons, unknown to the researcher, in the few weeks between recruitment and the intervention, leaving ($N = 100$) to complete the study in its entirety.

Participants ($N = 100$) completed a pre-study demographics survey (see Appendix B) to collect demographic information, including such factors as sex, race, and prior EOL care experience. Demographic data for both vicarious and active learners, combined, are represented in Table 1.
### Table 1

**Demographic Data**

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
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<td></td>
</tr>
<tr>
<td>Female</td>
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<td>89</td>
</tr>
<tr>
<td>Male</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
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<td></td>
</tr>
<tr>
<td>Latina/Latino</td>
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<td>1</td>
</tr>
<tr>
<td>Non-Latina/Latino</td>
<td>84</td>
<td>84</td>
</tr>
<tr>
<td>Other</td>
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<td>14</td>
</tr>
<tr>
<td>Decline</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Race</strong></td>
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<td></td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Black/African American</td>
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<td>6</td>
</tr>
<tr>
<td>White</td>
<td>91</td>
<td>91</td>
</tr>
<tr>
<td>More/Other</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Decline</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Educational experiences on therapeutic communication during difficult situations, such as EOL (EOLEd)*
- Yes 57 57
- No 43 43

Simulation experiences involving the death of a client, in which you acted as a participant (EOLActive)*
- Yes 10 10
- No 90 90

Simulation experience involving the death of a client, in which you acted as a vicarious learner (EOLVic)*
- Yes 5 5
- No 95 95

Experienced the loss of a friend or loved one within the past year (LossPersonal)*
- Yes 5 5
- No 95 95

Been the primary care giver for a dying loved one (PrimCare)*
- Yes 17 17
- No 83 83

Experienced the loss of a client during a clinical or work situation (LossClient)*
- Yes 36 36
- No 64 64

*Notes. (N = 100)
*Indicates abbreviations used for demographic variables in additional tables
Additionally, data were examined for any statistically significant differences between vicarious and active learner group means regarding the nine demographic variables (see Table 2).

Table 2

*Independent Samples t-test Between Groups Demographics*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sig.(2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
<th>Lower</th>
<th>Upper</th>
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</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Equal variances assumed</td>
<td>.752</td>
<td>-.020</td>
<td>.063</td>
<td>-.145</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>.752</td>
<td>-.020</td>
<td>.063</td>
<td>-.145</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Equal variances assumed</td>
<td>.226</td>
<td>.100</td>
<td>.082</td>
<td>-.063</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>.227</td>
<td>.100</td>
<td>.082</td>
<td>-.063</td>
</tr>
<tr>
<td>Race</td>
<td>Equal variances assumed</td>
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<td>.060</td>
<td>.077</td>
<td>-.094</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>.440</td>
<td>.060</td>
<td>.077</td>
<td>-.094</td>
</tr>
<tr>
<td>EOLed</td>
<td>Equal variances assumed</td>
<td>.842</td>
<td>.020</td>
<td>.100</td>
<td>-.178</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>.842</td>
<td>.020</td>
<td>.100</td>
<td>-.178</td>
</tr>
<tr>
<td>EOLActive</td>
<td>Equal variances assumed</td>
<td>.510</td>
<td>-.040</td>
<td>.060</td>
<td>-.160</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>.510</td>
<td>-.040</td>
<td>.060</td>
<td>-.160</td>
</tr>
<tr>
<td>EOLVic</td>
<td>Equal variances assumed</td>
<td>.650</td>
<td>.020</td>
<td>.044</td>
<td>-.067</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>.650</td>
<td>.020</td>
<td>.044</td>
<td>-.067</td>
</tr>
<tr>
<td>LossPersonal</td>
<td>Equal variances assumed</td>
<td>.692</td>
<td>-.040</td>
<td>.101</td>
<td>-.240</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>.692</td>
<td>-.040</td>
<td>.101</td>
<td>-.240</td>
</tr>
<tr>
<td>PrimCare</td>
<td>Equal variances assumed</td>
<td>.430</td>
<td>-.060</td>
<td>.076</td>
<td>-.210</td>
</tr>
<tr>
<td></td>
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<td>.430</td>
<td>-.060</td>
<td>.076</td>
<td>-.210</td>
</tr>
<tr>
<td>LossClient</td>
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<td>.038</td>
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<td>.095</td>
<td>-.388</td>
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<tr>
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<td>-.200</td>
<td>.095</td>
<td>-.388</td>
</tr>
</tbody>
</table>

According to the output from the independent-samples *t*-test, there were no significant differences between group means in eight of the nine demographic variables of sex (*p* = .752); ethnicity (*p* = .226); race (*p* = .440); previous EOL education (*p* = .842); participation as an
active learner in an EOL simulation ($p = .510$); participation as a vicarious learner in an EOL simulation ($p = .650$); loss of a friend or loved one within the past year ($p = .692$); or having been the primary caregiver for someone at EOL ($p = .430$). However, there was a significant difference in mean scores for the demographic variable concerning loss of a client during a work or clinical situation demonstrating that vicarious learners ($M=1.54$, $SD=.503$) reported fewer losses when compared to active learners ($M = 1.74$, $SD = .443$); $t(98) = -2.109$, $p = .038$, two-tailed). The magnitude of the difference in means, however, (mean difference $= -.200$, 95% CI: -.388 to -.012) was small ($\eta^2 = .04$).

Data Analysis

**Research question 1: What are the baseline perceived self-efficacy scale scores among pre-licensure nursing students?**

To address Research Question 1, participants completed the first of three, nine-item, SECS surveys (SECS1) to determine baseline perceived self-efficacy in their ability to communicate therapeutically during difficult conversations. Participants rated their communication confidence from 0 (not at all confident) to 100 (totally confident) on nine communication tasks, including such situations as breaking bad news and helping a client deal with uncertainty of his/her situation (see Appendix C). Using descriptive statistics and data from a mixed ANOVA, the researcher first assessed baseline means, standard deviations, minimum scores, and maximum scores of vicarious and active learner groups, combined, on each of the nine items within the SECS1 (see Table 3).
Next, an independent-samples *t*-test was performed, allowing the researcher to assess between-group statistical means and standard deviations for SECS1 scores (see Table 4) and to determine any statistical significance between randomized vicarious and active learners’ perceived self-efficacy scores on their SECS1 (see Table 5).

<table>
<thead>
<tr>
<th>Description</th>
<th>N</th>
<th>Missing</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiate discussion about concerns (DiscConc)*</td>
<td>100</td>
<td>0</td>
<td>68.19</td>
<td>23.034</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Encourage a client to talk about emotional concerns (EncEmot)*</td>
<td>100</td>
<td>0</td>
<td>64.47</td>
<td>22.168</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>Explore a client’s feelings like anger (Feelings)*</td>
<td>100</td>
<td>0</td>
<td>53.37</td>
<td>25.494</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Conclude a client interview with an agreed problem list and plan of action (POA)*</td>
<td>100</td>
<td>0</td>
<td>61.20</td>
<td>24.107</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Assess symptoms of anxiety and depression (AnDe)*</td>
<td>100</td>
<td>0</td>
<td>65.32</td>
<td>22.002</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Break bad news to a client (BreakBad)*</td>
<td>100</td>
<td>0</td>
<td>41.02</td>
<td>24.480</td>
<td>0</td>
<td>95</td>
</tr>
<tr>
<td>Appropriately challenge a client who denies illness (Denial)*</td>
<td>100</td>
<td>0</td>
<td>42.17</td>
<td>23.272</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Manage collusion (Collusion)*</td>
<td>100</td>
<td>0</td>
<td>49.22</td>
<td>27.499</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Help a client deal with the uncertainty of his/her situation (Uncertainty)*</td>
<td>100</td>
<td>0</td>
<td>55.97</td>
<td>23.308</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

*Notes.* *Indicates abbreviations used for SECS variables in additional tables*
<table>
<thead>
<tr>
<th></th>
<th>T1 Vicarious</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DiscConc</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vicarious Learner</td>
<td>50</td>
<td></td>
<td>68.74</td>
<td>22.329</td>
</tr>
<tr>
<td>Active Learner</td>
<td>50</td>
<td></td>
<td>67.64</td>
<td>23.933</td>
</tr>
<tr>
<td>EncEmot</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vicarious Learner</td>
<td>50</td>
<td></td>
<td>64.70</td>
<td>22.822</td>
</tr>
<tr>
<td>Active Learner</td>
<td>50</td>
<td></td>
<td>64.42</td>
<td>21.724</td>
</tr>
<tr>
<td>Feelings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vicarious Learner</td>
<td>50</td>
<td></td>
<td>53.30</td>
<td>25.766</td>
</tr>
<tr>
<td>Active Learner</td>
<td>50</td>
<td></td>
<td>53.44</td>
<td>25.480</td>
</tr>
<tr>
<td>POA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vicarious Learner</td>
<td>50</td>
<td></td>
<td>62.56</td>
<td>23.100</td>
</tr>
<tr>
<td>Active Learner</td>
<td>50</td>
<td></td>
<td>59.84</td>
<td>25.235</td>
</tr>
<tr>
<td>AnDe</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vicarious Learner</td>
<td>50</td>
<td></td>
<td>64.20</td>
<td>21.222</td>
</tr>
<tr>
<td>Active Learner</td>
<td>50</td>
<td></td>
<td>66.44</td>
<td>22.915</td>
</tr>
<tr>
<td>BreakBad</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vicarious Learner</td>
<td>50</td>
<td></td>
<td>41.60</td>
<td>23.505</td>
</tr>
<tr>
<td>Active Learner</td>
<td>50</td>
<td></td>
<td>40.44</td>
<td>25.644</td>
</tr>
<tr>
<td>Denial</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vicarious Learner</td>
<td>50</td>
<td></td>
<td>42.00</td>
<td>24.620</td>
</tr>
<tr>
<td>Active Learner</td>
<td>50</td>
<td></td>
<td>42.34</td>
<td>22.092</td>
</tr>
<tr>
<td>Collusion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vicarious Learner</td>
<td>50</td>
<td></td>
<td>49.50</td>
<td>27.297</td>
</tr>
<tr>
<td>Active Learner</td>
<td>50</td>
<td></td>
<td>48.94</td>
<td>27.973</td>
</tr>
<tr>
<td>Uncertainty</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vicarious Learner</td>
<td>50</td>
<td></td>
<td>56.10</td>
<td>22.819</td>
</tr>
<tr>
<td>Active Learner</td>
<td>50</td>
<td></td>
<td>55.84</td>
<td>24.019</td>
</tr>
</tbody>
</table>
An independent-samples t-test was conducted to compare the baseline perceived self-efficacy in therapeutic conversations during difficult situations between vicarious and active learners. Levene’s test on each of the nine SECS items showed no statistically significant differences between groups (vicarious versus active learners) \( p > .05 \). Homogeneity of
variances was assumed on each of the nine items between vicarious and active learners’ SECS1 scores; therefore, the null hypothesis was not rejected for Research Question 1.

