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Palliative Care Referral Behavior Among Nurse Practitioners in Hospital Medicine

Sharon Jackson White

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ABSTRACT

PALLIATIVE CARE REFERRAL BEHAVIOR AMONG NURSE PRACTITIONERS IN HOSPITAL MEDICINE

by

SHARON JACKSON WHITE

Palliative care incorporates holistic care, symptom management, advance care planning, strengthening of patient-family-physician communication, goals of care planning, and improved coordination of care. Healthcare providers practicing in U.S. hospitals do not always refer patients to palliative care who need it. The predominant mode of delivery of palliative care services within hospitals is the consultation service model. In such settings, palliative care services are usually initiated by request that requires a referral for the palliative care team to participate in a patient’s plan of care. Nurse practitioners (NPs) practicing within hospital medicine teams play a significant role in identifying patients who might benefit from palliative care services. The factors that influence their decision to refer patients for palliative care have not been studied. The purpose of this study was to examine the relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussions, history of referral, and referring to palliative care among NPs in hospital medicine. This study was framed by the Theory of Planned Behavior.

A cross-sectional, correlational design was used. Hospital medicine NPs were recruited using social media platforms and postal mail. Participants used Survey Monkey and paper surveys to complete questionnaires that measured demographics and the concepts of interest.

The study participants (N = 76) consisted of 5 males and 71 females with an age range from 30 to 69 (M = 41.82). The availability of the palliative care teams at their hospitals were 24/7 in person (17.1%), 24/7 hybrid of in person/phone (36.8%), and Monday-Friday day shift only in person (46.1%). Four facilitators (palliative care establishing goals of care, helping with length of stay, spiritual concerns, and when patients have serious illness and/or poor prognoses), two barriers (palliative care not routinely available and unless death is imminent), and two self-efficacy aspects (giving bad news to a patient/family member and discussing DNR orders) influenced palliative care referrals. Referral history did not influence referrals.

The findings from this study emphasize the impact of palliative care availability in NPs' referral behavior and suggest a need for strategies to overcome this barrier.

PALLIATIVE CARE REFERRAL BEHAVIOR AMONG NURSE PRACTITIONERS IN HOSPITAL MEDICINE

by

SHARON JACKSON WHITE

A DISSERTATION

Presented in Partial Fulfillment of Requirements for the
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LIST OF ABBREVIATIONS

DNR	Do Not Resuscitate
EOL	End of Life
LOS	Length of Stay
NP	Nurse Practitioner
PC	Palliative Care
TPB	Theory of Planned Behavior

CHAPTER I

INTRODUCTION

Palliative care is specialized care for people living with serious illnesses that focuses on improving the quality of life (QOL) for the patient and the family. Palliative care incorporates holistic care, symptom management, advance care planning, strengthening of patient-family-physician communication, goals of care planning, and improved coordination of care. It is appropriate at any age and any stage of a serious illness (Center to Advance Palliative Care & National Palliative Care Research Center, 2015). Studies of palliative care have found that it significantly reduced symptom distress, enhanced QOL, and helped to clarify the understanding of serious illness diagnoses (Bakitas et al., 2009; Bull, Zafar, & Wheeler, 2010; Gilbert, Howell, & King, 2012; Temel et al., 2010). Despite the benefits of palliative care, many seriously ill Americans, especially those who are hospitalized, do not have adequate access to the assistance that palliative care can offer (Institute of Medicine, 2014).

The current healthcare system focuses on care delivery to extend life, especially in the hospital setting (Chen, 2008). This includes a focus on resuscitation and aggressive treatment, which may contribute to reducing the quality of life for patients and patients’ family members. There is an increasing presence of hospital medicine programs in the United States (U.S.). Hospital medicine programs include hospitalist providers who work strictly in the hospital setting to manage the care of patients (Butcher, 2014).

Hospitalist physicians are those physicians who practice solely in hospitals and manage a great deal of the care of hospitalized patients (Dunn, 2015). They have the ability to refer patients to palliative care within the hospital setting. In recent years, there has been an increase in the number of nurse practitioners (NPs) who also work alongside hospitalist physicians in the hospital setting. Hospital medicine NPs work solely in hospitals and have the opportunity to refer hospitalized patients to palliative consultation teams when needed. Healthcare providers' confidence with engaging in end of life discussions is important within the hospital setting when it comes to influencing the referral of patients to palliative care. Little is known about the hospital medicine NP's role in referring patients to palliative care programs. If we could examine the relationships among the factors that influence the palliative care referral practices of hospital medicine NPs, then we could design interventions to assist more hospitalized patients in obtaining palliative care services if needed.

