



Assessing Undergraduate Nursing Students' Attitudes Toward the Dying in an End-of-Life Simulation Using an ACE.S Unfolding Case Study

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Caring for the dying patient can be stressful for nursing students. The purpose of this study was to describe a multimodal educational intervention designed to improve nursing students' attitude toward care of the dying patient and the family. Sophomore nursing students participated in an interactive end-of-life (EOL) lecture and simulation. A quasi-experimental, pretest/posttest design with a convenience sample was used for this study. Frommelt Attitudes Toward Care of the Dying version A was used to measure attitudes toward care of the dying patient before and after educational intervention. In addition, students were given an open-ended questionnaire to reflect on their perceptions of the EOL experience and a demographic questionnaire. A paired *t* test revealed a statistically significant difference between the pretest and posttest ($t_{50} = 3.1, P = .003$) on the Frommelt Attitudes Toward Care of the Dying, suggesting that students gained a more positive attitude toward caring for the dying patient. Three themes emerged from the content

analysis and included knowing what to say and how to offer presence, becoming emotionally prepared, and learning skills to comfort. The use of lecture and simulation allowed students to assimilate the knowledge and affective skills needed to provide quality EOL care.

KEY WORDS

ELNEC, end of life, lecture, multimodal education, simulation, standardized patients, undergraduate nursing students

Death is an inevitable part of life, and nurses are frequently called upon to perform end-of-life (EOL) care. Therefore, EOL education is imperative for undergraduate nursing students. The American Association of Colleges of Nursing,¹ National League of Nursing (NLN),² American Nurses Association,³ and the Institute of Medicine⁴ are in agreement that nursing education should prepare nursing students to manage and perform EOL care.

The End-of-Life Nursing Education Consortium (ELNEC) was formed in 2000 to address deficits in nursing education concerning end of life. The End-of-Life Nursing Education Consortium has identified 15 competencies that are essential for undergraduate nursing students to achieve in order to provide quality care to the dying patient.⁵ In 2017, the American Nurses Association and Hospice and Palliative Nurses Association published a Call for Action: Nurses Lead and Transform Palliative Care, which recommended that ELNEC curricula be adopted as the standard for primary palliative care education for prelicensure nurses.⁶ Primary palliative care includes care for the dying and support for grieving loved ones. This document also recommended that the National Council for State Boards of Nurses increase palliative care content on the National Council Licensure Examination for Registered Nurses. As a result, nurse educators need to identify effective strategies to integrate this content into existing undergraduate nursing courses.

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End-of-life simulations have been designed to help students achieve learning outcomes related to EOL care. Simulation allows the student to engage in activities that may not occur in the course of the traditional clinical setting and offers the student an opportunity to engage in difficult conversation with patient and families, in addition to practicing important clinical skills in a safe environment.⁷ The use of simulation with standardized patients (SPs) and high-fidelity mannequins is an effective strategy that could be integrated throughout the curricula to evaluate a student's EOL knowledge and skills. Simulation typically incorporates the use of an unfolding case, which requires the student to make clinical decisions over time. The NLN's Advancing Care Excellence for Seniors (ACE.S) is the first national project aimed to prepare prelicensure nursing students to deliver high-quality care to older patients and offers unfolding cases that can be modified to meet individual course and curriculum needs.² This framework provides nurse educators evidence-based teaching strategies to promote learning across settings. In addition to unfolding cases, the scenarios provide patient monologs, guided questions, and access to a video library.^{8,9} Advancing Care Excellence for Seniors helps nursing students understand how older patients interact with various health care providers.

The purpose of this study is to describe a multimodal educational intervention designed to improve nursing students' attitude toward care of the dying patient and the family and to present study results. The specific aims of the research study were to identify undergraduate sophomore nursing students' attitudes toward care of the dying patient before and after an interactive EOL lecture and simulation and to describe students' perceptions of the educational activity.

Research Questions

1. What was the self-reported attitude toward the care of the dying patient and family in sophomore undergraduate nursing students before and after a specifically designed EOL lecture and simulation?
2. What were the students' perceptions of the EOL educational activity?