**Research question 2: What are the differences between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores within groups, as compared to their pre-simulation experience self-efficacy scale scores?**

a. **Within the total sample**

b. **Within vicarious and active learner groups**

First, the entire sample was examined. Using a paired-samples t-test, a significance level of .05, and a confidence interval set at 95%, analysis of each of the nine SECS items were completed to determine any significant differences between pre-licensure nursing students’ SECS2 score means within the participant group, as a whole, as compared to their SECS1 score means. Table 6 reveals the total sample mean and standard deviation values.
The paired sample statistics table (Table 6) exhibits an increase in total sample mean scores from SECS1 to SECS2 for each of the nine items assessed. Table 7 depicts increases in total sample means as significant with \((p < .05)\) for each of the nine items assessed across time, between SECS1 and SECS2 (see Table 7).
Table 7

<table>
<thead>
<tr>
<th>Paired Samples Correlations SECS1 to SECS2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Item 1 T1DiscConc &amp; T2DiscConc</td>
</tr>
<tr>
<td>Item 2 T1EncEmot &amp; T2EncEmot</td>
</tr>
<tr>
<td>Item 3 T1Feelings &amp; T2Feelings</td>
</tr>
<tr>
<td>Item 4 T1POA &amp; T2POA</td>
</tr>
<tr>
<td>Item 5 T1AnDe &amp; T2AnDe</td>
</tr>
<tr>
<td>Item 6 T1BreakBad &amp; T2BreakBad</td>
</tr>
<tr>
<td>Item 7 T1Denial &amp; T2Denial</td>
</tr>
<tr>
<td>Item 8 T1Collusion &amp; T2Collusion</td>
</tr>
<tr>
<td>Item 9 T1Uncertainty &amp; T2Uncertainty</td>
</tr>
</tbody>
</table>

These findings are further confirmed by the results in the paired-samples t-test, when viewing the Sig. (2-tailed) column, which reveals probability values ranging from \( p = .000 \) to \( p = .001 \), all substantially smaller than the specified significance value of .05. Therefore, improved total sample means from the time of SECS1 until SECS2 are confirmed to be significant in each of the nine items assessed for the total sample (see Table 8).
Next, the sample was explored by group for within group findings (vicarious and active learners). Using within group data from paired-samples t-tests, an aggregated table of vicarious and active learners’ means, standard deviations, and significance (2-tailed) of mean differences between SECS1 and SECS2 was constructed. Within group findings were consistent with the total sample findings in all items assessed, with the exception of three SECS items within the active learner group that revealed non-significant mean differences over time between SECS1 and SECS2. Those three SECS items included: initiating a discussion with a client about his or her concerns \((p = .159, 2\text{-tailed})\); encouraging a client to talk about emotional concerns \((p = .086, 2\text{-tailed})\); and exploring a client’s intense feelings like anger \((p = .133, 2\text{-tailed})\). Calculated eta squared statistics for each of these three items were < .60, indicating a small effect size for each SECS1 to SECS2 mean difference determined not to be considerably significant among the active learner group. All remaining within group findings were consistent with total sample

<table>
<thead>
<tr>
<th>Item</th>
<th>Paired Differences</th>
<th>Paired Differences</th>
<th>Paired Differences</th>
<th>Paired Differences</th>
<th>Paired Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>T1DiscCon - T2DiscCon</td>
<td>-7.580</td>
<td>22.805</td>
<td>2.281</td>
<td>-12.105</td>
</tr>
<tr>
<td>Item 3</td>
<td>T1Feelings - T2Feelings</td>
<td>-11.270</td>
<td>24.422</td>
<td>2.442</td>
<td>-16.116</td>
</tr>
<tr>
<td>Item 4</td>
<td>T1FOA - T2FOA</td>
<td>-13.650</td>
<td>23.231</td>
<td>2.323</td>
<td>-18.269</td>
</tr>
<tr>
<td>Item 7</td>
<td>T1Denial - T2Denial</td>
<td>-24.350</td>
<td>24.196</td>
<td>2.420</td>
<td>-29.161</td>
</tr>
</tbody>
</table>
findings, revealing statistically significant improved means between administration of the baseline SECS1 and the post-simulation SECS2 (see Table 9).

<table>
<thead>
<tr>
<th>Table 9</th>
<th>Aggregated Table of Descriptive Statistics SECS1 to SECS2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vicarious (M/SD)</td>
</tr>
<tr>
<td></td>
<td>SECS1</td>
</tr>
<tr>
<td>DiscConc</td>
<td>68.74 / 22.329</td>
</tr>
<tr>
<td>EncEmot</td>
<td>64.70 / 22.822</td>
</tr>
<tr>
<td>Feelings</td>
<td>53.30 / 25.766</td>
</tr>
<tr>
<td>POA</td>
<td>63.96 / 22.830</td>
</tr>
<tr>
<td>AnDe</td>
<td>65.40 / 21.520</td>
</tr>
<tr>
<td>BreakBad</td>
<td>43.40 / 24.462</td>
</tr>
<tr>
<td>Denial</td>
<td>43.20 / 25.229</td>
</tr>
<tr>
<td>Collusion</td>
<td>50.40 / 26.818</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>57.50 / 23.327</td>
</tr>
</tbody>
</table>

Paired-samples t-tests were conducted to answer research question two, first evaluating the difference between pre-licensure nursing students’ SECS2 scores as compared to their baseline SECS1 scores for the entire sample and, second, within groups (vicarious and active learners). There was a statistically significant increase in mean self-efficacy scores from SECS1 to SECS2 for the entire sample. Total sample eta squared statistics for each of the nine items within the SECS were > .10, indicating a large effect size for each item assessed. Therefore, the null hypothesis was rejected regarding the total sample, as data revealed a statistically significant increase between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores, as compared to their pre-simulation experience self-efficacy scale scores.

Regarding within groups (vicarious and active learners) findings, data did not reveal statistically significant increases between pre-licensure nursing students’ SECS2 scores, as compared to their pre-simulation SECS1 scores on three of the nine SECS items assessed within the active learner group. Three SECS items that revealed results that were not statistically
significant included: initiating discussion about concerns, encouraging discussion about emotional concerns, and exploring client feelings (see shaded area on Table 11); therefore, the null hypothesis was not rejected.

**Research question 3: What are the differences between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores between groups, vicarious versus active learners, as compared to their pre-simulation experience self-efficacy scale scores?**

To answer the third research question, a mixed between-within subjects ANOVA with repeated measures and a significance value of .05 was conducted on each of the nine SECS items, determining if there were significant differences between pre-licensure nursing students’ post-EOL simulation SECS2 scores between groups, vicarious versus active learners, as compared to their pre-simulation SECS1 scores. Tests of between subjects effects revealed significance values between SECS scores between the two groups, vicarious and active learners, and the effect size of the between-subject effect. Aggregated results for these findings were recorded in Table 10.

<table>
<thead>
<tr>
<th>Table 10</th>
<th>Between-Groups Effects SECS1 to SECS2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
</tr>
<tr>
<td>Item 1</td>
<td>DiscConc (1,98)=1.233</td>
</tr>
<tr>
<td>Item 2</td>
<td>EncEmot (1, 98)=1.595</td>
</tr>
<tr>
<td>Item 3</td>
<td>Feelings (1, 98)=1.800</td>
</tr>
<tr>
<td>Item 4</td>
<td>POA (1,98)=1.762</td>
</tr>
<tr>
<td>Item 5</td>
<td>AnDe (1, 98)=.339</td>
</tr>
<tr>
<td>Item 6</td>
<td>BreakBad (1, 98)=2.521</td>
</tr>
<tr>
<td>Item 7</td>
<td>Denial (1,98)=1.029</td>
</tr>
<tr>
<td>Item 8</td>
<td>Collusion (1, 98)=0.10</td>
</tr>
<tr>
<td>Item 9</td>
<td>Uncertainty (1,98)=.705</td>
</tr>
</tbody>
</table>
According to the data, there were no statistically significant differences between vicarious learners versus active learners on perceived self-efficacy scale scores between SECS1 and SECS2, as each of the nine items analyzed yielded \( p > .05 \) and a small effect size of < .06. Therefore, the null hypothesis was not rejected for the third research question, as there was no statistically significant between-group difference between pre-licensure nursing students’ post-EOL simulation SECS2 scores compared to their pre-simulation SECS1 scores.