Background

Palliative Care

Palliative care has evolved over time. Initially, palliative care was largely delivered in hospice programs and seen as care provided for people who were not receiving active treatment for cancer and dying. Over time, it has become recognized as applicable earlier in the course of any serious illness and provided alongside disease modifying treatment (Kite, 2006; Vissers et al., 2013).

Modern palliative care in the U.S. has developed due to significant regulatory limitations of hospice. Under the Medicare hospice benefit and private insurer hospice benefits, reimbursement for care is restricted to persons with an expected prognosis of six months or less who are willing to forgo disease-directed treatment. These restrictions left innumerable patients to suffer with symptoms of serious illness, which led to the evolution of palliative care (Kelley & Meier, 2015).

The World Health Organization (WHO) defines palliative care as:

> ….an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual. (World Health Organization, 2016, para. 1)

The WHO further expresses the following about palliative care: a) provides relief from pain and other distressing symptoms; b) affirms life and regards dying as a normal process; c) does not hasten or postpone death; d) offers a support system to help patients and families cope during patients' illnesses and their own bereavement; e) uses a team approach; f) will enhance quality of life and may also positively influence illness course; and g) is applicable early in the course of illness in conjunction with other therapies for prolonging life (World Health Organization, 2016). Palliative care is known to improve patient and family satisfaction through enhanced communication and holistic support (Byock, 2009; Roza, Lee, Meier, Goldstein, 2015) and extends assistance to families and relatives after the patient's death (Vissers et al., 2013).

The Center to Advance Palliative Care (CAPC) and others further define and describe palliative care. CAPC indicates that palliative care incorporates advance care planning, strengthening of patient-family-physician communication, goals of care planning, and improved coordination of care (Center to Advance Palliative Care, 2014). Palliative care interventions are multifaceted and aim to deliver care that is holistic and centered around the patient to improve quality of life. Those interventions include the following:

a) relief of physical and emotional suffering, b) facilitation of patient-family-provider communication and shared decision making, and c) coordination of care across health care settings (Center to Advance Palliative Care, 2013). These interventions are carried out for three domains: a) condition (i.e., frailty) or disease-focused palliation (targeting condition/disease specifically for managing symptoms), b) symptom-focused palliation (quality of life improvement for managing symptoms when disease targeting is not effective), and c) terminal or end of life care (ensuring quality of the dying experience). Overall, palliative care is a specialty that has evolved over time and contributes greatly to patients and their families.

Seriously Ill in U.S. Hospitals: Palliative Care Utilization

The number of seriously ill patients being admitted to hospitals in the United States is increasing (Center to Advance Palliative Care, 2014). These patients often need assistance with advance care planning, symptom management, and coordination of care. Due to palliative care being comprehensive care that is tailored to patients’ needs and works in synergy with the primary treatment that patients are receiving, seriously ill patients who are hospitalized can benefit from the services that palliative care provides. According to the Institute of Medicine (IOM), *Dying in America*, many Americans who have serious illnesses do not have adequate access to the assistance that palliative care can offer, because many hospitalized patients are not referred to palliative care although it is available (Institute of Medicine, 2014). It is estimated that between 7.5 and 8.0 percent of hospital admissions need the integration of palliative care services, and between 1 million and 1.8 million patients admitted to U.S. hospitals annually could benefit from palliative care but are not receiving it (Center to Advance Palliative Care & National Palliative Care Research Center, 2015).

Patients of any age and stage of the following serious illnesses can benefit from being referred to hospital palliative care consultation teams: oncological diseases, cardiac issues (i.e., heart failure, cardiac arrest), pulmonary illnesses (i.e., chronic obstructive pulmonary disease), liver failure, renal disease, and neurological illnesses (amyotrophic lateral sclerosis, Parkinson's disease, multiple sclerosis, dementia) (Paolo et al, 2018). To better understand the utilization of hospital palliative care in the United States, 359 non-pediatric hospital-based palliative care programs submitted data to the National Palliative Care Registry in 2016 for the calendar year of 2015 (Center to Advance Palliative Care & National Palliative Care Research Center, 2016). The palliative care programs were based in teaching (59.9%) and non-teaching (40.1%) hospitals. Table 1 displays some of the key data results as related to this study.

