



Improving End of Life Care Competencies in Baccalaureate Nursing Students

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Received Date: September 14, 2020; Published Date: September 18, 2020

Abstract

Many nursing students report a lack of knowledge, skills, and attitudes in providing end of life care. Research suggests when nursing students are provided with education on end of life care they demonstrate improvements in their attitudes and ability to provide this type of care. The purpose of this quality improvement study was to determine if undergraduate nursing students had improvements in their attitudes with regard to end of life care following an educational initiative that included both didactic and simulation components. Eighty baccalaureate nursing students at Stony Brook University were invited to participate in the end-of-life care educational intervention. A pre-test/post-test design was employed to assess the effectiveness of the intervention. Analysis of the data showed that the student nurses had a statistically significant improvement in their attitudes after receiving education on end of life care. As educators it is important to prepare nursing students with education on end of life care before entering clinical practice.

Keywords: End of Life Care; Palliative Care; Simulation; Didactic

Abbreviations: ELNEC: End of Life Nursing Education Consortium; FATCOD: Frommelt Attitudes Toward Care of the Dying Scale

Background

As student nurses enter clinical practice, they are expected to care for patients and their families at varying stages of illness. Every year, approximately 61 million people are in need of palliative care services and approximately 20 million of these individuals are near the end of life [1]. As well, about 25 million people who die each year will experience preventable pain and suffering [1]. Despite the significant number of people requiring palliative and end of life care many students report feeling they have a lack of knowledge, skills, and attitudes in providing this type of care [2-5]. Many students also state a lack of education in their undergraduate

curriculums on palliative and end of life care [5-7]. In order to prepare students to enter clinical practice faculty must work to meet student learning needs and provide students with the necessary educational opportunities to be successful. Research shows that when students are provided with education on end of life care either via didactic only [8-10], simulation only [4,11-14], or a combination of both didactic and simulation, they have improvements in their attitudes about end of life care [2,15-18].

Objectives

The aim of this project was to improve baccalaureate nursing students' attitudes on end of life care through the use of didactic and simulation-based teaching strategies. The hypothesis stated, if students are educated on end of life care using didactic and simulation components than they will

have improvements in their attitudes about providing end of life care.

Literature Review

Prior to development of the learning interventions, a literature review was performed to evaluate the research on educating baccalaureate nursing students about end of life care. A search of the databases was led by the question: In baccalaureate level nursing students is simulation learning (with or without didactic) more effective compared to didactic only in improving attitudes toward end of life care. In order to search the databases, key words were then selected, these included "nursing education" and (undergraduate or pre-licensure or baccalaureate) and ("palliative care" or "end of life care" or dying or "comfort care" or "hospice care"). The key words were then input into the databases, Cumulative Index of Nursing and Allied Health Literature, Medline, Health Source: Nursing/Academic Edition, Teacher Reference Center, ERIC, Health Source: Consumer Edition, Education Source, and eBook collection: EBSCO host. Inclusion criteria included articles from the last five years, baccalaureate nursing students, articles from the United States, adult population, and in the English language. Exclusion criteria included studies regarding pediatrics, interprofessional, registered nurses, or nursing students other than baccalaureate (such as associate degree students, master's degree students, and associate degree-baccalaureate degree students). Articles greater than five years old, dissertations, articles not in the English language, faculty programs, continuing education, raw data, professional development, and international articles were also excluded.

The review of the literature included literature/integrative reviews, qualitative studies, didactic only, simulation only, and a combination of simulation and didactic. The integrative and literature review articles discussed the different teaching methodologies utilized in research studies to educate students on end of life care. These reviews also showed that regardless of what educational intervention was used, students indicated they benefited from education on end of life care and after intervention had improvements in their knowledge and attitudes in regard to the topic [19-21]. A suggestion each of these articles had for future studies was to utilize standardized data analysis/collection and randomized control trials in order to determine what the best method for educating undergraduates is, [19-21] Several studies used didactic only methods to educate student nurses about end of life care. In each of these studies the End of Life Nursing Education Consortium (ELNEC) course was utilized as the educational intervention [8-10,22,23]. ELNEC is an educational tool that was created to train nurses of all levels in palliative care using didactic modules [24]. The modules include information on pain management,

communication, symptoms management, as well as other palliative care related topics [24]. Although each of these studies used different methods to collect/analyze the data, the results suggested that after students received didactic education via the ELNEC course they had improvements in their knowledge and attitudes to care for patients at the end of life.