**Research question 4: What are the differences between pre-licensure nursing students’ post-debriefing perceived self-efficacy scale scores, as compared to their post-simulation experience self-efficacy scale scores?**

a. **Within the total sample**

b. **Within vicarious and active learner groups**

First, the entire sample was examined. Using a paired-samples \( t \)-test, a significance level of .05, and a confidence interval set at 95%, analysis of each of the nine SECS items were completed to determine any significant differences between pre-licensure nursing students’ post-debriefing perceived self-efficacy scale (SECS 3) score means, as compared to their post-simulation experience self-efficacy scale score means (SECS 2). Table 11 reveals the total sample mean and standard deviation values.
The paired sample statistics table (Table 11) for the total sample exhibits an increase in mean scores from SECS2 to SECS3 for each of the nine items assessed. Table 12 depicts increases in the means as significant with ($p < .05$) for each of the nine items assessed across time, between SECS2 and SECS3 for the total sample (see Table 12).
This finding is further validated by results in the paired-samples $t$-test, when viewing the Sig. (2-tailed) column, which consistently reveals probability values of $(p = .000)$, all substantially smaller than the specified significance value of .05. Therefore, improved means from the time of SECS2 until SECS3 are confirmed to be significant in each of the nine items assessed among the total sample (see Table 13).
Next, the sample was explored by group for within group findings. Using paired-samples t-tests, an aggregated table of within group means and standard deviations for both vicarious and active learner groups was developed. As with the whole participant group, data for both vicarious learner and active learner groups reveal an increase in means for all nine items between administration of the post-simulation SECS2 and the post-debriefing SECS3 (see Table 14).

Table 14

<table>
<thead>
<tr>
<th>Item</th>
<th>DiscConc</th>
<th>EncEmot</th>
<th>Feelings</th>
<th>POA</th>
<th>AnDe</th>
<th>BreakBad</th>
<th>Denial</th>
<th>Collusion</th>
<th>Uncertainty</th>
</tr>
</thead>
<tbody>
<tr>
<td>SECS2</td>
<td>79.10 / 16.527</td>
<td>78.36 / 17.543</td>
<td>70.14 / 18.232</td>
<td>77.68 / 19.536</td>
<td>80.44 / 16.077</td>
<td>72.66 / 20.104</td>
<td>70.26 / 21.668</td>
<td>76.30 / 20.598</td>
<td>77.26 / 18.106</td>
</tr>
<tr>
<td>SECS3</td>
<td>85.70 / 12.206</td>
<td>86.04 / 11.420</td>
<td>77.58 / 16.075</td>
<td>82.44 / 15.408</td>
<td>84.60 / 15.408</td>
<td>79.68 / 14.393</td>
<td>78.56 / 16.703</td>
<td>82.86 / 15.538</td>
<td>82.18 / 13.929</td>
</tr>
<tr>
<td>Vicarious SECS1-SECS2</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.012</td>
<td>.021</td>
<td>.001</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Active SECS1-SECS2</td>
<td>72.44 / 19.839</td>
<td>69.84 / 20.320</td>
<td>59.14 / 23.743</td>
<td>72.04 / 18.690</td>
<td>79.00 / 16.283</td>
<td>72.30 / 20.242</td>
<td>79.00 / 16.257</td>
<td>79.00 / 14.727</td>
<td>79.60 / 12.771</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

In conclusion, paired-samples t-tests were conducted to answer research question four, evaluating the difference between pre-licensure nursing students’ SECS3, as compared to their SECS2, first within the total sample and, second, within groups (vicarious and active learners). There were statistically significant increases in self-efficacy scores from SECS2 to SECS3 within both the total sample and within groups. The SECS item regarding students’ perceived self-efficacy in assessing a client’s anxiety and depression, though revealing only a medium effect size with an eta squared value of .09., yielded a significant increase in score with (p = .002, 2-tailed). Therefore, the null hypothesis was rejected for the fourth research question, within the total sample and within groups (vicarious and active learners) as there was a
statistically significant difference between pre-licensure nursing students’ post-debriefing SECS3 scores, as compared to their post-simulation experience SECS2 scores with all nine SECS items.

Research question 5: What are the differences between pre-licensure nursing students’ post-debriefing self-efficacy scores between groups, vicarious versus active learners, as compared to their baseline self-efficacy scores?

To answer the fifth and final research question, demographic data and a mixed between-within subjects ANOVA with repeated measures and a significance value of .05 and a confidence interval set at 95% was conducted on each of the nine SECS items. This question assisted the researcher in determining if there were significant differences between pre-licensure nursing students’ post-debriefing SECS3 scores between groups, vicarious versus active learners, as compared to their baseline SECS1 scores. First, an aggregated table of means and standard deviation for both vicarious and active learners on each of the nine SECS items from SECS1 to SECS3 was developed (see Table 15). Table 15 displays an increase in means for both groups across time from SECS1 to SECS3.

| Table 15 |

Aggregated Table of Descriptive Statistics (Vicarious vs. Active Learners: SECS1, 2, & 3)

<table>
<thead>
<tr>
<th></th>
<th>Vicarious Learners (M/SD)</th>
<th>Active Learners (M/SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SECS1</td>
<td>SECS3</td>
</tr>
<tr>
<td>Item 1 DiscConc</td>
<td>68.74 / 22.329</td>
<td>85.70 / 12.206</td>
</tr>
<tr>
<td>Item 2 EncEmot</td>
<td>64.70 / 22.822</td>
<td>86.04 / 11.420</td>
</tr>
<tr>
<td>Item 3 Feelings</td>
<td>53.30 / 25.766</td>
<td>77.58 / 16.075</td>
</tr>
<tr>
<td>Item 4 POA</td>
<td>63.96 / 22.830</td>
<td>82.44 / 15.408</td>
</tr>
<tr>
<td>Item 5 AnDe</td>
<td>65.40 / 21.520</td>
<td>84.60 / 10.825</td>
</tr>
<tr>
<td>Item 6 BreakBad</td>
<td>43.40 / 24.462</td>
<td>79.68 / 14.393</td>
</tr>
<tr>
<td>Item 7 Denial</td>
<td>43.20 / 25.229</td>
<td>78.56 / 16.703</td>
</tr>
<tr>
<td>Item 8 Collusion</td>
<td>50.40 / 26.818</td>
<td>82.86 / 15.538</td>
</tr>
<tr>
<td>Item 9 Uncertainty</td>
<td>57.50 / 23.327</td>
<td>82.18 / 13.929</td>
</tr>
</tbody>
</table>
Further data, displayed in Table 18, shows the percent of mean increases between groups across time from SECS1 to SECS3, with vicarious learners having the greatest percent increase among their SECS means from SECS1 to SECS2 in five of the nine SECS items (see Table 16).

<table>
<thead>
<tr>
<th>Item</th>
<th>Vicarious Learners</th>
<th>Active Learners</th>
</tr>
</thead>
<tbody>
<tr>
<td>DiscConc</td>
<td>24.67%</td>
<td>16.50%</td>
</tr>
<tr>
<td>EncEmot</td>
<td>32.98%</td>
<td>22.98%</td>
</tr>
<tr>
<td>Feelings</td>
<td>45.55%</td>
<td>33.05%</td>
</tr>
<tr>
<td>POA</td>
<td>28.89%</td>
<td>35.18%</td>
</tr>
<tr>
<td>AnDe</td>
<td>29.36%</td>
<td>17.14%</td>
</tr>
<tr>
<td>BreakBad</td>
<td>83.59%</td>
<td>92.18%</td>
</tr>
<tr>
<td>Denial</td>
<td>81.85%</td>
<td>81.01%</td>
</tr>
<tr>
<td>Collusion</td>
<td>64.40%</td>
<td>66.03%</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>42.92%</td>
<td>46.25%</td>
</tr>
</tbody>
</table>

Percent mean increases on the nine SECS items over time between SECS1 to SECS3 ranged from a low of 16.50% to a high of 92.18%. However, further analysis of variance was necessary to answer research question five and determine if there were statistically significant, between-group differences in mean scores on each of the nine SECS items (see Table 17).
According to the 2x3 mixed-design ANOVA data, there were no statistically significant differences between the effectiveness of vicarious learning versus active learning on perceived self-efficacy scale scores between SECS1 and SECS3, as each of the nine items analyzed yielded ($p > .05$), ranging from ($p = .205$) to ($p = .776$). Therefore, the null hypothesis was not rejected for the fifth research question, as there were no statistically significant between-group differences between pre-licensure nursing students’ post-debriefing SECS3 scores as compared to their baseline SECS1 scores.

Summary

Following a descriptive analysis of sample participants, the researcher attempted to answer five research questions. To answer Research Question 1, descriptive statistics, an independent-samples $t$-test, and a 2x3 mixed-design ANOVA were conducted to examine baseline SECS1 scores among pre-licensure nursing students. There were no significant differences between

<table>
<thead>
<tr>
<th>(I)Vicarious</th>
<th>Mean Difference (I-J)</th>
<th>F</th>
<th>Sig.</th>
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groups regarding baseline SECS1 scores; therefore, homogeneity of variances was assumed on each of the nine SECS items between vicarious and active learners.

