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Assessment of Nurse Practitioners' Knowledge and Attitudes Related to Hospice Referrals

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ASSESSMENT OF NURSE PRACTITIONERS' KNOWLEDGE AND ATTITUDES RELATED TO HOSPICE REFERRAL

by

Bailee Cerra

A Doctoral Project
Submitted to the Graduate School,
the College of Nursing and Health Professions
and the School of Leadership and Advanced Nursing Practice
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Nursing Practice

Approved by:

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ABSTRACT

Hospice care is a comprehensive group of services provided to patients who have been determined to have six months or less to live. Data suggests that hospice services in the United States are underutilized, and referrals are made too late for patients to reap the full benefits of services (Mulville et al., 2018). Additionally, Mississippi is among the lowest-ranked states for hospice services (Centers of Medicare & Medicaid Services [CMS], 2019). Many barriers exist that impede patients from receiving timely hospice referrals; however, the primary focus of this research project is nurse practitioners' attitudes and knowledge toward hospice care and referrals.

The purpose of this project was to develop an evidence-based educational module about hospice and hospice referrals to improve nurse practitioners' attitudes and knowledge. A survey was distributed to nurse practitioners in Mississippi through the Mississippi Association of Nurse Practitioners social media over 3 weeks. The survey had 3 sections: a pretest, an educational module, and a post-test. The pretest was utilized to gather demographic data and baseline knowledge and attitudes. The educational module contained evidence-based information about hospice and hospice referrals. The posttest immediately followed the educational module. The results of the pre-test and post-test were analyzed using descriptive and quantitative statistics.

Results of the survey demonstrated improvement in attitudes and knowledge towards hospice referrals after the educational intervention. A comparison of the mean scores for each question was completed and showed improvement in all questions that analyzed attitudes. After completion of the educational module, all participants agreed that the intervention was useful and will impact future practice when initiating hospice discussions.

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I would like to thank Dr. Carolyn Coleman, my committee chair, and Dr. Lakenya Forthner, my committee member, for their support and encouragement throughout my project. I would like to also thank Dr. Debra Copeland, who saw me through the early stages of this project. Lastly, thank you to all who participated and contributed to this project.

DEDICATION

I would like to dedicate this project to my incredible family. First, to my son whose birth encouraged me to return to school and for whom I want to be the best I can be. My husband, who continually supported and encouraged this endeavor. To my wonderful mother and in-laws, who provided unwavering support and assistance while I dedicated my time to my studies. I love you all.

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CHAPTER I - INTRODUCTION

Hospice is a comprehensive service of care that is provided to terminally ill patients who have been determined by their healthcare provider to have six months or less to live (National Institute on Aging [NIA], 2017). Hospice care is a comprehensive care service comprised of an interdisciplinary team that addresses not only patients' physical symptoms but also the psychosocial concerns and spiritual distress of both patients and their family members (Hospice Foundation of America, n.d.). In 1983, the Medicare Hospice Benefit was established to ensure access to high-quality care at the end of life (National Hospice and Palliative Care Organization [NHPCO], 2020a).

In the United States, hospice services are underutilized, and evidence suggests that referrals are being made too late (Mulville et al., 2018). Patients with terminal diseases frequently do not receive a hospice referral in a timely manner or at all. Many factors contribute to late hospice referral. Of note, referrer reluctance is a contributor to late or absent hospice referrals. Based on personal observation and evidence available in the literature, there are misconceptions among healthcare providers about hospice care. Evaluation of nurse practitioners' knowledge, attitudes, and beliefs related to hospice care is necessary to determine what influences the initiation of hospice referrals.

Background

According to the NHPCO, 1.49 million Medicare beneficiaries were enrolled in hospice care in 2017. Of these patients, 40.5% received hospice services for less than 15 days (NHPCO, 2019). Additionally, only 48.2% of Medicare beneficiaries were enrolled in hospice at the time of death (NHPCO, 2019). Mississippi is among the lowest-ranked states for hospice service availability, with less than half (40%) of hospitals reporting palliative care services. Mississippi Medicare beneficiaries enrolled in hospice have an average length of stay of 92 days (CMS, 2019).

Healthcare expenditures in the last year of life for patients without hospice care account for the majority of national healthcare spending (Sopcheck, 2016). The cost of aggressive, futile treatment in the last year of life was estimated to be between $158 billion and $226 billion in 2011 (Sopcheck, 2016). The delay or absence of hospice referral increases the "overutilization of ICU services coupled with increased hospital admissions" for patients in the last year of life (Sopcheck, 2016, p. 36). Early referral to hospice services will reduce "unnecessary hospital admissions and the use of health services" (World Health Organization [WHO], 2020, "What can countries do?" section).

Significance

Recent studies have explored the time of initiation of hospice service and have found delays in initiation. For example, a retrospective study conducted in 2019 revealed that the median length of stay for hospice patients was approximately seventeen days despite hospice care being recommended for the last six months of life (Mulville et al., 2018). Hospice referrals are being made too late for patients who will benefit from hospice services. Patients who receive early initiation of hospice services receive "patient-centered care that is less invasive and more cost-effective than standard medical care at the end of life" (Schneiter et al., 2018, p. 1927). Early initiation of hospice services can increase the quality of life for patients.

Many factors contribute to late hospice referral. Patient and family readiness to accept end-of-life in addition to "lack of knowledge, comfort and less positive attitudes about hospice and death" are some contributing factors to late hospice referrals

(Schockett et al., 2005, p. 401). Of note, the reluctance of the primary care provider is also a contributor to late or absent hospice referrals. Attitudes of primary care providers about hospice include “fear of upsetting patients, not wanting to abandon their patients, feeling as though referral is an admission of failure, and not understanding the benefits of hospice” (Hawley, 2017, p. 2). Additional provider barriers to early hospice referral include the “inability to identify hospice-appropriate diagnoses and prognoses” and less positive attitudes about hospice (Schockett et al., 2005, p. 401). As a result, qualifying patients to go without the physical, psychosocial, and socioeconomic benefits of hospice care.

Problem Statement

Late or absent referrals to hospice can lead to unnecessary patient suffering at the end of life because the patients do not have the physical, psychosocial, and socioeconomic benefits of hospice care. Currently, Part A, Section 1814 of the Social Security Act prohibits nurse practitioners from directly making hospice referrals despite the fact that more than 80% of nurse practitioners accept and treat Medicare and Medicaid patients (American Association of Nurse Practitioners [AANP], n.d.). However, nurse practitioners can collaborate with a physician who can certify the eligibility of the patient for hospice services. The AANP is advocating for policy change that will allow licensed nurse practitioners to independently refer patients to hospice in order to improve patient access to hospice.

Despite the inability to directly refer patients to hospice, nurse practitioners can provide education to patients about hospice care, initiate end-of-life discussions, and recommend hospice referrals. The attitudes and beliefs of nurse practitioners with regard to hospice care have not been extensively explored. This project's mission is to identify nurse practitioner's attitudes and beliefs about hospice care and how they impact hospice referrals by answering the following questions:

- What are the knowledge and attitudes of nurse practitioners in regard to hospice referral?
- How do these attitudes and beliefs impact clinical decision-making?

PICOT

The following PICOT question guided this study: Among Mississippi Nurse Practitioners (P), what is the effect of an evidence-based educational module on understanding criteria for hospice referral processes (I), compared to standard knowledge (C), on clinical decision-making about hospice referrals (O)?

Needs Assessment

Hospice services are underutilized in the United States, and Mississippi ranks 40th in hospice care and availability in the United States (NHPCO, 2020). One reason for this underutilization of hospice is late referrals. Patients are frequently admitted to hospice services too late to benefit from the wide array of services available which leads to patient and family dissatisfaction with hospice services (Adams et al., 2008). Improvements in time of hospice referrals will provide better patient outcomes and reduce the burden of healthcare costs in Mississippi.

Healthcare providers' knowledge, attitudes, and beliefs about hospice care impact their decision to refer patients to hospice (Mulville et al., 2018). Physician perceptions have been well documented; however, based on the lack of published studies, not much is known about nurse practitioners' knowledge, attitudes, and beliefs. Examination of nurse practitioners' knowledge and perspectives of hospice care and referral will provide insight into clinical decision-making and implications for the need for end-of-life education. In particular, the knowledge and attitudes of nurse practitioners who do not work primarily in hospice and palliative care but work in primary care settings where hospice referrals will take place should be examined.

Purpose and Objectives of the Project

The focus of this project was to determine Mississippi nurse practitioners' knowledge, attitudes, and beliefs about hospice care and its underutilization. The study addressed how attitudes and beliefs affect hospice referrals. This goal was measured by a questionnaire completed by nurse practitioners that are licensed to practice in the state of Mississippi. Participants completed an evidence-based educational module with a pretest and posttest given to determine if education about hospice and hospice referrals had an impact on nurse practitioners clinical decision-making with regard to end-of-life discussions and hospice referrals.