Simulation only teaching strategies were implemented in five articles. In these studies, after simulation, students had improvements in their knowledge, skills, and attitudes [4,11,13], as well as improvements in their confidence level [12,14], in providing end of life care. Lastly, five studies incorporated both didactic and simulation teaching methodologies through a combination of readings and simulation [16], lecture and simulation [18], lecture, case studies, discussion, and simulation [2], or pre classroom readings, review of case studies, care plans, discussion of communication strategies, and simulations [15]. One study used a randomized control trial to compare students who received didactic only to students who received didactic and simulation teaching [17]. In each of these studies students had improvements in their knowledge, attitudes, and skills after the educational interventions. Also, the randomized control trial suggested students who received both didactic and simulation teaching had significant improvements in their knowledge and attitudes compared to the control group (students that received education via didactic only) [17]. As a result of these studies, as well as nursing students request for more interactive activities in their education on end of life care [3,22], a combination of didactic and simulation teaching strategies will be used in this project.

Five of the studies incorporated the Frommelt Attitudes Toward Care of the Dying: Form B (FATCOD: Form B) [25], survey into their data collection [2,4,11,13,23]. The FATCOD: Form B is a previously validated survey to assess students' attitudes in regard to end of life care [25]. In the initial study performed to test for the validity and reliability of the FATCOD: Form B tool, there was an interrater agreement of 1.00 which established validity of the tool and a Pearson's coefficient of 0.9269 which was computed from the sample that supported the reliability of the tool [25]. Not only did this help in comparison of the research but helped strengthen the results since a valid/reliable survey was utilized in the data collection processes.

Methods

Design

A pre/posttest design was used in this study to evaluate students' attitudes before and after the educational intervention. Both didactic and simulations interventions

were created based on the latest in research and evidence-based practice to meet students learning needs. Prior to the start of the intervention students received the pre-survey FATCOD: Form B which also included some demographic questions. The lecture was two hours long and was developed to address the competencies necessary for student nurses to provide quality palliative care based on the CARES competencies as well as the clinical practice guidelines for quality palliative care [26-28]. In order to address these competencies and guidelines the lecture included discussion on the need for palliative care, review of differences between palliative care and hospice, types of palliative care, benefits of early palliative care involvement, and barriers to palliative care. Information about the domains of palliative care were incorporated into the lecture which included the structure and processes of care, physical, social, spiritual, cultural, religious and existential aspects of care. As well as, the ethical and legal, psychological/psychiatric aspects of care, care of the imminently dying patient and information on decision making [28]. The student nurses were also educated on communication techniques, helpful phrases, delivering bad news, and barriers to communication. The importance of self-care was also discussed at the end of the lecture. Throughout the lecture and afterward during the twenty-minute discussion/questions time, students were encouraged to ask questions and discuss examples of situations they have encountered in clinical or from personal experience to help expand upon the topics.

After the lecture component students participated in a simulation activity. The simulation activity was 20 minutes long and afterwards there was 10 minutes for debriefing. Immediately prior to the simulation the students were provided information on the hypothetical patient. This simulated patient was admitted to the hospital and had just found out that her cancer had returned and now spread to her lungs. She also was found to have a pulmonary embolism, which was causing her to need significant amount of supplemental oxygen and it looked like she may be nearing intubation. The patient and her husband were dealing with the emotions of the news and struggling to come to terms with the information/diagnosis. Students were provided with the background information and then were given roles of either nurse, patient, husband, or observer. The students that played the patient and husband were provided with a script to help them act during the activity to guide the simulation toward the nurse working on communication strategies and educating the patient and husband on palliative care. After the simulation was completed a 10-minute debriefing session was held. This session allowed students to discuss how they felt about the situation, how they thought they performed, and how they could have handled the situation better in the future. Students were also given suggestions on how to

handle the situation and communicate effectively. During the debriefing students were encouraged to ask questions and discuss any concerns they had. After the debriefing session students completed the post intervention FATCOD: Form B survey.