To answer Research Question 2, a paired-samples $t$-test was conducted to determine differences between pre-licensure nursing students’ post-EOL simulation SECS2 scores within groups (a. total sample and b. vicarious and active learner groups), as compared to their pre-simulation experience SECS1 scores. Analysis of data revealed a significant increase over time between SECS1 and SECS2 scores within all study participants; therefore, the null hypothesis was rejected for Research Question 2, part a., regarding data analysis within the total sample. There were also significant increases over time, from SECS1 to SECS2, in all nine SECS items within the vicarious learner group; however, there were three SECS items that did not reveal significant increases over time, from SECS1 to SECS2, within the active learner group.

Research Question 3, assessing the differences between pre-licensure nursing students’ post-EOL simulation SECS2 scores between groups, vicarious versus active learners, as compared to their pre-simulation experience SECS1 scores, was analyzed using a 2x3 mixed-design ANOVA. No statistically significant differences were revealed between vicarious learners versus active learners on perceived self-efficacy scale scores over time between SECS1 and SECS2.

To answer Research Question 4, a paired-samples $t$-test was conducted to determine differences between pre-licensure nursing students’ post-debriefing simulation SECS3 scores within groups (a. total sample and b. vicarious and active learner groups), as compared to their post-simulation experience SECS2 scores. Analysis of data revealed a significant increase over time between SECS2 and SECS3 scores within all study participants; therefore, the null hypothesis was rejected for Research Question 2, part a., regarding data analysis within the total
sample. There were also significant increases over time, from SECS2 to SECS3, in all nine SECS items within vicarious and active learner groups.

The final question, Research Question 5, assessing the differences between pre-licensure nursing students’ post-debriefing SECS3 scores between groups, vicarious versus active learners, as compared to their baseline SECS1 scores, was conducted using a 2x3 mixed-design ANOVA. Analysis of the data revealed that there were no statistically significant differences between the effectiveness of vicarious learning versus active learning on perceived self-efficacy scale scores over time between SECS1 and SECS3.
CHAPTER V
DISCUSSION

A push to integrate EOL education, specific to therapeutic communication and improved EOL care among all ages, including pediatric clients, has spanned over several decades (RWJF & AACN, 1998; AACN, 2018; IOM, 1997; IOM, 2003). Despite this push, a sizeable curricular gap remains in preparing future nurses for essential application of therapeutic measures, deemed critical to appropriate EOL care (AACN, 2018; Ali & Ayoub, 2010; Germano & Meneguin, 2013; IOM, 1997; & Shifrin, 2016). Pre-licensure nursing students often equate this educational gap with generalized anxiety (Adesina, et al., 2014; Carman, et al., 2016; Mutto et. al, 2010) and perceived exacerbation of the already stress-producing task of caring for clients at the EOL and their loved ones (Ali & Ayoub, 2010; Germano & Meneguin, 2013).

Nurses’ avoidance of communication with dying clients and their loved ones may directly correlate with such anxiety, as well as poor perceived self-efficacy (Mutto et. al, 2010) and low self-confidence in caring for the dying (Lubbers & Rossman, 2016). If not adequately addressed in didactic pre-licensure nursing curricula and clinical experiences, nursing students’ decreased self-efficacy in providing EOL care may lead to ineffective and potentially damaging communication skills that are likely to continue beyond graduation and into professional nursing practice (Mutto et. al, 2010).

Hard nursing skills, such as intravascular access, Foley catheter insertion, pain management, and maintaining skin integrity for those at EOL can be taught through both didactic and clinical educational experiences. However, soft skills, such as provision of therapeutic communication
with pediatric clients and their families at EOL require clinical experiences for pre-licensure nursing students to directly observe and then practice appropriate methods of therapeutic communication (Heise & Gilpin, 2016). Limited clinical access to pediatric clients at the EOL (Aldridge, 2017; Fabro et al., 2014) along with the recognized necessity to increase pre-licensure EOL care education, specific to therapeutic communication (ANA, 2016; IOM, 2015; Jeffers, 2014), force pre-licensure nursing educators to seek alternative educational approaches for meeting this need and incorporating such educational alternatives into nursing curricula.

One alternative approach to consider is increased utilization of simulated EOL scenarios in pre-licensure nursing curricula. Simulation experiences aid in providing alternative methods for knowledge acquisition, enhanced communication skills, and improved self-efficacy (Gillan et al., 2014). Additionally, simulation provides pre-licensure nursing students opportunities to practice therapeutic communication during intensely emotional mock situations with the reassurance that no actual harm will result from inappropriate actions or words (Lee & Dupree, 2007).

Though simulation is beneficial for enhancing communication skills and self-efficacy (Gillan et al., 2014), several barriers may impede the use of simulation to fill this educational gap. Such barriers include limited time availability to run simulated scenarios and perform a thorough debriefing, expense of conducting simulations with high fidelity mannequins and audio-visual technology, and limited clinical laboratory space (Fabro et al., 2014; Gillan et al., 2014). Additionally, many pre-licensure nursing programs lack faculty who are adequately trained to facilitate simulated EOL care situations (Fabro et al., 2014; Gillan et al., 2014), leaving accuracy and consistency of appropriate EOL educational simulations to chance.

The principal aim of this study was to determine the effectiveness of vicarious versus active learning on pre-licensure nursing students’ self-efficacy related to provision of therapeutic
communication during pediatric EOL care situations. The results of this study help support the case that vicarious learning can offer an equally effective, evidence-based alternative to traditional active learning for pre-licensure clinical nursing groups in simulated pediatric EOL scenarios.

**Major Findings**

**Research question 1**

Research Question 1 asked “What are the baseline perceived self-efficacy scale scores among pre-licensure nursing students?” Baseline assessments provide a critical reference point in interventional research studies as they provide a way for the researcher to examine what, if any, changes are triggered by the research intervention (United Nations Entity for Gender Equality and the Empowerment of Women, 2012). Findings from this research show no significant baseline assessment differences between groups, thus establishing an even baseline for later comparison.

The finding that no students felt 100% self-efficacious supports work by previous researchers. Mullen et al. (2015) note that lack of adequate education on the provision of EOL care leads to decreased perceived self-efficacy in students’ abilities to communicate therapeutically when caring for clients and their loved ones at the EOL. Mutto et al. (2010) agree, stating avoidance of communication with dying children and their loved ones may be reflective of poor perceived self-efficacy. Though prior studies have evaluated self-efficacy in provision of therapeutic communication during EOL situations among physicians, social workers, and licensed nursing staff, this study brings new findings about the pervasiveness of the lack of self-efficacy in therapeutic communication during EOL situations among pre-licensure nursing students. Dosser and Kennedy (2014) emphasize the fundamental need for education on
appropriate provision of therapeutic communication during pediatric EOL situations, explaining how therapeutic communication becomes the very essence of EOL care and potentiates significantly improved bereavement outcomes for children’s loved ones.

**Research question 2**

Research question 2 asked “What are the differences between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores within groups, as compared to their pre-simulation experience self-efficacy scale scores?” When considering all of the items on the SECS, the within group findings for the total sample, along with within group findings among vicarious learners indicate that participation in the pediatric EOL simulation significantly improved the pre-licensure nursing students’ self-efficacy in provision of therapeutic communication during difficult conversations. However, within group findings for the active learners revealed significantly improved perceived self-efficacy in six of the nine SECS items, leaving three items yielding no significant improvement in perceived self-efficacy.

Based on previous research, EOL simulation improves knowledge, attitudes, and specific to this study, self-efficacy regarding EOL care among pre-licensure students (Lippe & Becker, 2015; Moreland et al., 2012). In an effort to determine if this study’s EOL simulation pedagogical method aligned with prior research in improving self-efficacy during EOL care, the researcher compared post-simulation SECS2 scores with the same participants’ pre-simulation baseline SECS1 scores and assessed differences. In doing so, alignment with prior studies revealed that increased perceived self-efficacy in EOL care provision resulting from participation in EOL simulations was confirmed among the total participant group.

The current study supports previous literature related to EOL simulated experiences. Simulated experiences, such as mock EOL situations, help alleviate a critical gap in nursing
curricula surrounding EOL care (Aldridge, 2017). Having the ability to practice difficult conversations in the safety of a simulation lab can limit anxiety and promote therapeutic communication for actual clinical situations (Sleeper & Thompson, 2008). In addition, EOL simulations during which students can practice difficult conversations are essential in building students’ perceived self-efficacy in providing therapeutic communication during difficult situations (Gillan et al., 2014).

One new aspect integrated into this EOL simulation study was the use of vicarious versus active learners with a focus on determining if there was a significant difference between the groups’ changes in post-simulation perceived self-efficacy, as compared to their pre-simulation SECS1 ratings. Like the total group findings, the vicarious learner group yielded a statistically significant increase in perceived self-efficacy in the provision of therapeutic communication during a pediatric EOL situation as determined by comparing the vicarious learners’ post-simulation SECS2 scores with their baseline scores on SECS1.