Synthesis of Evidence

An electronic database search was conducted using the following databases: *CINAHL*, *EBSCOhost*, and *Medline*. Databases searches were conducted using keywords in a variety of ways. The search was limited to articles from 2005-2021 to provide more contemporary articles that relate to current practice. Key terms used in the database search were *nurse practitioner, nurse practitioner role, hospice, hospice referral, education, knowledge, attitudes, and beliefs*. The original keyword search yielded 977 results. These results were filtered to include only peer-reviewed articles with full-text available in English. Articles written outside the United States were also excluded. Using these filters, 105 articles were retrieved. In addition, articles were excluded that did not pertain to the topic such as articles about medication regimens, and registered nurses, physicians, and nurse practitioners who exclusively work in palliative care and hospice. Seven articles remained that were relevant to the topic.

Role of the Nurse Practitioner

While research is lacking on the role of the nurse practitioner in end-of-life discussions and hospice referrals, researchers agree that the nurse practitioner is “ideally suited” towards this role (Collins & Small, 2019). A qualitative descriptive study conducted in 2019 evaluated the role of nurse practitioners in palliative care that were not palliative care specialists. The study found that the nurse practitioners believed their role is ideally suited for palliative care practice; however, they thought their lack of palliative knowledge and emotional comfort with palliative care impedes their abilities to provide care (Collins & Small, 2019). Additionally, the nurse practitioners in the study acknowledged a need for more palliative care education and a lack of confidence in providing palliative care (Collins & Small, 2019). The authors conclude that although the patient-centered education of nurses and nurse practitioners cultivates a healthcare provider that is well suited to end-of-life discussions, more education is needed to increase confidence in initiating these conversations.

Cohen and Nirenberg (2011) assert that there is a lack of research regarding the role of nurse practitioners in discussing advanced care planning with patients. The authors believe that nurse practitioners can improve end-of-life care by promoting collaboration between physicians and palliative care teams early in the disease process. This collaboration can also help reduce the incidence of late hospice referrals.

Dyar et al. (2012) in a randomized pilot study found that nurse practitioners directed palliative intervention with newly diagnosed oncology patients, significantly improved emotional and mental quality of life, as compared to those who received standard care. In this study, 100 patients were randomized into a control group and an intervention group. Each group completed a hospice knowledge questionnaire and the quality of life tools at the onset of the intervention and one month later. The intervention group received an initial and one-month follow-up consultation with a nurse practitioner who provided hospice education, assisted with living will paperwork, and conducted an extensive assessment that included psychological, physical, intellectual, social, and spiritual needs. The control group did not receive a nurse practitioner consultation. The findings of the study showed statistically significant improvement in the physical and psychological well-being of the intervention group (Dyar et al., 2012).

Nurse Practitioner Attitudes, Knowledge, and Beliefs

Tyree et al. (2005a) conducted a nonexperimental descriptive research study to compare the results of a previous study that examined the knowledge, beliefs, and practices of healthcare providers such as physicians, social workers, and pastoral care in end-of-life decisions to the knowledge, beliefs, and practices of nurse practitioners. The researchers distributed 896 questionnaires and 607 (67%) were returned. Most of the nurse practitioners (82%) stated they had initiated the end-of-life discussion in their career and 86% believed their work experience enabled them to have these discussions. In comparison, the previous study found that 96.3% of other providers either disagreed or strongly disagreed that their experience enables them to discuss end-of-life care with patients and families. The researchers concluded that nurse practitioners are perhaps the ideal choice of provider to initiate end-of-life discussions. However, the participating nurse practitioners believed that “additional education is needed to enhance their ability to initiate EOL discussions” (Tyree et al., 2005b, p. 59).

A study conducted by Shea et al. (2010) evaluated “graduate nursing students' knowledge about and attitudes toward palliative care” using the End-of-Life Nursing Education Consortium (ELNEC) examination (p. 183). A total of 36 students participated in the study which included the ELNEC examination and a questionnaire with open-ended questions to evaluate their views and knowledge about palliative care. Of the 36 respondents, 66.7% expressed they had no past experience in the delivery of palliative care and 86.7% expressed they had not received any education in palliative care during their training. The mean score of the ELNEC examination was 68.72%. The data from this descriptive study supports previous research that demonstrates a “lack of preparation of nurses in general and their lack of confidence in providing end-of-life care” (Shea et al., 2010, p. 187).

Zhou et al. (2010) conducted a descriptive, cross-sectional, pilot survey study to obtain a preliminary understanding of oncology advanced practice nurses’ [APNs’] “knowledge, attitudes, and practice behaviors regarding advanced care planning and determine barriers that oncology APNs perceive as impediments to advanced care planning discussions” (Zhou et al., 2020, p. 401). The survey was initially distributed to 300 oncology advanced practice nurses, of which 89 responded to the initial survey and 53 responded to the retest survey. The average score on the knowledge section was 67%. Survey participants scored positively in their attitudes towards advanced care planning; however, responses were varied when asked about having advanced care planning discussions with their patients. The participants claimed that most of their patients with terminal cancer did not engage in end-of-life discussions with their providers and received chemotherapy until the end of life. A minority of patients were using hospice care, and their referrals often occurred within two weeks of death.

Summary of the Synthesis of Evidence

Very little evidence exists in the literature regarding nurse practitioners' knowledge, attitudes, and beliefs toward hospice and hospice referrals. The available research varies greatly with regard to knowledge and attitudes. While some research shows that nurse practitioners are frequently discussing end-of-life care issues, other research has evidence to the contrary. More hospice education is clearly needed for nurse practitioners, according to the literature. Additionally, the research shows that patients who have end-of-life discussions with nurse practitioners tend to have better quality-of-life outcomes. More research is needed to understand the knowledge, attitudes, and beliefs of nurse practitioners regarding hospice care and referral.

Theoretical Framework

The theory guiding the framework of this project was the theory of planned behavior (TPB). The TPB was defined in 1985 and indicates that a person’s intent to perform a behavior is influenced by their attitude toward the behavior. A person’s attitude towards a behavior is dependent on beliefs about the behavior's consequences and the positive or negative connotations of those consequences. The TPB postulates that a person’s beliefs are predictive of behavior and intentions and that positive attitudes and norms increase the likelihood that the person will perform a behavior (Ajzen, 2011).

Behavioral beliefs can be examined to determine a person’s attitude toward a certain behavior (Azjen, 2011). For example, a nurse practitioner’s beliefs about hospice care in congruence with normative behaviors can strongly influence the decision to begin end-of-life discussions with a patients. Unfavorable personal experiences, lack of end-of-life knowledge, and negative attitudes of peers are factors that can affect a nurse practitioner's beliefs and behaviors towards hospice referral. Conversely, positive experiences and an environment that fosters end-of-life knowledge and attitudes positively influence nurse practitioners' beliefs and behaviors toward hospice referral.

Because the initiation of end-of-life discussions and hospice referrals is sensitive, these beliefs and behaviors can have a strong impact on the nurse practitioner’s clinical decision-making. Examination of nurse practitioners’ knowledge, attitudes, and beliefs on a broad scale can illustrate the need for education about end-of-life care.

Doctor of Nursing Practice Essentials

This project utilized all of the Doctor of Nursing Practice Essentials. These essentials were developed by the American Association of Colleges of Nursing (AACN) as the core competencies of advanced practice nurses (AACN, 2006). The following Doctor of Nursing Practice Essentials (AACN, 2006) were met during this project:

- Essential I: Scientific Underpinnings for Practice
    - Synthesis of the evidence to evaluate current practice approaches and develop new practice approaches
- Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking

    - Leadership role in the development and implementation of the DNP project that focuses on the needs of a target population
- Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice
    - Synthesis of research and integration of knowledge to develop an educational intervention
- Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care
    - The use of computer programs to develop an education module and to collect and analyze data.
- Essential V: Health Care Policy for Advocacy in Health Care
    - Discussion and advocation of policy change to allow nurse practitioners to make hospice referrals.
- Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes
    - Collaboration with the Mississippi Association of Nurse Practitioners to distribute the survey and educational modules.
- Essential VII: Clinical Prevention and Population Health for Improving the Nation’s Health
    - Education and collaboration with nurse practitioners to increase timeliness of hospice referrals.

- Essential VIII: Advanced Nursing Practice
    - Design, implementation, and evaluation of an educational intervention to improve knowledge, attitudes, and beliefs about hospice care and referrals.

Summary

Although hospice care significantly improves patients’ quality of life at the end of life, it is often underutilized. One cause of this underutilization is late or absent referrals by healthcare providers. In this chapter, the need for hospice education for nurse practitioners to initiate end-of-life conversations with patients was discussed. In Chapter II, the proposed methods and interventions of the DNP project will be discussed.

CHAPTER II – METHODOLOGY

Process

This project used existing data to create an educational module about hospice referrals. The educational module's focus was to inform nurse practitioners about the underutilization of hospice in Mississippi and provide information on how to recognize patient signs that hospice discussions should be initiated. The educational module was evaluated using a pretest and posttest.

Population

The sample includes Nurse Practitioners licensed to work in the state of Mississippi who are not working directly in hospice and palliative care. No preference was given to specialty. General demographics, years of experience, and specialty were determined through the use of the pretest survey.