Sample/Setting

Eighty Basic Baccalaureate nursing students enrolled in the first semester of their senior year (Fall 2019), at Stony Brook University were invited to participate. Institutional Review Board exemption was granted by Stony Brook University for this study. The purpose of this project was to expand upon the introduction to end of life care concepts that the students had received in their junior year by providing review of important topics, expanded information on end of life concepts, and the opportunity to practice using the information learned in a simulation activity. As the students approached graduation, their licensing exams, and entering clinical practice, it was important for them to have positive attitudes to care for patients at all stages of disease process. By expanding on the previous instruction the students had received on end of life care, the goal was that the students would have positive attitudes when caring for individuals and their families at the end of life.

Tools

The survey that was used to test students' attitudes pre/post intervention was FATCOD: Form B [25]. The FATCOD: Form B, has 30 questions based on a likert scale (1-5) with an equal number of positive and negatively worded items [25]. The highest score a person could achieve on the FATCOD: Form B is 150 which shows positive attitudes about providing end of life care [25]. As discussed above this survey tool has previously been tested for validity and reliability in evaluating students' attitudes on end of life care and was used with permission from the author. Demographic questions included age, gender, religious beliefs, lack of religious beliefs, highest degree held, nursing program enrolled in, previous education on death and dying, previous experience in caring for a terminally ill person, previous experience with loss within the past year, and present experience [25]. The FATCOD: Form B was used to assess students attitudes toward caring for the dying and scores were calculated based on the scoring system designed for the tool.

Data Collection

Each of the students in the class received the demographic questionnaire and the FATCOD: Form B to fill out prior to the start of class. Students were provided with the surveys and told to ensure that the number on the top of their pre survey matched the number on their post survey, so the data could later be compared during the analysis phase. Students

were informed that their participation was voluntary and there would be no penalty for not completing the surveys. On top of the survey was a section for students to consent to participate in the study. Post intervention students were asked to complete the post-survey, FATCOD: Form B, to evaluate the effectiveness of the learning activities on their attitudes about end of life care.

Data Analysis

A total of (N= 80) students were invited to participate in this quality improvement study and provided with pre and post surveys. Surveys that were excluded from data analysis were those that the pre/post surveys were not completed in their entirety, those students who did not participate in both the didactic and simulation component, and those who did not consent to participation. After the exclusion criteria was evaluated a total of (N=68) participants surveys met all the criteria and their surveys were included in the data analysis. According to a power analysis of 0.05 the appropriate sample size for this study is 64 participants, thus the 68 participants included in this study met the appropriate sample size. Data from each individual survey was input into IBM SPSS Statistics Version 26 and paired t-tests were used to analyze the data from pre to post intervention. Analysis of the data using paired t-tests showed that the t-level of 4.548 is significantly greater than the critical value of 1.996 and the sig value is less than 0.05. Thus, with a 95% confidence interval the data showed that students had improvements in their attitudes on end of life care after the education interventions and the hypothesis was correct.

Results

The results showed an improvement in the mean scores from pre to post from 120.35 (pre) to 124.84 (post) with a standard deviation of 10.092 and 11.927 respectively. All students in this course were between the ages of 18- 55, the majority of students ages ranged from 18-22 years old (41%) or 23-27 years old (47%). Of these students 51.5% reported the highest degree they hold as a bachelor's degree in a subject other than nursing. All 68 of the student nurses are enrolled in the Basic Baccalaureate Nursing Program at Stony Brook University, which is a pre-licensure program. The majority of the student nurses reported they either took a specific course on death and dying (9%) or received information within other courses on death and dying (85%).

About half the students had cared for individuals who are terminally ill and about half had not. Questions on religion were omitted because a majority of the students answered both questions on religion, when the instructions stated to answer either question three or four. After reviewing the two questions about religion, the wording may have been confusing, and since it was not a focus of this study, these demographic questions were omitted from further analysis. The demographic questions can give insight into the backgrounds and experience of the student nurses who participated in this study. A future study can look to evaluate how students' experiences with death and dying as well as their age, etc. influence their scores on the surveys.