REVIEW OF THE LITERATURE

Nurse educators have recognized that EOL care is essential content to integrate in the nursing curricula.¹⁰⁻¹⁵ Research suggests that undergraduate nursing students feel unprepared, fearful, and anxious when caring for the dying patient and their families.¹⁶⁻¹⁸ A study by Hebert et al revealed that 62% of nursing students rated EOL content in the nursing curricula as inadequate.¹⁸ Therefore, nurse educators are tasked with facilitating opportunities for nursing students to care for dying patients in clinical and simulation settings. The use of simulation in nursing education

is well documented. End-of-life simulation with SPs and high-fidelity mannequins can increase a nursing student's confidence and positive attitude in caring for dying patients and their family.^{11,20-22} In addition to confidence, EOL simulation can improve nursing student's communication skills in challenging situations.²³

METHODS

Research Design

A quasi-experimental, pretest/posttest design with a convenience sample was used for this study. The study consisted of an interactive lecture and simulation on EOL care. Frommelt Attitudes Toward Care of the Dying (FATCOD) version A was used to measure attitudes toward care of the dying patient before and after educational intervention. In addition, students were given an open-ended questionnaire to reflect on their perceptions of the EOL experience and a demographic questionnaire.

Setting and Sample

The study was conducted as part of a Foundations of Professional Nursing course taught in the second semester of sophomore year at a private university in the eastern region of the United States. Prior to lecture, students received information about the study and had an opportunity to review the informed consent form. A principal investigator and coinvestigator recruited students enrolled in the course. Students were informed that while the participation in the simulation was a course requirement, participation in the study was voluntary. Of the 58 students enrolled in this cohort, 54 students agreed to participate in the study. The study was reviewed by the university's institutional review board and considered exempt.

Description of EOL Lecture and Simulation Experience

EOL Lecture

During the fourth week of the course, students participated in an interactive lecture, which incorporated content from the ELNEC modules that addressed hospice and palliative care, caring for the dying patient, grief loss, bereavement, and communication. Faculty presenters had expertise in palliative and hospice care and had received training to facilitate ELNEC courses. Students enrolled in the class had been introduced in the previous semester to therapeutic communication and strategies to support caring nurse-patient and nurse-family relationships. However, content on loss, grief, bereavement, care of the dying, and EOL communication represented new learning for this cohort. Prior to class, students were asked to complete a personal loss history to encourage them to begin to think about this topic.²⁴ A case study describing a patient's choice to pursue hospice was



presented to help illustrate how patients and family members experience loss and grief differently. This case study was revisited during the lecture to help students consider how the nurse could continue to support the patient and the family as the patient approached the EOL. Video clips and personal stories were threaded throughout the presentation to make concepts more relatable for students. In addition, students participated in a variety of ELNEC activities during the lecture to facilitate more active engagement with the concepts. For example, to better understand the experience of loss, students were asked to list meaningful aspects of their lives and then, as part of an evolving story of illness, were asked to give them up. In a subsequent exercise, students were asked to practice listening for 5 minutes to better appreciate the challenges of active listening. Faculty also provided examples of words and phrases and evidence-based tools that students could use to facilitate therapeutic communication. Throughout the presentation, students were invited to share personal stories and their own fears and concerns, with an emphasis on remaining calm during the process. Our goal was to encourage students to begin to assess their own values and attitudes around caring for a dying patient and to provide students basic knowledge and skills that could then be applied during their upcoming simulation and eventually in real-life situations.

EOL Simulation

Over the remaining weeks of the course, students participated in a simulation experience focused on EOL care in the university's Interprofessional Simulation Center. The simulation focused on providing care and support to a dying patient and her partner. A high-fidelity simulator was used for the patient, and an SP played the role of the patient's partner. The 3 SPs were oriented to the simulation scenario 2 weeks prior to the scheduled simulation experience. Orientation involving a review of the scenario, simulation student learning objectives, and a discussion on the emotional impact of this role on the SP was conducted by one of the authors who is the simulation coordinator. The review of the scenario included areas for the SPs to note whether the student performed expected tasks during the simulation. For example, at a beginning point in the scenario, the student was prompted by the SP to answer questions regarding EOL decisions. The SP was required at the end of the scenario to indicate if the student adequately answered the questions. These notes from the SPs guided the discussion in the debriefing. In addition, students were required to do prework as admittance to the simulation. The prework consisted of reviewing Five Wishes, a document regarding EOL decisions and questions regarding care of the dying patient. The questions were developed from assigned lecture readings. The prework was reviewed and discussed with students during the simulation prebriefing by the clinical instructor.