Of interest is the fact that three of the SECS items tested over time from SECS1 (pre-simulation self-efficacy assessment) to SECS2 (post-simulation self-efficacy assessment) did not yield statistically significant increases in perceived self-efficacy scores among active learners; whereas, the total sample and vicarious learner group yielded statistically significant improvements in each of the nine SECS items. One possible explanation for this difference is the fact that vicarious learners, as observers, may not have experienced the same level of anxiety that the active learners potentially experienced, because the active learners were actually performing in the presence of peers and faculty during a first-time, perceivably uncomfortable experience.
Although Sleeper and Thompson (2008) surmise that practicing difficult conversations in the safety of a simulation lab can limit anxiety for actual clinical situations, they do not address the level of anxiety initially perceived by first-time active learners participating in simulated difficult conversations. In addition, anxiety surrounding death and dying and attitudes regarding provision of EOL care are often molded by nursing students’ initial exposures to EOL education (Mutto et. al, 2010). Thus, if the simulation was the first EOL care situation the active learners had ever encountered, performance anxiety may have impeded the group from recognizing a boost in perceived self-efficacy in the three areas of initiating discussion about concerns, encouraging discussion about emotional concerns, and exploring client feelings.

Findings from this study support earlier work by several investigators. Aldridge (2017) found that simulated experiences, such as mock EOL situations, help alleviate a critical gap in nursing curricula surrounding EOL care. Sleeper and Thompson (2008) propose that having the ability to practice difficult conversations in the safety of a simulation lab limits anxiety and promotes therapeutic communication for actual clinical situations. Gillan et al. (2014) also reports that EOL simulations, during which students can practice difficult conversations, are essential in building students’ perceived self-efficacy in providing therapeutic communication during difficult situations.

Regarding the vicarious learners’ perspective, the researcher believes they may have had less anxiety during the simulation than the active learners by not being worried about the pressure to perform during the new EOL simulated experience. Such findings are supported by Ford et al. (2013), who report that the vicarious learner group scored higher than the active learner group due to decreased distractions, as opposed to being immersed as an active participant in the live event. Observation may have allowed the vicarious learners to feel more at
ease, while providing them an opportunity to evaluate the situation as a whole and observe communication among the active learner group. As observers, the vicarious learners had the advantage of viewing the overall scene and potentially deciding for themselves which of the active learners’ communication behaviors were therapeutic and those that were not. Supported by Ford et al., 2013, decreased performance anxiety felt by vicarious learners, along with the ability to be more attentive to the overall scenario, may have attributed to a greater perceived improvement among vicarious learners’ self-efficacy in providing therapeutic communication.

The findings also support work by Thidemann and Soderhamn (2013) who state that learning through observation of the experiences of another promotes active listening and reflective thinking. Active learner participants in this study were not allowed time for observation or reflective thinking concurrent with the simulation. The active learners had to be prepared to act and react to the unknown script of the EOL simulation at any given moment, likely producing more performance anxiety as opposed to those who were vicariously observing the simulation from a separate room with no performance expectations.

**Research question 3**

Research question 3 asked “What are the differences between pre-licensure nursing students’ post-EOL simulation perceived self-efficacy scale scores between groups, vicarious versus active learners, as compared to their pre-simulation experience self-efficacy scale scores?” There were no statistically significant differences between vicarious learners versus active learners on perceived self-efficacy scale scores between SECS1 and SECS2. Findings indicated that both learning groups, vicarious and active, had similar increases in their perceived self-efficacy in communicating therapeutically during difficult conversations.
The finding that there was no statistically significant between-group difference in improvement of students’ perceived self-efficacy following the intervention supports the hypothesis that vicarious learning experiences may be as effective in increasing perceived self-efficacy in the delivery of therapeutic communication during pediatric EOL situations as active learning experiences.

Bandura (1997) states vicarious learning experiences promote visualization of the constructive use of cognitive behaviors, skills, emotions, and methods for coping with or transcending particular situations in which there are active participants. Like Bandura’s theory of improved self-efficacy through vicarious learning, the vicarious learners in this study observed similar social models (their peers as active learners) succeed in a perceived difficult situation of a pediatric EOL simulated scenario. Viewing their peers effectively participate in the EOL scenario may have stimulated vicarious learners’ beliefs in their capability of successfully accomplishing tasks similar to those in which the active learners participated. Being relatable to their peers as successful role models when providing therapeutic communication during EOL simulation, active learners’ may have influenced greater perceived self-efficacy among vicarious learners regarding their abilities to successfully complete similar tasks in like situations.

The importance of fidelity and realism in simulation must be emphasized to positively impact pre-licensure students as vicarious learners, by promoting use of their imagination and abilities to learn through observation of realistic, active simulation (Thidemann & Soderhamn, 2013). To engage the vicarious and active learners in the seriousness of this study, and thus attempt to improve learner self-efficacy, it was imperative to insure fidelity and realism throughout the experiences. To accomplish fidelity and realism all pre-simulation discussions
were carefully drafted to review the same topics from the participants’ assigned pre-simulation journal article. Live actors remained in character and portrayed the same roles in each simulated scenario, and the scripted roles were carefully adhered to throughout the entirety of each simulation.

Simulation settings appeared realistic with a separate conference area for discussions with the dying child’s mother, and an area outside of the child’s hospital room was arranged for the participants to obtain report from the doctor and to give and receive between-shift report. The client, although a mannequin and unresponsive throughout the simulation, was as realistic as possible in that he appeared to be the age of the client in the simulation scenario, had a stuffed animal in the bed with him, and had physical markings such as mottling of the skin indicating he was nearing EOL. Pre-simulation conferences were consistent, and the simulation settings, scripts, and acting were as real-to-life as possible. Such tactics likely contributed to not only the increase in active learners’ perceived self-efficacy, but also to that of vicarious learners.

**Research question 4**

Research question 4 asked “What are the differences between pre-licensure nursing students’ post-debriefing perceived self-efficacy scale scores, as compared to their post-simulation experience self-efficacy scale scores: within the total sample and within vicarious and active learner groups?” Findings revealed statistically significant increases in self-efficacy scores from the post-simulation SECS2 scores to the post-debriefing SECS3 scores within both the total sample and for both the vicarious and active learner groups. From these findings, the researcher concludes debriefing produced improvements in participants’ perceived self-efficacy within the total participant group and within both the vicarious and active learner groups in addition to the improved perceived self-efficacy yielded from the simulation experience itself.
Facilitating post-simulation debriefing with pre-licensure students aids in critical reflection upon the simulated experience, promotes a sense of salience regarding the most important takeaways from the simulation, and illustrates how the most significant and poignant moments experienced during the simulation apply to real-world, EOL nursing practice (Heise & Gilpin, 2016). Each of these attributes of a facilitated debriefing has the potential to promote self-efficacy among vicarious and active learners. For students to be successful in critical reflection following a simulated scenario, it is important that they have clearly-guided facilitation in reflecting on the most prominent learning points intended to be gained from the experience, as well as self-efficacy in their abilities to critically evaluate the overall simulation experience. The ability to think critically and the self-efficacy to reflect upon simulated situations directly influences students’ participation in critical reflection during facilitated post-simulation debriefing (Kennedy et al., 2015).

With appropriate reflective-guidance and constructive feedback provided by the facilitator during post-simulation debriefings, students are motivated to increase their perceived self-efficacy related to critical reflection on key learning points surrounding the simulated scenario. Self-efficacy in critical reflection during simulation debriefing promotes increased levels of perceived self-efficacy as an appropriate response when students are faced with like simulated and clinical experiences in the future (Ryoo & Ha, 2015; Tutticci, et al., 2017).

Following each simulated scenario in this study, both active and vicarious learners attended a facilitator-assisted joint guided debriefing that provided simultaneous and equal opportunities for feedback as to the effectiveness of the therapeutic communication provided by participants. This group debriefing also afforded the opportunity to reflect critically on the effectiveness of the simulation as a whole. Therefore, following the facilitator’s feedback on participant
performance and having time for critical reflection on the overall experience, participants likely felt more self-efficacious in providing therapeutic communication during an EOL pediatric situation than they had prior to the debriefing sessions.

**Research question 5**

Research question 5 asked “What are the differences between pre-licensure nursing students’ post-debriefing self-efficacy scores between groups, vicarious versus active learners, as compared to their baseline self-efficacy scores?” There was no statistically significant difference in post-debriefing self-efficacy scores between groups when compared to the participants’ baseline self-efficacy scores.

Based on previous studies of the effect of simulation on self-efficacy, the researcher expected an increase in perceived self-efficacy among all participants, both active and vicarious learners following debriefing. This expectation was confirmed by the finding of significantly improved post-debriefing self-efficacy for the total group as demonstrated in Question 4. Additionally, there was no significant difference in the final level of perceived self-efficacy between the active and vicarious learner groups.

This finding does not come as a surprise to the researcher, as the active and vicarious learner groups attended the post-simulation debriefings simultaneously. Both learner groups received the same constructive, facilitator-led feedback related to the active participants’ provision of therapeutic communication during the simulations, and they had equal opportunities to self-evaluate the overall effectiveness of the simulation through critical reflection. As mentioned in Question 4, the constructive feedback and critical thinking facilitated during debriefing promote improved self-efficacy among pre-licensure students regarding their abilities to be successful in future similar situations. Therefore, both active and vicarious learners experienced relatively
equal levels of increased self-efficacy related to debriefing, above the level of increased
efficaciousness they experienced from post-simulation alone.

**Limitations**

Limitations of this study are important to acknowledge and consider for future studies of like
nature as they may prevent generalizations of major findings across educational settings. One
limitation of this study is that it was conducted using a voluntary sample of participants from two
pre-licensure programs within one state in the southeastern region of the United States. Limiting
the study to a geographic region may limit the general applicability of results to pre-licensure
students within other geographic locations.

Though overall similarities in instructional curricula of programs were examined, there was
an inability to verify exact similarities or differences between actual didactic EOL content
exposure. Additionally, there was no way to confirm the exact extent of differences in personal
or clinical EOL experiences participants may have had prior to or during the process of this
study.