Setting

The setting for the survey was online through social media. The sample was reached through the Mississippi Association of Nurse Practitioners, an organization that advocates for nurse practitioners with the legislature, Congress, policymakers, and other healthcare associations to protect and expand the role of nurse practitioners both in Mississippi and nationally. Permission to share the educational module on the Mississippi Association of Nurse Practitioners Facebook page was received from Dr. Tina Highfill, DNP who serves on the Board of Directors (Appendix A).

Intervention.

The intervention of this project consisted of a narrated educational module on hospice and hospice referrals. An evidence-based educational module (Appendix B) was developed using known statistics about hospice referrals and information regarding how the nurse practitioner can recognize that hospice discussions should be initiated with patients. Information about hospice and national and state hospice statistics was sourced from national organizations such as the Hospice Foundation of America, the National Hospice and Palliative Care Organization, the Centers for Medicaid Services, The National Institute on Aging, and the Center to Advance Palliative Care. In addition, a healthcare cost analysis of hospice was included in the module with information taken from Sopcheck's (2016) article entitled *Social, Economic, and Political Issues Affecting End-of-Life Care.*

The educational module also included information on how to determine hospice eligibility. Fischer et al. (2006) developed the CARING Criteria which is a "screening tool to identify patients for whom palliative care needs should be addressed" and demonstrates a high sensitivity and specificity for mortality at 1 year (p.291). The CARING Criteria tool can be used to score patients based on the criteria they meet to determine if they meet hospice eligibility requirements and if their life expectancy is less than 1 year (Fischer et al., 2006). Additionally, the Center for Medicare and Medicaid's hospice eligibility requirements are included in the educational module.

The educational module ends with a discussion on how to initiate end-of-life conversations with patients, the rewards of hospice care for the provider, and information about the role of the nurse practitioner and hospice referrals. The current inability of a nurse practitioner to provide hospice referrals is discussed, along with the American Association of Nurse Practitioners' current policy advocacy to allow for nurse practitioners to initiate hospice referrals.

Instrument

The instrument utilized for the project was the electronic administration of a modified version of the survey developed by Dr. Karen Ogle in her article *Physicians and Hospice Care: Attitudes, Knowledge, and Referrals* (2002). The survey was originally created to evaluate physicians' attitudes and knowledge about hospice care and referrals. Dr. Ogle permitted the use of the survey for this project (Appendix C) and the survey was modified to apply to a Nurse Practitioner sample. Although reliability has not been reported on the instrument, it has been used in several studies to determine physicians' and nurse practitioners' attitudes and knowledge about hospice and hospice referrals (Graham, 2015; Jackson McClary, 2016).

Measures

The survey was hosted by The University of Southern Mississippi's *Qualtrics* system and contained the following 5 demographic questions: 1) age, 2) ethnicity, 3) years of practice, 4) primary practice areas, and 5) an estimation of several hospice discussions initiated within the last three months. The pre-test consisted of 8 questions that used a Likert Scale of 1-5 and 5 true/false questions. The narrated educational module was linked in the survey after the pre-test. The post-test consisted of the same 8 Likert questions and 5 true/false questions that were used from the pre-test to assess for knowledge and attitude improvements. In addition, participants completed 2 open-ended questions to determine the nurse practitioners' perceived greatest barriers to hospice and attitude toward the proposed policy change to allow for nurse practitioners to initiate hospice referrals without a physician. Finally, using a Likert Scale 1-5 approach, the survey ended with 2 questions to determine the effectiveness of the educational module. The survey questions are available in Appendix D.

The instrument was administered over three weeks. The timeframe for the survey was July 25, 2022 – August 14, 2022. A recruitment message describing the project along with a link to the *Qualtrics* survey was posted to the Mississippi Association of Nurse Practitioners Facebook group. A handout with a QR code to the *Qualtrics* survey was handed out at the Mississippi Association of Nurse Practitioners conference that took place July 27, 2022 – July 29, 2022. Recruitment letters are located in Appendix E.

Analysis and Ethical Considerations

Concluding the end of the three-week survey period, the results of the pretest and post-test were analyzed using descriptive statistics. The pretest results and the post-test results were analyzed separately, then the pretest and post-test were compared against one another using descriptive statistics. The data were entered into an electronic spreadsheet for analysis. The quantitative data were analyzed using the program SPSS Version 28. Open-ended question responses will be transferred to a *Word* table for directed content analysis. Participants' responses were placed in categories.

This project was approved by The University of Southern Mississippi's Internal Review Board (IRB Protocol #22-654). The approval letter is located in Appendix F. Participation in the survey was voluntary, anonymous, and without compensation or incentives. Participants had the option to skip questions or exit the survey at any time without any repercussions. Participants were provided with a consent form at the beginning of the survey (Appendix G). While participants received no benefits for participating in the survey, the results may impact awareness among the nurse practitioner community of the importance of early hospice intervention and influence future practice. Because the survey was anonymous and not mandatory, there are no risks to the participants.

Results from the surveys were stored in the *Qualtrics* system and were password protected. The data was later transferred to a password-protected computer to complete the analysis. Potential identifiers such as names and email addresses were not collected to maintain confidentiality. All survey responses will be deleted one year after all project requirements have been met.

Evaluation

Data from the surveys were analyzed to interpret nurse practitioners' baseline attitudes, beliefs, and knowledge attitudes and beliefs about hospice and compare them to post-test survey results after the educational module. Proposed short-term outcomes project an increase in knowledge and improvement in attitudes and beliefs of nurse practitioners towards hospice care and referrals. Further, the proposed long-term outcomes are an increase in hospice referrals and utilization by nurse practitioners. Additionally, demographic information about the nurse practitioners including age, gender, years of practice, and specialty was analyzed for patterns.

Project Timeline

The implementation of this project took place over a six-month period. The project was proposed to the project committee in March 2022. The project was approved by The University of Southern Mississippi's Institutional Review Board in May 2022. The survey and intervention were available to participants from July 25 – August 14, 2022. Data analysis was completed on August 26, 2022, and dissemination of the project took place during The University of Southern Mississippi's DNP Scholarship Day on September 29, 2022.

Summary

The focus of this project was to establish an understanding of nurse practitioners' attitudes and knowledge about hospice and hospice referrals. The purpose of the project was to obtain baseline knowledge through a pre-test, provide education through an evidence-based educational module, and identify improvements in knowledge and attitudes with a post-test. Implementation and survey results are discussed in Chapter III.

CHAPTER III – RESULTS

This project examined the effectiveness of a hospice educational module on attitudes and knowledge of hospice and hospice referrals of Nurse Practitioners in Mississippi. The survey was distributed on the Mississippi Association of Nurse Practitioners' Facebook profile and at the MANP conference. The survey began with a demographic questionnaire and pretest survey, followed by an educational *PowerPoint* video and a post-test. The goal of the project was to assess nurse practitioners' attitudes toward and knowledge of hospice and hospice referrals. Results from the Demographic Questionnaire, Pretest, Posttest, and Survey Review were analyzed using SPSS Version 28 and will be discussed in this section.

Results from Demographic Questionnaire

During the three-week survey period, 18 nurse practitioners accessed the survey. Five participants did not proceed past the consent form, one participant only completed the demographic questionnaire, and one participant did not complete the posttest. These seven participants were not included in the results analysis. The remaining 11 participants accessed and completed the survey in its entirety after agreeing to the online consent form. The results of the demographic questionnaire are displayed in Table 1.

Table 1

Demographic Results

Age	20 to 30 years 41 to 50 years 31 to 40 years 51 to 60 years More than 60 years	1 3 5 2 0
Ethnicity	Caucasian African American	10 1
Gender	Male Female	3 8
Current Primary Practice Area	Family Practice Internal Medicine Oncology Other (Please Specify)	6 0 0 5
Years as a Nurse Practitioner	Less than 1 year 1-5 years 6-10 years 11-15 years >16 years	1 2 5 1 2
Discussions of Hospice in the Past Three Months	No patients/families 1-5 patients/families 6-10 patients/families 11-15 patients/families >15 patients/families	4 4 3 0 0

A modified version of the survey from Ogle et al., 2002 was used in this study.

The majority of participants (45.5%, n=5) were aged 31 to 40 years, and no participants were older than 60. 9.1% (n=1) were 20-30 years, 27.3% (n=3) were 41-50 years, and 18.2% (n=2) were 51-60 years. 90.9% (n=10) of participants were Caucasian, and 9.1% (n=1) were African American. The majority of participants were female (72.7%, n=8), while the remaining 27.3% (n=3) were male. 54.5% (n=6) of participants' primary practice area was "Family Practice", while the remaining 45.5% (n=5) participants chose "Other." These respondents were given the option to write in their primary practice area. These participants’ primary practice areas included Emergency Medicine, Pain Consultants, Nephrology, and Urgent Care.