Characteristic		Number	Percent
Age	18-22	28	41%
	23-27	32	47%
	28-35	6	9%
	36-45	1	1.50%
	46-55	1	1.50%
Highest Degree Held	High School Equivalency	2	3%
	High School	21	31%
	Associate's	9	13%
	Bachelor's	35	51.50%
	Master's	1	1.50%
Nursing Program Enrolled In	Basic Baccalaureate	68	100%
Previous Education on Death and Dying	Took a specific Course	6	9%
	Information provided within other courses	58	85%
	No information	4	6%

	Cared for terminally ill person	33	49%
Experience Caring for Person with Terminal Illness	No Experience	35	51%
Gender	Male	13	19%
	Female	54	79.50%
	Other	1	1.50%
Loss in Last Year	Yes	27	40%
	No	41	60%
Present Experience	Anticipating Loss	7	10%
	Not Anticipating Loss	61	90%

Table 1: Demographics.

	Mean	N	Std. Deviation	Std. Error Mean
Post Survey Total	124.84	68	11.927	1.446
Pre-Survey Total	120.35	68	10.092	1.224

Table 2: Paired Samples Statistics.

	N	Correlation	Sig.	Mean	Std. Deviation	Std. Error Mean	95% Confid. Interval Lower	95% Confid. Interval Upper	t	df	Sig. (2-tailed)
Post Survey Total & Pre-Survey Total	68	0.739	0.000	4.485	8.132	0.986	2.517	6.454	4.548	67	0.00

Table 3: Paired T-Test.

Discussion

The paired t-test showed that there was a statistically significant increase in students' attitudes after receiving education on end of life care via didactic and simulation-based teaching modalities. Student scores on the FATCOD: Form B improved significantly from pre survey to post survey. This information supported previous research done in this area that showed students have improvement in their knowledge skills, and attitudes in providing end of life care after receiving education via didactic, simulation, or a combination of both [2,3,8-18,22,23]. The quality improvement study provided students with the opportunity to learn about the different components of hospice, palliative, and end of life care, after receiving education via didactic, simulation, or a combination of both.

A multimodal approach of both didactic and simulation components were utilized in this study based on the recommendations seen in the literature. The didactic portion

allowed students to learn about what palliative/end of life care is, ask questions, and gain a baseline knowledge. The simulation component then allowed the students to practice applying the information they had learned in practice. Finally, the debriefing session assisted students to ask further questions, discuss their feelings about the topic, and learn ways they could improve in the future. Based on the available research and the results from this quality improvement study, education on end of life care is beneficial to improving undergraduate nursing student's knowledge, skills, and attitudes toward caring for this population of patients and their families.

Conclusion

Health care providers must be prepared and have positive attitudes in order to provide competent palliative and end of life care to improve patient's quality of life throughout the disease process [26]. As educators it is important to prepare nursing students to enter clinical practice and thus

to provide them with education about all aspects of disease process including how to care for individuals at the end of life. As seen in the literature and in this quality improvement study students have improvements in their attitudes about providing end of life care to patients and their families after an educational intervention. Considerations should be made to incorporate end of life care education into undergraduate nursing curriculums.

Limitations

This quality improvement study was performed with a single cohort from one nursing school. There is the potential for bias in student's self-report responses to the surveys. Prior to nursing students answering both the pre and post surveys, they were reminded the surveys were anonymous, to answer the questions honestly and truthfully, and their answers to the survey questions would not affect their grade in the course.

Future Implications

Further analysis of the data evaluating the relationship of age, previous experience with caring for individuals who are terminally ill, experience with loss or impending loss, and highest level of education on student scores could be studied using this data in the future. Implementation of the teaching methodologies used in this study with first, second, and third year nursing students at the same institution as well as other institutions would be important to evaluate in the future. Also, it would be beneficial to conduct a longitudinal study to test the evidence-based intervention with follow up in clinical practice. An evaluation on how offering specific end of life education content in nursing programs and its impact on student nurses ability to care for a patient and their families facing end of life in comparison, to others who did not receive this education may provide further evidence in regard to the importance of education on end of life care.

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