Student motivation to volunteer for the study is a possible limitation. The student volunteers
may have been a majority of students who have a particular interest in EOL care or pediatric
nursing; therefore, they may have been more motivated and possibly even more self-efficacious
than students who did not have a motivated interest in the research topic.

The Hawthorne Effect, whereby study participants modify their behavior based upon the fact
that they are aware of being studied is another potential limitation to the validity of this research
(Kurtz, 2017). Participants may have falsely elevated or potentially lowered their SECS scores.
Likewise, students may have increased their SECS scores simply by assuming the intent of the
educational intervention was to improve perceived self-efficacy in therapeutic communication
during difficult situations. This may have occurred whether the participants truly believed their self-efficacy was improved by the intervention or not.

An additional limitation to this study was in the simulation script, which was limited to participant interactions with only the dying child’s mother, the physician, and fellow students in the roles of coworkers. Integrating a younger sibling into the scenario to evaluate the participant’s communication with that child facing the loss of a sibling may have affected outcomes. Another missed opportunity was that of interprofessional communication with a bereavement coordinator, social worker, and perhaps even a phone conversation with the dying child’s father. An additional situation that the researcher would have liked to have addressed was a debriefing or counseling session for the nursing staff following the emotional death of the child.

Another potential limitation to this study is familiarity with the SECS tool. The tool, used at three significant time points throughout the study, was first used on the date of recruitment and then twice in one day, two to four weeks later, on the date of simulation. This repeated exposure over short time intervals likely increased participant familiarity with the tool and could have affected the perceived self-efficacy scoring.

One final, but significant, limitation to consider is the large number of participants required to determine a medium effect size with the proposed study methodology. A sample size of 100 participants was determined to be sufficient to achieve 87% power to detect a medium effect size (partial η² = .06) using a within-between mixed ANOVA with repeated measures with two groups and three time points at a 5% significance (Faul et al., 2007). Though 131 participants agreed to participate in the study, attrition due to unknown reasons yielded exactly 100 participants who completed the study in its entirety.
Implications for Nursing Education and Practice

This study provides new literature to the limited evidence-based educational practice of utilizing vicarious learning as an equally efficacious pedagogy to active learning in regard to simulated experiences and self-efficacy. The findings of this study can inform educators in the didactic and clinical settings of the benefits of vicarious learning. This study demonstrated an effective teaching methodology that could be integrated into nursing programs that currently have limited curricular dedication to EOL education and limited simulation time or space availability. Vicarious learning provides the opportunity to learn through observation of a group of peers or those learners perceive to be “like them”, allowing a larger student audience than the traditional recommended simulation group size of four to six participants.

The findings that vicarious learning is equally as efficacious as active learning in improving perceived self-efficacy among pre-licensure nursing students presents the potential to increase the number of simulations students might encounter in their nursing curriculum. This also may decrease the need for multiple faculty simulation facilitators who are EOL-trained simulation facilitators, as well as decrease the need for more simulation laboratory space and time. It is also possible that with use of this vicarious learning strategy a potential decrease in the cost of integrating EOL content into a pre-licensure curriculum may be experienced.

Finally, it is important to mention that this study focused strictly on evaluating pre-licensure nursing students’ self-efficacy in communicating during difficult situations, such as pediatric EOL; however, vicarious learning opportunities are not limited to pediatrics or EOL situations. Such pedagogy could be effective in a variety of situations that have traditionally taken place in the simulation lab, or that have not been taught at all due to limited curricular integration of soft skill training that is essential to the profession of nursing. We must be reminded, as educators
and as nurses, that learning never ceases for the nurse, and that learning soft skills is equally as important to our profession as hard skills or clinical tasks that are taught in the simulation lab. Vicarious learning provides an excellent opportunity to teach and to learn skills that do not require hands-on kinesthetic skills, but rather skills of the nurse’s heart.

Recommendations for Future Study

Following data analysis, review of limitations, and proposing implications of this study, the researcher recommends the following suggestions for future study.

1. Repeat this study using a larger sample from various types of pre-licensure programs and across a wider region to improve the generalizability of the findings.
2. Repeat this study with the incorporation of more standardized clients, such as siblings, two parents, and additional interprofessional team members.
3. Repeat this study with a dying child who is conscious during the beginning of the scenario to allow interaction between the pre-licensure students and the dying child.
4. Repeat this study with varying aged clients who are more culturally diverse and include LGBT relationships to encourage inclusivity of the non-traditional family.
5. Use vicarious versus active learning to investigate other outcomes such as improved EOL care knowledge and explore qualitative student perceptions of the experience.
6. Utilize vicarious learning for additional types of soft skill nursing situations.
7. Repeat this study with a longitudinal design to assess the SECS beyond the participants’ first live encounters with EOL situations.

Conclusion

In conclusion, integration of EOL care curriculum is essential, both in a didactic and clinical sense. Because EOL clinical experiences are rare during the time students are in pre-licensure
nursing programs, simulation provides an excellent alternative to impart education and experiences for pre-licensure nursing students regarding the soft skills required of therapeutic communication during difficult situations such as at the EOL. With simulation comes potential barriers that prevent integration of such learning experiences including limited simulation space and time, limited number of students who can effectively be in a simulated experience at one time, limited faculty trained to facilitate EOL simulations, and the overall cost of running simulations.

Vicarious learning provides an excellent alternative to traditional nursing simulation experiences. By observing relatable peers successfully perform in an active simulated scenario, vicarious learners have equal and sometimes even higher levels of improved perceived self-efficacy in performing the same tasks as those they observed while being acted out by their peers. Acceptance of non-traditional pedagogy in a simulated situation may transform the way EOL care has historically been taught and negatively perceived by pre-licensure nursing students. Such a transformation has the potential to promote greater understanding of the importance of therapeutic communication at EOL and to empower future nurses to participate in necessary, though difficult, conversations surrounding death.
REFERENCES


Dunn, K. E., Osborne, C., & Link, H. J. (2014). High-fidelity simulation and nursing student self-efficacy: Does training help the little engines know they can? Nursing Education Perspectives, 35(6), 403-404.


Appendix A

CARES COMPETENCIES

Competencies new nurses need to have completed by the end of their undergraduate nursing education are the following:

1. Promote the need for palliative care for seriously ill patients and their families, from the time of diagnosis, as essential to quality care and an integral component of nursing care.

2. Identify the dynamic changes in population demographics, healthcare economics, service delivery, caregiving demands, and financial impact of serious illness on the patient and family that necessitate improved professional preparation for palliative care.

3. Recognize one's own ethical, cultural, and spiritual values and beliefs about serious illness and death.

4. Demonstrate respect for cultural, spiritual, and other forms of diversity for patients and their families in the provision of palliative care services.

5. Educate and communicate effectively and compassionately with the patient, family, health care team members, and the public about palliative care issues.

6. Collaborate with members of the interprofessional team to improve palliative care for patients with serious illness, to enhance the experience and outcomes from palliative care for patients and their families, and to ensure coordinated and efficient palliative care for the benefit of communities.

7. Elicit and demonstrate respect for the patient and family values, preferences, goals of care, and shared decision-making during serious illness and at end of life.
8. Apply ethical principles in the care of patients with serious illness and their families.

9. Know, apply, and effectively communicate current state and federal legal guidelines relevant to the care of patients with serious illness and their families.

10. Perform a comprehensive assessment of pain and symptoms common in serious illness, using valid, standardized assessment tools and strong interviewing and clinical examination skills.

11. Analyze and communicate with the interprofessional team in planning and intervening in pain and symptom management, using evidence-based pharmacologic and nonpharmacologic approaches.

12. Assess, plan, and treat patients' physical, psychological, social, and spiritual needs to improve quality of life for patients with serious illness and their families.

13. Evaluate patient and family outcomes from palliative care within the context of patient goals of care, national quality standards, and value.

14. Provide competent, compassionate, and culturally sensitive care for patients and their families at the time of diagnosis of a serious illness through the end of life.

15. Implement self-care strategies to support coping with suffering, loss, moral distress, and compassion fatigue.

16. Assist the patient, family, informal caregivers, and professional colleagues to cope with and build resilience for dealing with suffering, grief, loss, and bereavement associated with serious illness.

17. Recognize the need to seek consultation (i.e., from advanced practice nursing specialists, specialty palliative care teams, ethics consultants, etc.) for complex patient and family needs.
Appendix B

DEMOGRAPHICS SURVEY

Anonymity Code: ________________

1. Age ______

2. Sex
   □ Female
   □ Male
   □ Other
   □ Decline to answer

3. Race
   □ American Indian/Alaska Native
   □ White
   □ Asian
   □ Black/African American
   □ More than one race/ Other
   □ Decline to answer

4. Ethnicity
   □ Latino/ Latina
   □ Non-Latino/ Non-Latina
   □ Other
   □ Decline to answer

5. Have you had any educational experience on therapeutic communication during difficult situations, such as end of life?
   □ Yes
   □ No

_In simulation, you may be an active participant or a vicarious (observational) learner._

6. Have you had any simulation experience involving the death of a client, in which you acted as a participant?
   □ Yes
   □ No

7. Have you had any simulation experience involving the death of a client, in which you acted as a vicarious (observational) learner?
   □ Yes
   □ No

8. Have you experienced the loss of a friend or loved one within the past year?
   □ Yes
   □ No

9. Have you ever been the primary care giver for a dying loved one?
   □ Yes
   □ No

10. Have you experienced the loss of a client during a clinical or work situation?
    □ Yes
    □ No
Appendix C

MODIFIED SELF-EFFICACY IN COMMUNICATION SCALE (SECS)
PRE-SIMULATION EXPERIENCE

Participant ID ______________

Instructions: Please rate your self-efficacy in the following communication tasks using a number from “0” (not at all confident) to “100” (totally confident).