The original ACE.S unfolding case included 3 scenarios.² After reviewing the simulation student learning objectives, scenarios 1 and 2 were adapted for this simulation. The ACE.S scenario involved Julia Morales, aged 65 years, and her partner of 25 years, Lucy Gray. Julia had been battling lung cancer and wished to stop treatment. The simulation begins with Julia's story and spans her acceptance of hospice care and eventual death. During the first scenario, the student is required or expected to comfort the patient and her partner, educate both the patient and her partner on hospice and palliative care decisions, and answer their questions. In the second scenario, the partner calls the hospice nurse after the patient becomes unconscious. The student nurse is expected to assess and acknowledge that the patient has died. This scenario afforded the students an opportunity to identify clinical manifestations of the dying process and death and to communicate the death to a loved one, while providing comfort. All students participated in both scenarios, which allowed the students to practice verbal and nonverbal communication skills, caring, and apply knowledge of EOL care.

After the simulation, the simulation coordinator and SPs debriefed the participants for approximately 30 minutes. Debriefing allows the participants the opportunity to reflect on their actions, feelings, and reactions to the experience.^{7,25,26} The debriefing was guided by the SPs' evaluation of the student's performance using the notes taken at the end of each simulation. Students were also asked at the beginning of the debriefing to describe how they were feeling. Facilitators of the debriefing were aware of the emotional nature of this simulation and wanted the students to express their feelings. Students were also asked what the most challenging or difficult part of the simulation was. The students completed the demographic questionnaire and posttest instrument after the debriefing. Approximately 4 months after the intervention, students completed a survey regarding their perceptions of the educational experience. The delay in completing the survey was to see if the students retained the information and to record their feelings about the EOL multimodal educational experience.

Instrument

Students' attitudes toward caring for a dying patient were measured using the FATCOD, a 30-item scale in which participants rate their attitude on a 5-point Likert scale. The higher the scores, the more positive the student's attitude toward care of the dying. The FATCOD instrument has been used nationally and internationally in multiple research studies.^{12,15,27–29} Validity and reliability of this instrument have been established.¹⁶ A study by Brajtman et al showed an interrater agreement of 0.98 showing content validity.²⁷ For this study, the Cronbach α coefficient was found to be .79, suggesting good internal consistency.



Data Analysis

Data were analyzed and managed using the Statistical Package for the Social Sciences (SPSS) version 24.²⁸ There were no missing data. Descriptive statistics were used to characterize the sample. Participants ($N = 54$) were between the ages of 18 and 27 years. Of the 54 subjects, the majority were female (42%), Catholic (64.7%), and white (74.5%).

Two members of the research team conducted the content analysis on the survey questions. A total of 54 participants completed survey questions, resulting in a response rate of 100%. Both researchers independently read participants' responses to survey questions, highlighting text or making notes to identify preliminary codes that supported the development of broad categories. Data were reexamined in the context of these broad categories to ascertain more specific patterns of ideas, which resulted in more distinct categories. Syntheses of these categories led to the development of themes. Researchers participated in consensus procedures throughout this process to clarify discrepancies and facilitate accurate interpretation of data based on the recommendations of Creswell.²⁹

RESULTS

Quantitative Results

A paired t test revealed a statistically significant difference between the pretest and posttest ($t_{50} = 3.1$, $P = .003$) on the FATCOD, suggesting that students gained a more positive attitude toward caring for the dying patient. The FATCOD pretest mean was 118.23 ($SD \pm 9.9$; range 30-150), and the posttest mean was 123.92 ($SD \pm 10.7$; range 30-150). There were no statistically significant differences in gender, age, religion, and race/ethnicity before and after educational experience.