Participants were also asked about their number of years of experience as practicing nurse practitioners. The majority of participants have been practicing for more than five years, with 45.5% (n=5) practicing for 6-10 years, 9.1% (n=1) practicing for 11-15 years, and 18.2% (n=2) practicing for more than 16 years. Additionally, participants were asked to identify how many hospice discussions they have had with patients over the last three months. Table 2 shows a correlation between the number of years of experience and the number of hospice discussions. Participants who have practiced for less than 6 years had no hospice discussions with patients, whereas participants who had practiced for longer had more hospice discussions. This correlation demonstrates that practitioners with more experience are more comfortable initiating hospice discussions than those who have less experience.

Table 2

Correlation of Years of Experience and Number of Hospice Referrals

Participant	Number of Years of Experience	Number of Hospice Referrals in the Past Three Months
1	6-10	1-5
2	6-10	1-5
3	>16	6-10
4	1-5	0
5	6-10	0
6	1-5	0
7	<1	0
8	>16	6-10
9	6-10	1-5
10	11-15	1-5
11	6-10	6-10

Results of Pretest Survey

The pretest survey consisted of 8 Likert scale questions to assess nurse practitioners’ attitudes towards hospice and 5 true/false/not sure questions to assess knowledge of hospice. Results from the pretest attitudes survey are displayed in Table 3. Results from the pretest knowledge survey are displayed in Table 4.

Table 3

Pretest Attitude Survey Results

		Count
Q1: I am comfortable discussing a hospice referral with patients and families.	Strongly disagree	0
	Somewhat disagree	0
	Neither agree nor disagree	1
	Somewhat agree	3
	Strongly agree	7
Q2: Hospice is a valuable alternative for the provision of terminal care as compared to hospital, nursing home, or home health services.	Strongly disagree	0
	Somewhat disagree	0
	Neither agree nor disagree	0
	Somewhat agree	1
	Strongly agree	10
Q3: When there is no longer a realistic hope for care and a patient’s life expectancy is limited to months rather than years, hospice should always be included in discussions regarding treatment options.	Strongly disagree	0
	Somewhat disagree	0
	Neither agree nor disagree	0
	Somewhat agree	0
	Strongly agree	11
Q4: Hospice services should be discussed with patients prior to the terminal stage of their disease.	Strongly disagree	0
	Somewhat disagree	0
	Neither agree nor disagree	0
	Somewhat agree	1
	Strongly agree	10
Q5: Hospice is a more cost-effective model of terminal care than that provided by a hospital, nursing home, or home health services.	Strongly disagree	0
	Somewhat disagree	0
	Neither agree nor disagree	3
	Somewhat agree	2
	Strongly agree	6

Table 3 (continued).

Q6: When hospice services are used, the primary/referring provider loses control over the management of the patient.	Strongly disagree	3
	Somewhat disagree	2
	Neither agree nor disagree	2
	Somewhat agree	1
	Strongly agree	3
Q7: Discussion of hospice gives patients and families a sense of hopelessness; a sense that nothing can be done.	Strongly disagree	5
	Somewhat disagree	2
	Neither agree nor disagree	1
	Somewhat agree	0
	Strongly agree	3
Q8: Hospice services are underutilized, and hospice referrals are often made too late.	Strongly disagree	0
	Somewhat disagree	0
	Neither agree nor disagree	0
	Somewhat agree	3
	Strongly agree	8

A modified version of the survey from Ogle et al., 2002 was used in this study.

Table 4

Pretest Knowledge Survey Results

		Count
Q1: Patients can drop hospice benefits and resume them at a later date if they desire	True	9
	False	0
	Not Sure	2
Q2: A patient may reside in a nursing home and receive hospice services.	True	10
	False	0
	Not Sure	1
Q3: The patient must be given a prognosis of six months or less to be eligible for hospice.	True	5
	False	5
	Not Sure	1
Q4: If a terminally ill patient lives beyond the 6-month prognosis, hospice services must be terminated.	True	1
	False	9
	Not Sure	1
Q5: Patients receiving radiation and/or chemotherapy for palliation of symptoms are not candidates for hospice.	True	0
	False	11
	Not Sure	0

A modified version of the survey from Ogle et al., 2002 was used in this study.

Results of Posttest Survey

After completion of the pretest, participants were directed to the educational video developed by the researcher. The video was a fifteen-minute narrated *PowerPoint* presentation accessed by a *YouTube* link in the *Qualtrics* survey. After watching the video, the participants were directed to complete the post-test survey. Results from the attitudes survey questions are displayed in Table 5, and results from the knowledge survey questions are displayed in Table 6.

Table 5

Posttest Attitude Survey Results

		Count
Q1: I am comfortable discussing a hospice referrals with patients and families.	Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree	0 0 0 2 9
Q2: Hospice is a valuable alternative for the provision of terminal care as compared to a hospital, nursing home, or home health services.	Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree	0 0 0 1 10
Q3: When there is no longer a realistic hope for care and a patient's life expectancy is limited to months rather than years, hospice should always be included in discussions regarding treatment options.	Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree	0 0 0 0 11
Q4: Hospice services should be discussed with patients prior to the terminal stage of their disease.	Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree	0 0 0 0 11
Q5: Hospice is a more cost-effective model of terminal care than that provided by a hospital, nursing home, or home health services.	Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree	0 0 0 1 10

Table 5 (continued).

Q6: When hospice services are used, the primary/referring provider loses control over the management of the patient.	Strongly disagree	6
	Somewhat disagree	1
	Neither agree nor disagree	1
	Somewhat agree	0
	Strongly agree	3
Q7: Discussion of hospice gives patients and families a sense of hopelessness; a sense that nothing can be done.	Strongly disagree	7
	Somewhat disagree	2
	Neither agree nor disagree	0
	Somewhat agree	0
	Strongly agree	2
Q8: Hospice services are underutilized, and hospice referrals are often made too late.	Strongly disagree	0
	Somewhat disagree	0
	Neither agree nor disagree	0
	Somewhat agree	1
	Strongly agree	10

A modified version of the survey from Ogle et al., 2002 was used in this study.

Table 6

Posttest Knowledge Survey Results

		Count
Q1: Patients can drop hospice benefits and resume them at a later date if they desire	True	11
	False	0
	Not Sure	0
Q2: A patient may reside in a nursing home and receive hospice services.	True	11
	False	0
	Not Sure	0
Q3: The patient must be given a prognosis of six months or less to be eligible for hospice.	True	5
	False	6
	Not Sure	0
Q4: If a terminally ill patient lives beyond the 6-month prognosis, hospice services must be terminated.	True	0
	False	11
	Not Sure	0
Q5: Patients receiving radiation and/or chemotherapy for palliation of symptoms are not candidates for hospice.	True	1
	False	10
	Not Sure	0

A modified version of the survey from Ogle et al., 2002 was used in this study.

Attitude questions, which utilized Likert scale questions, demonstrated improvement in all questions except for questions two and three, in which all participants agreed to the posed question on both the pretest and posttest. These questions assessed if the participants believed hospice to be a beneficial alternative for end-of-life care and if hospice discussions should be included in the plan of care when life expectancy is less than 1 year. Question 1, which asked if participants were comfortable discussing hospice referrals with patients, showed improvement with 7 (63.6%) participants stating they strongly agree on the pretest and 10 (90.9%) participants stating they strongly agree on the post-test.

Questions 6 and 7 evaluated negative attitudes and also showed improvement in the pretest and posttest responses. Question 6 assessed if participants believe the primary provider loses control over the management of the patient when hospice is initiated. On the pretest, 3 (27.3%) participants strongly disagreed, and on the posttest 6 (54.6%) participants strongly disagreed. Question 7, which evaluated if participants believed hospice discussions give patients and families a sense of hopelessness, showed improvement with 5 (45.5%) participants stating they strongly disagree with the pretest and 7 (63.6%) participants stating they strongly disagree with the post-test.

Question 8 evaluated if participants believe hospice services are underutilized. In the pretest, 8 (72.7%) participants strongly agreed. After the educational intervention, 10 (90.9%) participants strongly agreed.

Knowledge questions, which utilized true/false/unsure questions demonstrated improvement in three of five questions. Questions 1, 2, and 4 had 100% (n=11) correct responses on the post-test. However, questions 3 and 5 demonstrated a decrease in knowledge.

Statistical Analysis of Pretest and Posttest

Results of the pretest and posttest surveys were taken from *Qualtrics* and analyzed using SPSS Version 28. Paired t-tests were used to determine if the change in results from the pretest and posttest was statistically significant. Statistical significance is achieved when $p < 0.05$. While the comparison of the pretest and posttest results demonstrated improvement, the results of the paired t-tests were not statistically significant.

Responses to each question were given a numeric value in order to compare the mean scores of the pretest and posttest responses. Likert scale questions were valued with 1=strongly disagree, 2=somewhat disagree, 3=neither agree nor disagree, 4=somewhat agree, and 5=strongly agree. Knowledge questions were valued with 1=incorrect, 2=unsure, and 3=correct. Mean scores for each question were calculated using SPSS. The results of the mean comparison for attitude questions are displayed in Figure 1, and the results of the mean comparison for knowledge questions are displayed in Figure 2.