1. Initiate a discussion with a client about his or her concerns  ______
2. Encourage a client to talk about emotional concerns  ______
3. Explore a client’s intense feelings like anger  ______
4. Conclude a client interview with an agreed problem list and plan of action  ______
5. Assess symptoms of anxiety and depression  ______
6. Break bad news to a client  ______
7. Appropriately challenge a client who denies illness  ______
8. Manage collusion (withholding of medical information about the person who is ill, such as diagnosis or prognosis*)  ______
9. Help a client deal with the uncertainty of his/her situation  ______

*“In healthcare, collusion implies any information (about the diagnosis, prognosis, and medical details about the person who is ill) being withheld or not shared among individuals involved. Collusion also means that relevant and complete medical information is selectively or not disclosed at all to patients and/or relatives” (Chaturvedi, Loiselle, & Chandra, 2009, p. 2).

Appendix D

MODIFIED SELF-EFFICACY IN COMMUNICATION SCALE (SECS)
POST-SIMULATION EXPERIENCE

Participant ID ______________ Active or Vicarious Learner ______________

Instructions: Please rate your self-efficacy in the following communication tasks using a number from “0” (not at all confident) to “100” (totally confident).

1. Initiate a discussion with a client about his or her concerns ______
2. Encourage a client to talk about emotional concerns ______
3. Explore a client’s intense feelings like anger ______
4. Conclude a client interview with an agreed problem list and plan of action ______
5. Assess symptoms of anxiety and depression ______
6. Break bad news to a client ______
7. Appropriately challenge a client who denies illness ______
8. Manage collusion (withholding of medical information about the person who is ill, such as diagnosis or prognosis*) ______
9. Help a client deal with the uncertainty of his/her situation ______

“In healthcare, collusion implies any information (about the diagnosis, prognosis, and medical details about the person who is ill) being withheld or not shared among individuals involved. Collusion also means that relevant and complete medical information is selectively or not disclosed at all to patients and/or relatives” (Chaturvedi, Loiselle, & Chandra, 2009, p. 2).

Appendix E

MODIFIED SELF-EFFICACY IN COMMUNICATION SCALE (SECS)
POST-DEBRIEFING

Participant ID ___________ Active or Vicarious Learner _________________

Instructions: Please rate your self-efficacy in the following communication tasks using a number from “0” (not at all confident) to “100” (totally confident).

1. Initiate a discussion with a client about his or her concerns _____
2. Encourage a client to talk about emotional concerns _____
3. Explore a client’s intense feelings like anger _____
4. Conclude a client interview with an agreed problem list and plan of action _____
5. Assess symptoms of anxiety and depression _____
6. Break bad news to a client _____
7. Appropriately challenge a client who denies illness _____
8. Manage collusion (withholding of medical information about the person who is ill, such as diagnosis or prognosis*) _____
9. Help a client deal with the uncertainty of his/her situation _____

“In healthcare, collusion implies any information (about the diagnosis, prognosis, and medical details about the person who is ill) being withheld or not shared among individuals involved. Collusion also means that relevant and complete medical information is selectively or not disclosed at all to patients and/or relatives” (Chaturvedi, Loiselle, & Chandra, 2009, p. 2).

Appendix F

SIMULATION GOAL AND OBJECTIVES

**Pediatric End-of-Life Simulation Goal:** To promote senior nursing students’ self-efficacy in provision of therapeutic communication to the dying child’s loved one during and immediately following the simulated death of the pediatric patient

**Objectives:** The student provides effective communication and psychosocial support to the dying pediatric patient’s loved ones during the simulated end-of-life experience, AEB the student’s ability to:

1. Initiate a discussion with the loved one about his or her concerns
2. Encourage the loved one to talk about emotional concerns
3. Explore the loved one’s intense feelings like anger
4. Conclude an interview with the child’s loved one regarding an agreed problem list and plan of action
5. Assess the child’s loved one’s symptoms of anxiety and depression
6. Break bad news to the dying/deceased child’s loved one
7. Appropriately challenge the child’s loved one, who denies the imminence of the child’s death
8. Manage collusion (withholding of medical information about the person who is ill, such as diagnosis or prognosis)
9. Help the child’s loved one with the uncertainty of his/her situation

*The 9 objectives for the simulation are based upon the 9 components of the SECS
Appendix G

CLIENT BACKGROUND FOR SIMULATION EXPERIENCE

Meet Your Patient:
Brandon is a 9-year-old fourth-grade student and only child who comes from a single parent home. Brandon’s parents have been divorced since Brandon was 2 years old. Brandon was first diagnosed with Acute Myeloid Leukemia (AML) when he was 7 years old, and was showing significant improvement, following a bone marrow transplant and two rounds of chemotherapy. While on the list for a stem cell transplant donor, Brandon began showing signs and symptoms of increased confusion, weakness, fever, and decreased visual acuity. After a complete work-up at the children’s hospital, Brandon was diagnosed with an aggressive case of refractory AML; this time with metastasis to the brain. Repeat CT scans and worsening symptoms have led Brandon’s doctor, Dr. Lawrence, to determine that Brandon’s brain mass is growing at a rapid rate and is no longer responding to aggressive treatments. Based upon these findings, clinical expertise, and evidence-based practice, Dr. Lawrence believes Brandon’s prognosis to be poor and estimates he has approximately 1 month left to live. Dr. Lawrence must break the news to Brandon’s mother and requests the presence of the nurse manager and shift charge nurse during the conference regarding Brandon’s prognosis and treatment options. Brandon’s father has partial custody and is aware of Brandon’s previous cancer diagnosis. Though he calls to check on him occasionally, he has not visited with him since his previous diagnosis, stating, “It’s just too much for me to handle.”
Appendix H

STUDENT SIMULATION ROLES

Student Nurse Roles:

Scene 1: Conference Room

   Student #1: 2nd floor unit nursing manager
   Student #2: Day shift charge nurse #1

Scene 2: Conference Room

   Student #1: 2nd floor unit nursing manager
   Student #2: Day shift charge nurse #1

Scene 3: Palliative Care Suite (Days) 1 week after prognosis given

   Student #3: Day shift charge nurse #2
   Student #4: Day shift RN

Scene 4: Palliative Care Suite (Shift Change Report)

   Student #3: Day shift charge nurse #2
   Student #4: Day shift RN
   Student #5: Night shift RN
   Student #6: Night shift charge nurse

Scene 5: Palliative Care Suite

   Student #5: Night shift RN
   Student #6: Night shift charge nurse
Appendix I

END-OF-LIFE PEDIATRIC SIMULATION MATRIX

Children’s Hospital 2nd Floor
Patient: Brandon Liles; Mom: Ms. Liles

<table>
<thead>
<tr>
<th>Scene 1 Conference Room</th>
<th>Scene 2 Conference Room</th>
<th>Scene 3 Palliative Care Suite</th>
<th>Scene 4 Palliative Care Suite</th>
<th>Scene 5 Palliative Care Suite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference Room meeting between Ms. Liles and Dr. Lawrence to discuss Brandon’s prognosis.</td>
<td>Dr. Lawrence leaves the room, leaving the unit manager, the charge nurse and Ms. Liles. Ms. Liles just sits in silence, hands covering her face, as she leans forward (await student response, #1)</td>
<td>One week into hospice care within the hospital setting, Ms. Liles calls urgently for the nurses to come check Brandon. The new day shift charge nurse and the RN assigned to Brandon (Student #3 &amp; Student #4) enter the hospital room, where Ms. Liles is leaning over Brandon crying out his name. When the nurses enter, Ms. Liles states “His breathing has changed, and he won’t open his eyes.” (await student assessment)</td>
<td>8 hours later, after a steady decline in Brandon’s physical condition has occurred throughout day shift, Brandon’s day shift RN and the oncoming night shift RN (Student #5 &amp; Student #6) enter the room after exchanging report. They find Ms. Liles, asleep from exhaustion at Brandon’s bedside, holding onto what appears to be his lifeless hand.</td>
<td>Ms. Liles notifies the night shift RN and night charge nurse (Student #5 &amp; Student #6) that she plans to use Victory Funeral Home for Brandon’s service and that she has a clean pair of pajamas she would like him dressed in before he is taken to the funeral home (await student response: Student should offer time alone with Brandon and offer Mrs. Liles the opportunity to stay/assist)</td>
</tr>
<tr>
<td>Dr. Lawrence presents Ms. Liles with the news that Brandon’s AML has returned and has spread to his brain. Dr. Lawrence then</td>
<td></td>
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</table>
states that it appears the cancer is very aggressive this time and suggests hospice care be started, as it is only expected that Brando live another month, at the most. Dr. Lawrence discusses a DNR order. Ms. Liles responds, “I just want him to be comfortable if you don’t think anything is going to cure him.” Dr. Lawrence agrees to write the DNR order and orders hospice care to begin.