Qualitative Results

Three themes emerged from the content analysis and included *knowing what to say and how to offer presence*, *becoming emotionally prepared*, and *learning skills to comfort*.

Knowing What to Say and How to Offer Presence

Students indicated that the educational experience helped to improve both their verbal and nonverbal communication skills in working more therapeutically with a dying patient and the family member. The majority of students commented specifically on how the simulation, including the debriefing, helped them to learn which phrases and words to use, how to incorporate touch, and the importance of facial expressions, listening, and sitting silently with the patient and family. One student wrote:

This sim helped me figure out what comforting words to use in a time like this. This sim also allowed me to use my

therapeutic touch. Lastly, this sim helped me brainstorm things to say in moments when I didn't know what to say.

In addition, students described a greater ability to convey empathy and understanding through their words and actions. A few students discussed the benefits of having the lecture and classroom activities prior to the simulation.

I was able to use communication skills learned during class and apply it to a real-life situation before being in a hospital setting.

I think using key phrases/gestures from lecture was helpful, eg, comfort patient and family with presence, be at bedside. I'm more prepared to ask the right questions and help family members deal with grief.

Becoming Emotionally Prepared

Students described the challenge of having to tell family members that their loved one had "died" and the emotions this created for them. Some described the simulation as "eye opening," "awkward," and "emotional" especially when the family member started crying. Although students perceived the experience as emotionally challenging, they also commented on how they felt more comfortable, better prepared, and less anxious and afraid to provide support. In general, students described the greatest impact of the experience as follows:

The part where the patient died and I had to try and console her family.

...trying to calm family members down. You have to not only focus on the patient, but family members too.

The feedback from the SP acting as the family member was also key for some students in helping them to become more emotionally prepared. This feedback helped the students recognize what they did well and what they could improve upon in future clinical encounters

Learning Skills to Comfort

Although students commented on learning the appropriate phrases and actions to best support patients and families, many students specifically used the word *comfort* to convey what they had learned. Students explained that they were able to provide comfort by providing loving care and learning to be kind, patient, and caring as the patient and partner grieved. One student wrote:

When the actor started crying, I learned how to comfort the person suffering and mourning.

Yet, overwhelmingly students shared the need for more experience in how to care for and communicate with the patients and their family member. They expressed concern