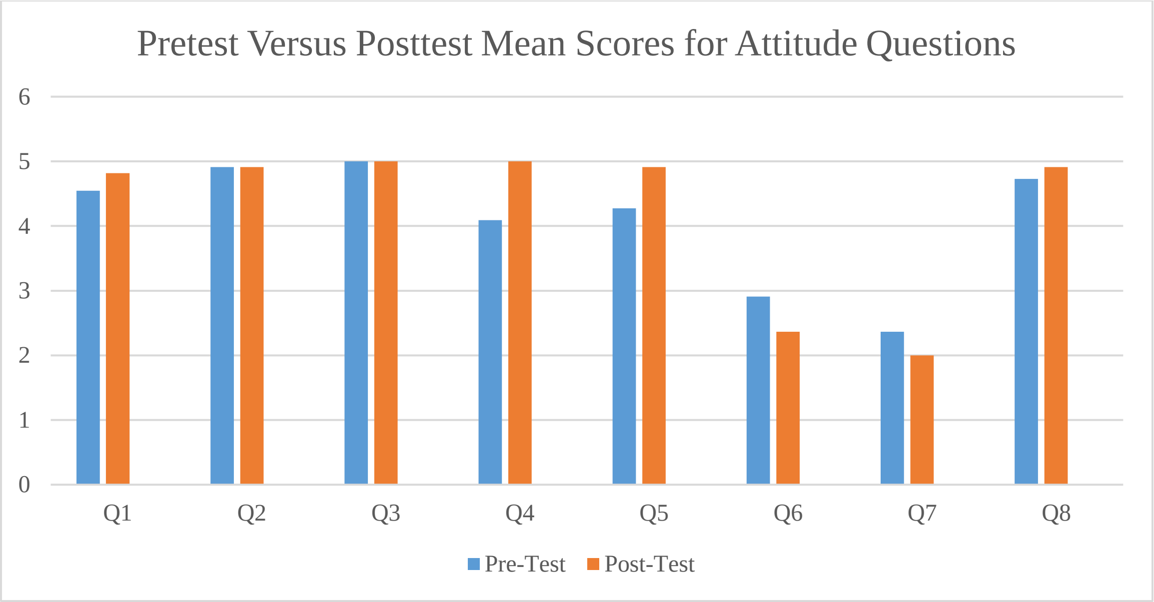


Figure 1. Attitude Survey Mean Score Comparison.

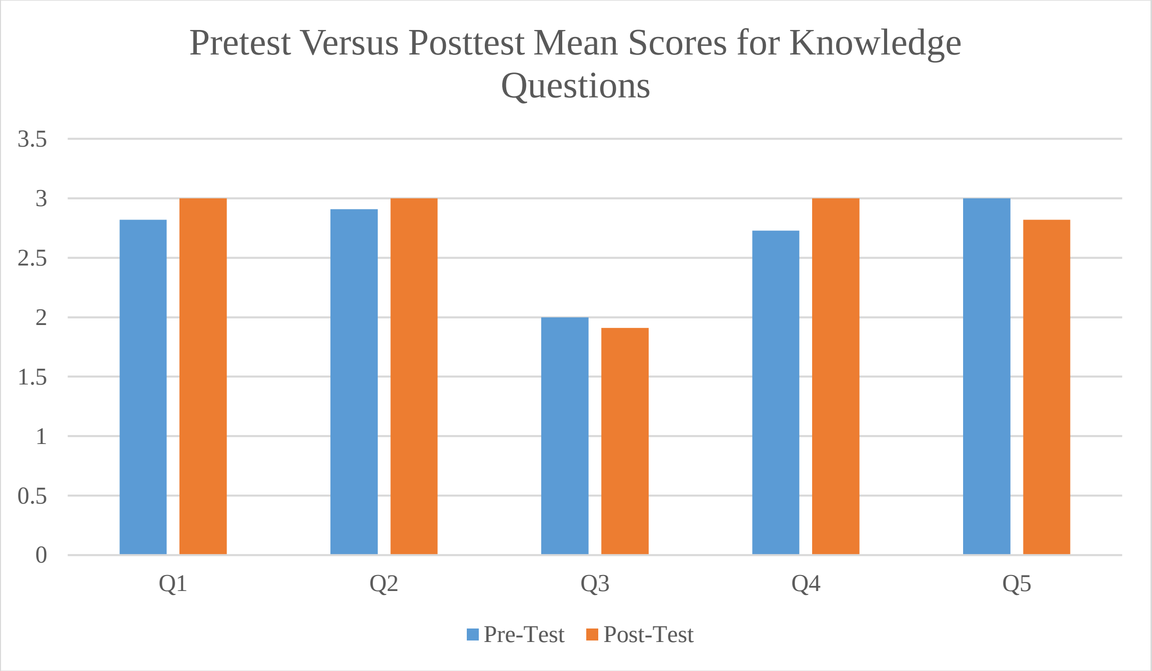


Figure 2. Knowledge Survey Mean Score Comparison.

Results of Posttest Evaluation

At the end of the post-test survey, participants were asked 4 evaluation questions. These questions were used to determine what participants believe to be the greatest barrier to hospice if participants support proposed legislation by the AANP to allow nurse practitioners to make hospice referrals without physician supervision, if participants found the educational module informative and useful, and if they feel more prepared to make hospice referrals after completing the educational module. The results of the post-test evaluation questions are displayed in Table 7.

Table 7

Results of Posttest Evaluation

As a Nurse Practitioner, what do you perceive to be the greatest barrier to referring patients to hospice?	• Knowledge • Fear of imminent death • Lack of knowledge about the services • Knowing what to offer my patients when it is needed • Education • Family • None; strong supporter of hospice and services when appropriate
The American Association of Nurse Practitioners is advocating for policy change that will allow licensed nurse practitioners to independently refer patients to hospice in order to improve patient access to hospice. Do you agree with this policy change? Please explain your answer.	• Yes • Yes, sometimes the patients I see have not seen a physician in months and even years. It would be extremely beneficial if I could independently refer patients for care. • Yes. As an NP we are on the front line in their care and we should be able to offer this to • Yes because we make up a large part of access to care and should afford our patients the right to this service without delay • Yes. Many patients have a good rapport with us and are reluctant to see a physician for hospice referral. • Yes - it's all about the patient and the care they need and deserve rather than a law that makes a collaborator who has never seen the patients make the decision
The educational module was informative and useful.	• Agree 18.2% • Strongly Agree 81.8%
After reviewing the educational module, I feel more prepared to make hospice referrals when the need arises.	• Agree 18.2% • Strongly Agree 81.8%

Summary

The results of the DNP project showed improvement in knowledge and attitudes toward hospice and hospice referrals after the educational intervention. A correlation was noted between years of experience practicing as a nurse practitioner and number of hospice discussions initiated with patients. All participants found the educational module to be useful and informative; additionally, all participants agreed they feel more prepared to make hospice referrals.

CHAPTER IV – DISCUSSION

The proposed outcome of this DNP project was an improvement in knowledge and attitudes of hospice and hospice referrals of Mississippi nurse practitioners. Based on the results of the pretest survey, 63.6% of participants strongly agreed that they were comfortable discussing hospice with patients. After the educational module, 90.9% of participants strongly agreed they were comfortable initiating hospice discussions. The mean comparison of pretest and posttest responses demonstrated an improvement in attitudes and knowledge after the educational module.

A correlation was noted between years of experience as a nurse practitioner and number of hospice referrals made within a 3-month period. Of 11 participants, 63.6% had initiated hospice discussions within the last 3 months and had more than 6 years of experience as a nurse practitioner. Conversely, 27.3% of participants had less than 6 years of experience and none had initiated hospice discussions with patients.

Key Findings

All survey participants agreed that the educational module was informative and useful, and they felt more prepared to make hospice referrals. Additionally, improvement was seen in post-test scores after the educational module. Based on these findings, this DNP question answers the PICO question: an educational module on hospice and hospice referrals increases knowledge about hospice services, improves attitudes towards hospice, and positively affects clinical decision-making with regard to making hospice referrals.

Limitations of the Project

The project was limited by sample size and years of experience of participants. The survey was distributed through the Mississippi Association of Nurse Practitioners' social media. While this platform reaches a large number of nurse practitioners, it does not guarantee a large number of participants. Larger sample size could have diversified responses and led to a more statistically significant result. Additionally, the majority of participants had six or more years of experience. Based on the results, a sample consisting of nurse practitioners with less experience may have gleaned greater benefits from the educational module.