“Why is this happening again? I believed in God to heal him!” (await student response #2 & #3)

Ms. Liles asks the charge nurse, “So what am I supposed to do now? I have no support at home. I can’t take care of him at home like this.” (await student response, #4 & #9)

Ms. Liles then states, “Well if his dad calls, I don’t want him to know about Brandon’s condition. He has no business being here now when he hasn’t bothered to come before.” (await student response, #8)

Assessment findings:
Vital Signs:
BP= 72/38
P= 132 and irregular
R= 10 and wet
T= 103°F
O2Sat= 78%
Foley bag has scant amount of dark amber urine.
There is slight mottling on Brandon’s knees and toes. His skin is moist, pale, and ashen.
There are no reflex responses on assessment.

After a nursing assessment is complete, Ms. Liles asks the nurses, “What’s going on with him? Is he dying?” (the charge nurse should escort Ms. Liles out of the room to discuss the decline in Brandon’s condition. Ms. Liles then states, “This can’t be happening! Please, tell me this is just a horrible dream!”)

Mouth is slightly agape, lips are gray/blue, mottling is covering his hands, feet, ears, and knees, and there are no visible or audible respirations. Upon assessment of vital signs and listening for a heartbeat for 1 minute, it is determined that Brandon has passed away. (await student response)
The day shift RN nurse (Student #4) leaves the room to get the day shift and night shift charge nurses (Student #3 & Student #6), who verify Brandon has died. The day shift charge nurse (Student #3) leaves to call Dr. Lawrence, while the night shift RN and night shift charge nurse (Student #5, & Student #6) awaken Ms. Liles and explain during post-mortem care)

Ms. Liles declines the offer to stay and states, “I better go call his father.” She leaves the room sobbing.

(Await Students #5 & Student #6 to perform post-mortem care)

Dr. Lawrence and Ms. Liles enter the room after post mortem care is complete. Ms. Liles thanks the doctor and nurses for the wonderful care of her son. (await student response)

The students will provide Ms. Liles a schedule of bereavement support meetings for parents who have lost children and contact information for a local support group, as well as the hospital’s bereavement coordinator.
| (await student response, #7) | that Branden has no heart beat and does not appear to be breathing. (await student response #6) Upon awakening to the news that her son has died, Ms. Liles breaks down into tears and begins to exhibit symptoms of an anxiety attack and stating, “If he’s gone, I have no purpose to live anymore!” (await student response, #5 & #9) | Again, Ms. Liles voices her appreciation and requests a few more minutes alone with Brandon before the funeral home arrives. The doctor and nurses leave the room upon this request. **End of Simulation.** |
Appendix J

DEBRIEFING GUIDELINES FOR SIMULATION

1. Discuss your individual and collective strengths.
2. Discuss your individual and collective weaknesses.
3. Which moment during the simulation was uncomfortable for you? Why?
4. What did your initial assessment findings indicate about your client?
5. What Nursing Diagnosis did you formulate from your assessment?
6. How did you decide the priorities of nursing care?
7. What were your goals in caring for your client? What data supports your goals were met?
8. Are there any interventions you would do differently or in a different order?
9. Identify something from the simulation that you can use in nursing practice.
10. How were the following QSEN competencies addressed in the simulation?
    a. Client safety
    b. Evidence based practice
    c. Patient-centered care/culture
    d. Quality of Care
    e. Informatics
    f. Teamwork/Collaboration

Appendix K

DAMROSCH ANONYMITY CODE INSTRUCTIONS

Create your anonymity code, using the following instructions:

1. The first letter of your mother’s first name
2. The first letter of your father’s first name
3. Number of older brothers
4. Number of older sisters
5. 1 if your first name begins with a letter in the 1st half of the alphabet (A-M) or 2 if your first name begins with a letter in the 2nd half of the alphabet (N-Z)
6. The first letter of the month you were born
7. The last number of the year you were born
8. The first letter of your middle name


*Research in Nursing & Health, 9*(1), 61–63.
Appendix L

PRE-CONFERENCE DISCUSSION GUIDE

<table>
<thead>
<tr>
<th>Statements to avoid</th>
<th>Rationale and recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;How are you feeling?&quot;</td>
<td>This question could be misconstrued as insensitive at a time when the family is obviously experiencing loss and emotional pain. Ask, &quot;How may I best support you right now?&quot;</td>
</tr>
<tr>
<td>&quot;I know how you feel. Or I understand how you feel.&quot;</td>
<td>An &quot;I know&quot; or &quot;I understand&quot; comment is less about how the bereaved feels and more about how the speaker feels. Dialogue may be encouraged by acknowledging the person's unique experience: &quot;I can only imagine how you are feeling right now.&quot;</td>
</tr>
<tr>
<td>&quot;You have other people to live for.&quot; Or &quot;Think of all the memories for which you have to be grateful.&quot; Or &quot;Count your blessings.&quot;</td>
<td>At a time of unbearable loss, these statements seem dismissive and can create resentment. Well-intentioned advice minimizes the family's pain and grief. Instead ask, &quot;Are there family members or friends you would like me to help you contact?&quot;</td>
</tr>
<tr>
<td>&quot;You're young. You can always have another child.&quot; Or &quot;It is good that you have other children.&quot;</td>
<td>A bereaved family needs to be assured that their child's life was unique and extraordinary, and worthy of remembering and celebrating. Listen for cues in what the family says about the child to engage them in dialogue about their favorite memories or stories. Storytelling promotes coping.</td>
</tr>
<tr>
<td>&quot;There is a reason for everything.&quot; Or &quot;It is God's plan.&quot;</td>
<td>For a grieving family, no reason in the world will be enough to justify their child's death. Losing a child to death may elicit doubts of faith. Nurses should support the family's spiritual world view. For example, &quot;What role does faith play in your life?&quot;</td>
</tr>
<tr>
<td>&quot;Time heals all wounds.&quot;</td>
<td>This statement skips to the future and disregards the crisis of the present moment. Validate the family's present feelings by saying, &quot;This is tough, isn't it?&quot;</td>
</tr>
<tr>
<td>&quot;Your child is in a better place,&quot; Or &quot;He/she is better off now.&quot;</td>
<td>These statements may be perceived as diminishing the child's value. Although some families may voice these expressions, nurses should refrain from euphemistic speech such as &quot;passed away,&quot; &quot;deceased,&quot; &quot;gone to heaven,&quot; or &quot;in a better place.&quot; Use concrete terminology such as &quot;death,&quot; &quot;dying,&quot; and &quot;died.&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technique</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence</td>
<td>Presence is the capacity to be fully there with a quality of attention and authenticity. A nurse who is present is fully engaged in the moment and not distracted by personal bias or other obligations. Mindful body practices, including breathing deeply and exhaling slowly, may help nurses to cultivate compassionate intention.</td>
</tr>
<tr>
<td>Body orientation</td>
<td>Maintaining an open stance with good posture demonstrates that the nurse is grounded, open, and not guarded. Arms, hands, and legs should be uncrossed and accessible. Standing diagonally to the side of someone is less confrontational than standing directly in front of the person. Be cognizant of the power differential created by who is standing up and who is sitting down. Many people, including children, may engage in conversation more openly if they are communicated with rather than &quot;talked down to.&quot;</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Eye contact can demonstrate active listening. The nurse should take cues regarding comfort with eye contact from the family and from the person with whom the nurse is speaking. Be aware that in some cultures, direct eye contact can communicate disrespect. With children, however, eye contact does not necessarily equate to listening; a child may be listening intently without making eye contact.</td>
</tr>
<tr>
<td>Facial expression</td>
<td>Entire conversations can be communicated through facial expressions. A compassionate expression communicates sincerity when offering a condolence. A gentle smile may serve to acknowledge a memorable story about the deceased.</td>
</tr>
<tr>
<td>Touch</td>
<td>Observe cultural considerations and family norms. If appropriate, begin with a light touch on the forearm, elbow, or shoulder to gauge the family member’s responsiveness to touch and establish your physical accessibility. If the family member reaches out to the nurse, offering a hug or holding a hand may be a form of consolation. The nurse should ask permission before hugging children or spouses/partners.</td>
</tr>
</tbody>
</table>

For the full article, please refer to:

Appendix M

IRB APPROVAL UNIVERSITY OF ALABAMA

February 12, 2018

Stephanie Mohr
Capstone College of Nursing
The University of Alabama
Box 870358

Re: IRB # 18-OR-050, “Vicarious Learning and Perceived Self-Efficacy Among Prelicense Nursing Students During Pediatric End-of-Life Situations”

Dear Ms. Mohr:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. You have also been granted the requested waiver of written documentation of informed consent. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your application will expire on February 8, 2019. If your research will continue beyond this date, please complete the relevant portions of the IRB Renewal Application. If you wish to modify the application, please complete the Modification of an Approved Protocol form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Request for Study Closure form.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research.

Sincerely,

[Redaction]
Appendix N

IRB Approval: University of North Alabama

Date to Committee: 01/22/2018

Principal Investigator(s): Stephanie Mohr

Title of Research Proposal: Vicarious Learning and Perceived Self-Efficacy Among Prelicensure Nursing Students During Pediatric End-of-life Situations

Protocol Number: 067

Date Approval Ends: 02/01/2019

IRB Action: This proposal complies with University and Federal Regulations for the protection of human subjects (45 CFR46). Approval is effective for a period of one year from the date of this notification and/or when approval from primary institution ends. Research must remain in compliance with UNA and the primary institution, UA.

This approval expires 02/01/2019. Investigators who wish to continue collecting data beyond the expiration date must submit a Continuing Review Form 30 days prior to the protocol expiration date. Continuing Review Forms can be found at:

http://www.una.edu/sponsored-programs/Human%20Subjects%20Research/policies-guidance-forms.html

Date Approved: 02/01/2018

Institutional Review Board Committee

9/5/2016