**TABLE** Pretest and Posttest Findings of the FATCOD Form A Tool

Items	Pretest Mean (SD)	Posttest Mean (SD)	t
Giving nursing care to the dying is a worthwhile experience.	4.49 (0.67)	4.65 (0.56)	1.18
Death is not the worst thing that can happen to a person.	2.86 (1.23)	2.88 (1.19)	0.10
I would be uncomfortable talking about the impending death with the dying person.	3.01 (1.02)	3.35 (0.97)	1.76
Caring for the dying patient's family should continue throughout the period of grief and bereavement.	4.52 (0.61)	4.66 (0.55)	1.30
I would not want to be assigned to care for a dying person.	3.62 (0.95)	3.90 (0.78)	1.99 ^a
The nurse should not be the one to talk about death with the dying person.	3.41 (0.96)	4.00 (0.95)	3.27 ^b
The length of time required to give nursing care to a dying person would frustrate me.	4.00 (0.84)	3.9 (0.86)	0.58
I would be upset when the dying person I was caring for gave up hope of getting better.	2.92 (1.24)	3.07 (1.05)	0.80
It is difficult to form a close relationship with the family of a dying person.	3.82 (0.93)	3.80 (0.93)	0.12
There are times when death is welcomed by the dying person.	4.23 (0.61)	4.43 (0.53)	1.60
When a patient asks, "Nurse am I dying?" I think it is best to change the subject to something cheerful.	3.86 (0.82)	4.31 (0.73)	2.83 ^a
The family should be involved in the physical care of the dying person.	3.98 (0.88)	4.13 (0.69)	1.07
I would hope the person I'm caring for dies when I am not present.	3.33 (0.90)	3.49 (0.80)	1.09
I am afraid to become friends with a dying person.	3.70 (1.00)	3.76 (0.83)	0.38
I would feel like running away when the person actually died.	3.88 (0.95)	3.84 (0.85)	0.26
Families need emotional support to accept the behavior changes of the dying person.	4.54 (0.61)	4.41 (0.69)	1.06
As a patient nears death, the nurse should withdraw from his/her involvement with the patient.	4.27 (0.75)	4.41 (0.53)	1.18
Families should be concerned about helping their dying member make the best of his/her remaining life.	4.21 (0.90)	4.29 (0.75)	0.47
The dying person should not be allowed to make decisions about his/her physical care.	4.56 (0.64)	5.35 (5.57)	1.01
Families should maintain as normal an environment as possible for their dying member.	4.29 (0.78)	4.21 (0.80)	0.49
It is beneficial for the dying person to verbalize his/her feelings.	4.62 (0.56)	4.68 (0.46)	0.62
Nurse care should extend to the family of the dying person.	4.49 (0.75)	4.64 (0.55)	1.27
Nurses should permit dying persons to have flexible visiting schedules.	4.39 (0.87)	4.62 (0.56)	1.80
The dying person and his/her family should be the in-charge decision makers.	4.19 (0.85)	4.29 (0.83)	0.58
Addiction to pain relieving medication should not be a concern when dealing with a dying person.	3.15 (1.28)	3.88 (0.95)	3.62 ^b
I would be uncomfortable if I entered the room of a terminally ill person and found him/her crying.	3.43 (1.00)	3.60 (0.96)	1.17
Dying persons should be given honest answers about their condition.	4.43 (0.64)	4.62 (0.59)	1.80
Educating families about death and dying is not a nursing responsibility.	4.25 (0.82)	4.47 (0.54)	1.66
Family members who stay close to a dying person often interfere with the professional's job with the patient.	3.43 (1.00)	3.86 (0.80)	2.59 ^a
It is possible for nurses to help patients prepare for death.	4.23 (0.81)	4.29 (0.80)	0.41

Abbreviation: FATCOD Form A, Frommelt Attitudes Toward Care of the Dying Scale Form A.

^a $P < .05$.

^b $P < .01$.



about doing the right thing, as expressed by one student who said:

Knowing what to say and what not to say to patient... being confident that my actions are helping... and not hurting.

They want more experience to be able to “answer questions” and practice in “consoling the patient” (Table).

DISCUSSION

As evidenced in the literature review, the benefits of using lecture and/or simulation to integrate EOL content in the curricula are well established. However, the use of both a specifically designed lecture developed using the ELNEC competencies and simulation using the NLN ACE.S's case study on EOL care adds depth and value to the students' learning experience. The aim of this study was to examine the impact of a multimodal educational experience on students' attitudes toward the care of a dying patient and her partner. The results of the FATCOD scale indicated that the overall attitudes of students improved significantly from the pretest to posttest following the multimodal educational experience on end of life. The use of lecture and simulation allowed students to assimilate the knowledge and affective skills needed to provide quality EOL care. The strengths of this multimodal educational experience were that it provided the students with an opportunity to practice communication skills and a caring attitudes and apply knowledge learned in the interactive lecture to a dying patient and their partner in a simulation setting. These learning outcomes were not only captured in improved scores on the FATCOD, but also in the themes that emerged from qualitative analysis of student self-reported perceptions of the experience. Students indicated feeling more emotionally prepared, enhanced learning skills to comfort the patient and their families, and knowing what to say and being present in the follow-up survey. Since the students completed the survey 4 months following the multimodal educational experience, we can observe the impact this experience had on the students' learning well after the educational experience.

While the limitations of this study include the small sample size and convenience sampling, overall results provided additional evidence from both qualitative and quantitative measures that simulation plus lecture on EOL care can enhance students' attitudes and comfort with care of dying patients and their caregivers.

CONCLUSION

The literature suggests that nurses feel unprepared and tend to avoid EOL care and discussions. For nurses to give quality EOL care, they must not only possess the knowledge of EOL care but also feel emotionally prepared to care for the dying patient and their family. This multimodal

approach allowed the nursing students to gain the knowledge, skills, and caring attitudes needed to feel prepared to deliver quality EOL care.

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