Implications for Future Practice

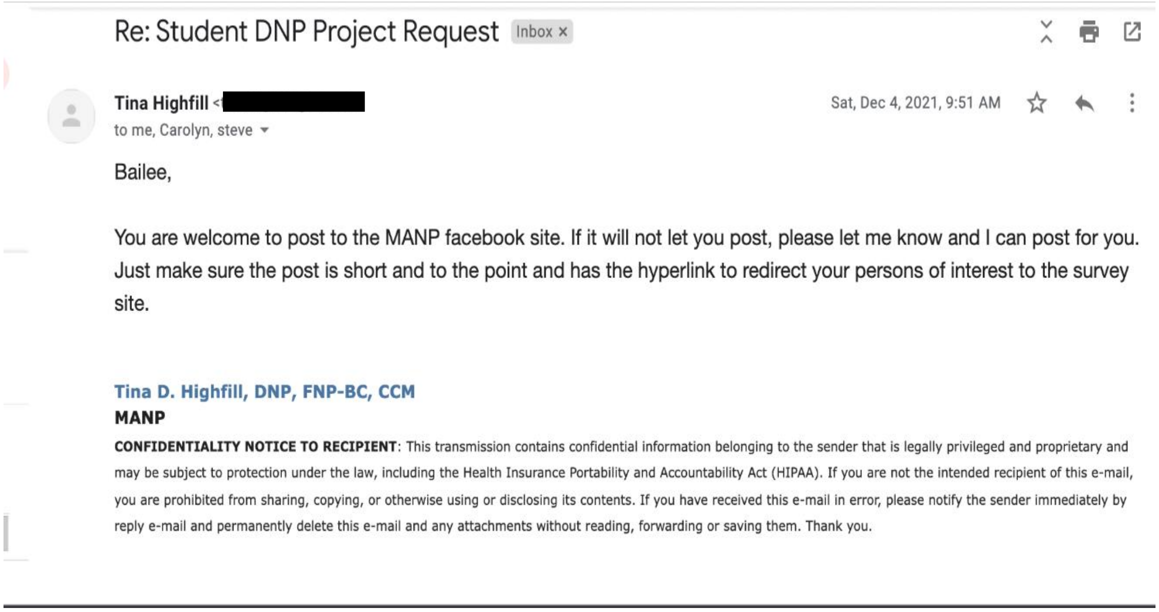
While this project demonstrated improvement in knowledge and attitudes toward hospice referrals for all participants, survey results also demonstrated that nurse practitioners with less than 6 years of experience are less likely to initiate discussions about hospice with patients. This assessment implies that thorough education about hospice should be included in curriculums.

Participants also identified other barriers they perceive towards hospice. These barriers include family and education. While patient and family perceptions about hospice are a significant barrier to hospice services, healthcare professionals, including nurse practitioners, are the front-line people to provide education to patients and their families. Therefore, providing education to nurse practitioners will increase their confidence to provide this education to their patients.

Conclusion

The 11 participants who completed the survey reported that the education intervention was beneficial and felt more prepared to initiate hospice discussions with patients. Improving attitudes and knowledge about hospice is an important step in increasing hospice utilization. Therefore, this DNP project indicates that an evidence-based educational intervention is effective at improving knowledge and attitudes toward hospice referrals and potentially increasing the utilization of hospice services.

APPENDIX A – Mississippi Association of Nurse Practitioners Permission



Re: Student DNP Project Request

Tina Highfill <[redacted]

to me, Carolyn, steve

Sat, Dec 4, 2021, 9:51 AM

Bailee,

You are welcome to post to the MANP facebook site. If it will not let you post, please let me know and I can post for you. Just make sure the post is short and to the point and has the hyperlink to redirect your persons of interest to the survey site.

Tina D. Highfill, DNP, FNP-BC, CCM

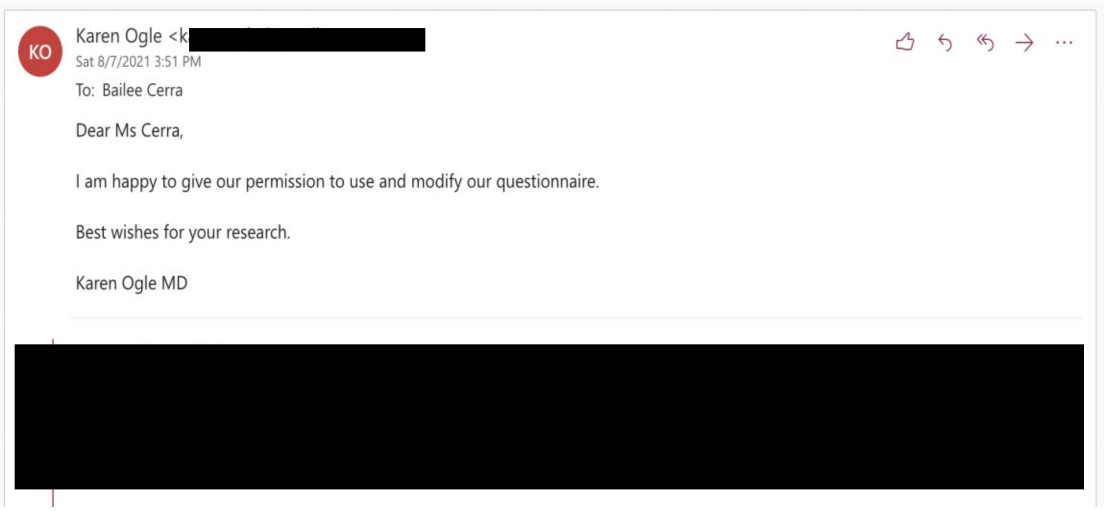
MANP

CONFIDENTIALITY NOTICE TO RECIPIENT: This transmission contains confidential information belonging to the sender that is legally privileged and proprietary and may be subject to protection under the law, including the Health Insurance Portability and Accountability Act (HIPAA). If you are not the intended recipient of this e-mail, you are prohibited from sharing, copying, or otherwise using or disclosing its contents. If you have received this e-mail in error, please notify the sender immediately by reply e-mail and permanently delete this e-mail and any attachments without reading, forwarding or saving them. Thank you.

APPENDIX B –Link to Education Module on *YouTube*

https://youtu.be/LaPE8b0VJls

APPENDIX C – Permission Letter from Dr. Karen Ogle



Karen Ogle <k[redacted]

Sat 8/7/2021 3:51 PM

To: Bailee Cerra

Dear Ms Cerra,

I am happy to give our permission to use and modify our questionnaire.

Best wishes for your research.

Karen Ogle MD

[redacted]

APPENDIX D – Survey Questions

Pretest Questions:

Demographics

1. What is your age?
    a. 30 years or less
    b. 31 to 40 years
    c. 41 to 50 years
    d. 51 to 60 years
    e. More than 60 years
2. Please specify your ethnicity.
    a. Caucasian
    b. African-American
    c. Latino or Hispanic
    d. Asian
    e. Native American
    f. Native Hawaiian or Pacific Islander
3. What gender do you identify as?
    a. Male
    b. Female
    c. Prefer not to answer
4. What is your current primary practice area?
    a. Family practice
    b. Internal medicine
    c. Oncology
    d. Geriatrics
    e. Pediatrics
    f. Other
5. How many years have you been practicing as a nurse practitioner?
    a. Less than 1 year
    b. 1-5 years
    c. 6-10 years
    d. 11-15 years
    e. > 16 years
6. Discussions of hospice in the past three months
    a. No patients/families
    b. 1 to 5 patients/families
    c. 6 to 10 patients/families
    d. 11 to 15 patients/families
    e. >15 patients/families

Attitudes

I am comfortable discussing a hospice referral with patients and families.

1- Strongly Disagree

2- Somewhat Disagree
3- Not Sure
4- Somewhat Agree
5- Strongly Agree

Hospice is a valuable alternative for the provision of terminal care as compared to hospital, nursing home, or home health services

1- Strongly Disagree
2- Somewhat Disagree
3- Not Sure
4- Somewhat Agree
5- Strongly Agree

When there is no longer a realistic hope for a cure and a patient's life expectancy is limited to months rather than years, hospice should always be included in discussions regarding treatment options.

1- Strongly Disagree
2- Somewhat Disagree
3- Not Sure
4- Somewhat Agree
5- Strongly Agree

Hospice services should be discussed with patients prior to the terminal stage of their disease.

1- Strongly Disagree
2- Somewhat Disagree
3- Not Sure
4- Somewhat Agree
5- Strongly Agree

Hospice is a more cost-effective model of terminal care than that provided by a hospital, nursing home, or home health services.

1- Strongly Disagree
2- Somewhat Disagree
3- Not Sure
4- Somewhat Agree
5- Strongly Agree

When hospice services are used, the primary/referring provider loses control over the management of the patient.

1- Strongly Disagree
2- Somewhat Disagree
3- Not Sure
4- Somewhat Agree
5- Strongly Agree

Discussion of hospice gives patients and families a sense of hopelessness; a sense that nothing more can be done.

1- Strongly Disagree
2- Somewhat Disagree
3- Not Sure

4- Somewhat Agree
5- Strongly Agree

Hospice services are underutilized, and hospice referrals are often made too late.

1- Strongly Disagree
2- Somewhat Disagree
3- Not Sure
4- Somewhat Agree
5- Strongly Agree

Knowledge

Patients can drop hospice benefits and resume them at a later date if they desire.

- True
- False
- Not Sure

A patient may reside in a nursing home and receive hospice services.

- True
- False
- Not Sure

The patient must be given a prognosis of six months or less to be eligible for hospice.

- True
- False
- Not Sure

If a terminally ill patient lives beyond the 6-month prognosis, hospice services must be terminated.

- True
- False
- Not sure

Patients receiving radiation and/or chemotherapy for palliation of symptoms are not candidates for hospice.

- True
- False
- Not sure

Posttest Questions

Attitudes

I am comfortable discussing a hospice referral with patients and families.

6- Strongly Disagree
7- Somewhat Disagree
8- Not Sure
9- Somewhat Agree
10- Strongly Agree

Hospice is a valuable alternative for the provision of terminal care as compared to hospital, nursing home, or home health services

6- Strongly Disagree
7- Somewhat Disagree
8- Not Sure

9- Somewhat Agree
10- Strongly Agree

When there is no longer a realistic hope for a cure and a patient’s life expectancy is limited to months rather than years, hospice should always be included in discussions regarding treatment options.

6- Strongly Disagree
7- Somewhat Disagree
8- Not Sure
9- Somewhat Agree
10- Strongly Agree

Hospice services should be discussed with patients prior to the terminal stage of their disease.

6- Strongly Disagree
7- Somewhat Disagree
8- Not Sure
9- Somewhat Agree
10- Strongly Agree

Hospice is a more cost-effective model of terminal care than that provided by a hospital, nursing home, or home health services.

6- Strongly Disagree
7- Somewhat Disagree
8- Not Sure
9- Somewhat Agree
10- Strongly Agree

When hospice services are used, the primary/referring provider loses control over the management of the patient.

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7- Somewhat Disagree
8- Not Sure
9- Somewhat Agree
10- Strongly Agree

Discussion of hospice gives patients and families a sense of hopelessness; a sense that nothing more can be done.

6- Strongly Disagree
7- Somewhat Disagree
8- Not Sure
9- Somewhat Agree
10- Strongly Agree

Hospice services are underutilized, and hospice referrals are often made too late.

6- Strongly Disagree
7- Somewhat Disagree
8- Not Sure
9- Somewhat Agree
10- Strongly Agree

Knowledge

Patients can drop hospice benefits and resume them at a later date if they desire.

- True
- False
- Not Sure

A patient may reside in a nursing home and receive hospice services.

- True
- False
- Not Sure

The patient must be given a prognosis of six months or less to be eligible for hospice.

- True
- False
- Not Sure

If a terminally ill patient lives beyond the 6-month prognosis, hospice services must be terminated.

- True
- False
- Not sure

Patients receiving radiation and/or chemotherapy for palliation of symptoms are not candidates for hospice.

- True
- False
- Not sure

As a Nurse Practitioner, what do you perceive to be the greatest barrier to referring patients to hospice?

The American Association of Nurse Practitioners is advocating for policy change that will allow licensed nurse practitioners to independently refer patients to hospice in order to improve patient access to hospice. Do you agree with this policy change? Please explain your answer.

Review Questions:

The educational module was informative and useful.

1- Strongly Disagree
2- Somewhat Disagree
3- Not Sure
4- Somewhat Agree
5- Strongly Agree

After reviewing the educational module, I feel more prepared to make hospice referrals, when the need arises.

1- Strongly Disagree
2- Somewhat Disagree
3- Not Sure
4- Somewhat Agree
5- Strongly Agree

A modified version of the survey from Ogle et al., 2002 was used in this study.

APPENDIX E – Recruitment Letters

Invitation to participate in Research Study

Hello!

My name is Bailee Cerra and I am a Doctor of Nursing Practice student at The University of Southern Mississippi. I am requesting your assistance with a survey on the knowledge and attitudes of nurse practitioners toward hospice and hospice referrals. You must be an actively practicing nurse practitioner in the state of Mississippi in order to participate. The study will take you approximately thirty minutes. The study will be available from July 25 through August 14, with reminders posted at the beginning of each week. The study is anonymous, so please do not enter any identifying information. Participation in this study is voluntary and you may withdraw from participation at any time. If you have any questions you may contact the researcher:

Bailee Cerra – bailee.brett@usm.edu

IRB Protocol Number: 22-654

If you would like to participate, please click the attached link that will take you to the survey:

https://usmuw.co1.qualtrics.com/jfe/form/SV_86Rr6EnaQFyir9c

Thank you for your time and participation!

Bailee Cerra, DNP Student

INVITATION TO PARTICIPATE IN DNP RESEARCH STUDY

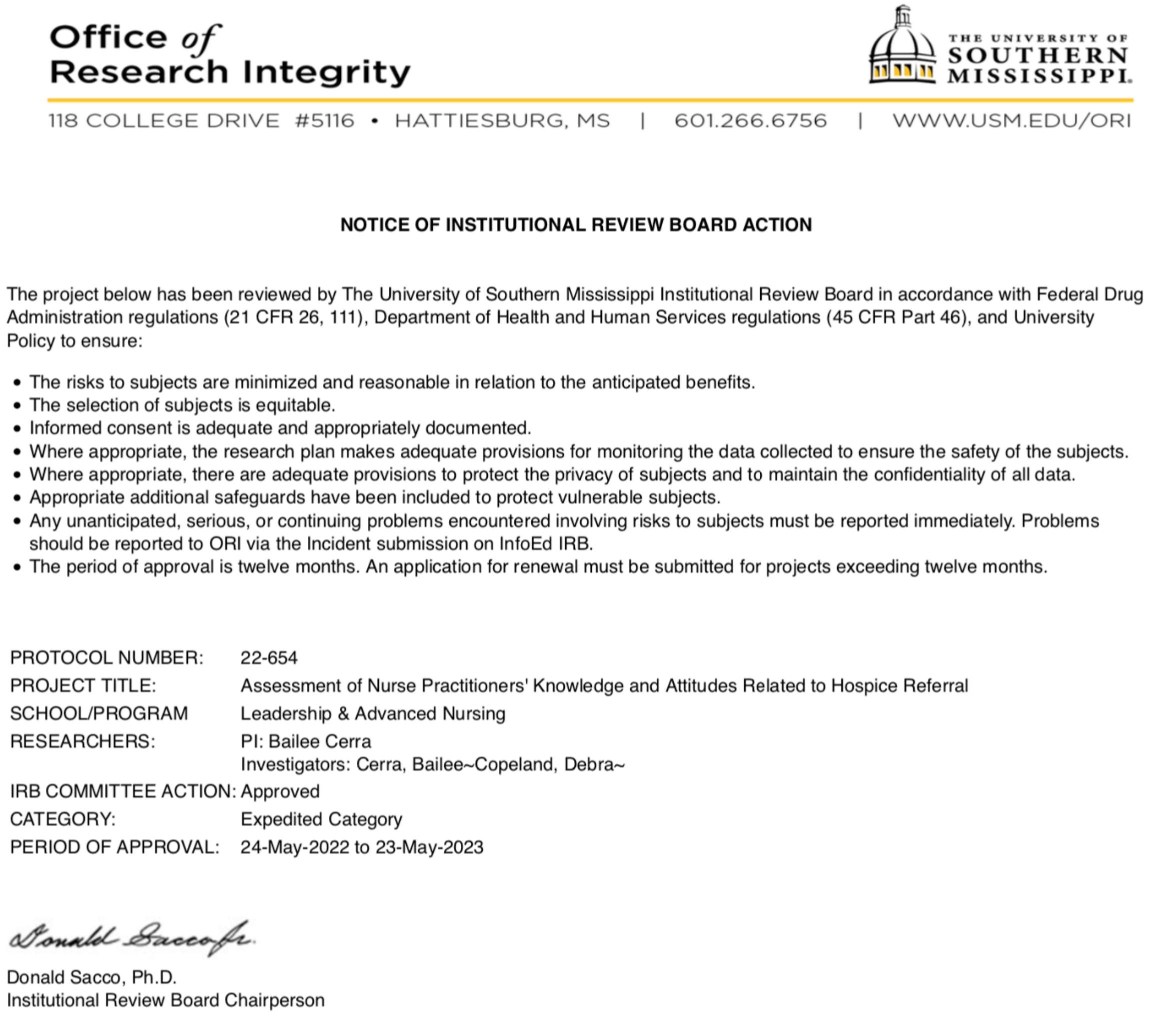
My name is Bailee Cerra and I am a Doctor of Nursing Practice student at The University of Southern Mississippi. I am requesting your assistance with a survey on the knowledge and attitudes of nurse practitioners towards hospice and hospice referrals. You must be an actively practicing nurse practitioner in the state of Mississippi in order to participate. The study will take you approximately thirty minutes. The study will be available July 25 through August 14. The study is anonymous, so please do not enter any identifying information. Participation in this study is voluntary and you may withdraw from participation at any time. If you have any questions you may contact the researcher:

Bailee Cerra – bailee.brett@usm.edu
IRB Protocol Number: 22-654

If you would like to participate, please enter the following link into your web browser, or scan the QR code from your cell phone.
https://usmuw.co1.qualtrics.com/jfe/form/SV_86Rr6EnaQFyir9c

Thank you for your time and participation!
Bailee Cerra

APPENDIX F – IRB Approval Letters



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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident submission on InfoEd IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER:	22-654
PROJECT TITLE:	Assessment of Nurse Practitioners' Knowledge and Attitudes Related to Hospice Referral
SCHOOL/PROGRAM	Leadership & Advanced Nursing
RESEARCHERS:	PI: Bailee Cerra Investigators: Cerra, Bailee~Copeland, Debra~
IRB COMMITTEE ACTION:	Approved
CATEGORY:	Expedited Category
PERIOD OF APPROVAL:	24-May-2022 to 23-May-2023

Donald Sacco Jr.

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

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Research Integrity

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Modification Institutional Review Board Approval

The University of Southern Mississippi's Office of Research Integrity has?received the notice of your modification for your submission *Assessment of Nurse Practitioners' Knowledge and Attitudes Related to Hospice Referral* (IRB #:22-654).

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
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PROTOCOL NUMBER:	22-654
PROJECT TITLE:	Assessment of Nurse Practitioners' Knowledge and Attitudes Related to Hospice Referral
SCHOOL/PROGRAM	Leadership & Advanced Nursing
RESEARCHERS:	PI: Bailee Cerra Investigators: Cerra, Bailee~Coleman, Carolyn~
IRB COMMITTEE ACTION:	Approved
CATEGORY:	Expedited Category
PERIOD OF APPROVAL:	28-Sep-2022 to 23-May-2023

Donald Sacco Jr.

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

APPENDIX G – Online Consent Form

Welcome! The following information is being presented to help you decide if you want to take part in a no-risk research study. This research study is for Nurse Practitioners actively licensed to work in the state of Mississippi. If you do not meet this requirement, you do not qualify to participate.

Description of the Research Study
The purpose of this research study is to assess Nurse Practitioner's attitudes, knowledge, and beliefs about hospice care and hospice referrals. The study will contain a demographic section, a pre-test, a short educational module, and a post-test. The information gathered from the study will be compiled and presented in a DNP (Doctor of Nursing Practice) project for the University of Southern Mississippi.

Benefits
By participating in this research study, you will help to expand understanding of the attitudes, knowledge, and beliefs of Nurse Practitioners in the state of Mississippi with regard to hospice and hospice referrals.

Risks
There are no known risks for participation.

Confidentiality
All survey responses will remain anonymous. No identifying information will be required for participation. The results of the study will be submitted to the University of Southern Mississippi as part of the DNP project required for graduation. All data will be kept on a password protected computer and deleted one year after graduation.

Alternative Procedures:
There are no alternative procedures. This is a voluntary survey study.

Participant's Assurance:
This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive [redacted] Hattiesburg, MS 39406-0001, [redacted]

Any questions about this research project should be directed to the Principal Investigator using the contact information provided below.

Bailee Cerra, DNP Student
bailee.brett@usm.edu

Thank you for your time and participation!

REFERENCES

Adams, C. E., Bader, J., & Horn, K. V. (2008). Timing of hospice referral. *Home Health Care Management & Practice*, *21*(2), 109–116. https://doi.org/10.1177/1084822308323440

Ajzen, I. (2011). Behavioral interventions: Design and evaluation guided by the theory of planned behavior. In B. Mark, M.M., Donaldson, & S.I., Campbell (Eds.), *Social psychology and evaluation* (pp. 74–100). Guilford Press.

American Association of Colleges of Nursing (AACN). (2006). *DNP Essentials. https://www.aacnnursing.org/DNP/DNP-Essentials*

American Association of Nurse Practitioners (AANP). (n.d*.).* Improve Patient Access to Medicare Hospice Services. American Association of Nurse Practitioners. https://www.aanp.org/advocacy/federal/federal-issue-briefs/improve-patient-access-to-medicare-hospice-services.

Centers for Medicare & Medicaid Services (CMS). (2019). *2019 Medicare hospice utilization by state*. https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/medicarefeeforsvcpartsab/medicareutilizationforparta

Cohen, A., & Nirenberg, A. (2011). Current practices in advance care planning. *Clinical Journal of Oncology Nursing*, *15(*5), 547–553. https://doi.org/10.1188/11.cjon.547-553

Collins, C. M., & Small, S. P. (2019). The nurse practitioner role is ideally suited for palliative care practice: A qualitative descriptive study. *Canadian Oncology Nursing Journal, 29*(1)*,* 4–9. https://doi.org/10.5737/2368807629149

Dyar, S., Lesperance, M., Shannon, R., Sloan, J., & Colon-Otero, G. (2012). A nurse practitioner directed intervention improves the quality of life of patients with metastatic cancer: results of a randomized pilot study. *Journal of Palliative Medicine, 15*(8), 890–895. https://doi.org/10.1089/jpm.2012.0014

Fischer, S. M., Gozansky, W. S., Sauaia, A., Min, S.-J., Kutner, J. S., & Kramer, A. (2006). A practical tool to identify patients who may benefit from a palliative approach: The caring criteria. *Journal of Pain and Symptom Management, 31*(4), 285–292. https://doi.org/10.1016/j.jpainsymman.2005.08.012

Graham, M. J. (2015). *Rural Healthcare Providers' Behavioral Intentions with Hospice Referrals: Attitudes, Knowledge, Beliefs, Benefits and Barriers*. (Publication No. 10023270) [Doctoral dissertation, Gardner-Webb University]. ProQuest Dissertations and Theses Global.

Hawley, P. (2017). Barriers to Access to Palliative Care. *Palliative Care: Research and Treatment, 10*, 117822421668888. https://doi.org/10.1177/1178224216688887

Hospice Foundation of America (HFA). (n.d.). *What is Hospice?* https://hospicefoundation.org/Hospice-Care/Hospice-Services.

Jackson McClary, K. (2016). *Examining Nurse Practitioners' Perceptions and Beliefs Regarding Hospice Referrals for African Americans*. [Walden Dissertations and Doctoral Studies]. https://scholarworks.waldenu.edu/dissertations/2606

Mulville, A. K., Widick, N. N., & Makani, N. S. (2018). Timely Referral to Hospice Care for Oncology Patients: A Retrospective Review. *American Journal of Hospice and Palliative Medicine, 36*(6), 466–471. https://doi.org/10.1177/1049909118820494

National Hospice and Palliative Care Organization (NHPCO). (2020a). *Medicare hospice benefit.* https://www.nhpco.org/hospice-care-overview/medicare-hospice-benefit-info/.

National Hospice and Palliative Care Organization (NHPCO). (2019). https://39k5cm1a9u1968hg74aj3x51-wpengine.netdna-ssl.com/wp-content/uploads/2019/07/2018_NHPCO_Facts_Figures.pdf

National Institute on Aging (NIA). (2017). *What are palliative and hospice care?* https://www.nia.nih.gov/health/what-are-palliative-care-and-hospice-care

Ogle, K. S., Mavis, B., & Wyatt, G. (2002). Physicians and hospice care: Attitudes, knowledge, and referrals. *Journal of Palliative Medicine, 5*(1), 85-92. doi:10.1089/10966210252785042

Schneiter, M. K., Karlekar, M. B., Crispens, M. A., Prescott, L. S., & Brown, A. J. (2018). The earlier the better: The role of palliative care consultation on aggressive end of life care, hospice utilization, and advance care planning documentation among gynecologic oncology patients. *Supportive Care in Cancer, 27*(5), 1927–1934. https://doi.org/10.1007/s00520-018-4457-x

Schockett, E. R., Teno, J. M., Miller, S. C., & Stuart, B. (2005). Late referral to hospice and bereaved family member perception of quality of end-of-life care. *Journal of Pain and Symptom Management, 30(*5), 400–407. https://doi.org/10.1016/j.jpainsymman.2005.04.013

Shea, J., Grossman, S., Wallace, M., & Lange, J. (2010). Assessment of advanced practice palliative care nursing competencies in nurse practitioner students:

Implications for the integration of ELNEC curricular modules. *Journal of Nursing Education*, *49*(4), 183–189. https://doi.org/10.3928/01484834-20090915-05

Sopcheck, J. (2016). Social, Economic, and Political Issues Affecting End-of-Life Care. *Policy, Politics, & Nursing Practice, 17*(1), 32–42. https://doi.org/10.1177/1527154416642664

Tyree, T. L., Long, C. O., & Greenberg, E. A. (2005a). Nurse practitioners and end-of-life care. *Journal of Hospice & Palliative Nursing*, *7*(1). https://doi.org/10.1097/00129191-200501000-00014

Tyree, T. L., Long, C. O., & Greenberg, E. A. (2005b). NPS vs. other healthcare providers in end-of-life care. *The Nurse Practitioner*, *30*(3), 58–59. https://doi.org/10.1097/00006205-200503000-00010

World Health Organization (WHO). (2020, August 5). *Palliative Care.* https://www.who.int/news-room/fact-sheets/detail/palliative-care.

Zhou, G., Stoltzfus, J. C., Houldin, A. D., Parks, S. M., & Swan, B. A. (2010). Knowledge, attitudes, and practice behaviors of oncology advanced practice nurses regarding advanced care planning for patients with cancer. *Oncology Nursing Forum*, *37*(6). https://doi.org/10.1188/10.onf.e400-e410