Table 1

Data Extracted from National Palliative Care Registry – 2015 Data Summary (Non-Pediatric Palliative Care Programs)

Variable	**Response Data**	
Patient Age Distribution	0 to 1 :	0.1%
	2 to 17:	0.2%
	18 to 44:	5.5%
	45 to 64:	22.9%
	65 to 85:	48.8%
	86 or Older:	22.0%
Patient Gender Distribution	Female:	51.6%
	Male:	48.4%
Patient Ethnicity Distribution	Black/African American/Non-Hispanic:	13.4%
	White/Caucasian/Non-Hispanic:	75.7%
	Asian/Non-Hispanic:	2.5%
	American Indian/Native American/Non-Hispanic:	1.2%
	Hawaiian/Native Pacific Islander/Non-Hispanic:	0.1%
	Hispanic/Latino:	4.6%
Referring Specialist	Hospital Medicine:	53.5%
	Pulmonary/Critical Care:	11.8%
	Internal/Family Medicine:	12.5%
	Oncology:	7.2%
	Cardiology/Nephrology/Neurology/Surgery/Other:	15.0%

(Continues)

Table 1 (Continued)

Variable	**Response Data**	
Referring Sites (Inside Hospital)	Medical/Surgical: Intensive Care Unit: Step-Down Unit: Oncology: Emergency Room:	43.0% 26.4% 13.2% 8.1% 3.2%
Primary Diagnosis for Referral	Cancer: Cardiac: Pulmonary: Neurological: Infectious: Complex Chronic/Dementia:	27.0% 13.0% 12.0% 8.0% 6.0% 11.0%

Palliative Care Teams and Referrals in U.S. Hospitals

The presence of hospital-based palliative care services has increased in the U.S. within the last 10 years. There are approximately 5,723 hospitals in the U.S. (American Hospital Association, 2014). Data from the American Heart Association and the National Palliative Care Registry indicated that, in 2015, the prevalence of palliative care consultation teams was 67% for U.S. hospitals with 50 or more beds, a 157.1% increase from 63% in 2011. In addition, almost 90 percent of large U.S. hospitals (300 beds or more) had a palliative care program (Center to Advance Palliative Care & National Palliative Care Research Center, 2015).

The most predominant mode of delivery of palliative care services within hospitals is the consultation service model (Kelly & Morrison, 2015; Weismann & Meier, 2011). Palliative care services in hospital settings with a consultation team approach are usually initiated by request that requires a referral for the palliative care team to participate in a patient's plan of care. A physician consultation/referral order is required for commercial and Medicare insurance billing (American Hospital Association & Center to Advance Palliative Care, 2012). However, there are some situations when a NP or a physician assistant can consult palliative care for a patient without the need for a physician order (i.e., when they are rounding and billing on patients in the hospital setting independently). At many hospitals, any staff or family member may request a palliative care consultation for a patient from a physician on the patient's plan of care. Palliative care consultations also can be initiated by pre-established criteria or triggers (i.e., prolonged ICU stays, pre-LVAD placement). But, ultimately, a palliative care consultation needs a physician order to be initiated (American Hospital Association & Center to Advance Palliative Care, 2012). When consulted, palliative care teams improve quality of care and support both the interdisciplinary team and patient by providing: a) devoted time for family meetings and patient/ family counseling; b) expert symptom management; c) communication and support for assisting in resolving patient/family/physician questions concerning goals of care; and, d) coordination of care transitions across multiple health care settings (Center to Advance Palliative Care, 2014). Successful utilization of palliative care teams depends on several factors, including: 1) knowledge of palliative care by non-palliative care providers, 2) access to palliative care,

3) recognition of the need for palliative care, 4) acknowledgment of the life-limiting nature of patients' conditions, and 5) provider openness to integration of palliative care into the plan of care (Walshe, Chew-Graham, Todd, & Caress, 2008). Palliative care should be regarded as coexisting with disease-oriented therapy throughout a patient's care.

Healthcare providers practicing in U.S. hospitals do not always refer patients to palliative care who need it. Several factors can limit patients being referred to palliative care, and misconceptions of palliative care exist. Too often, palliative care is understood as limiting options available to patients and families rather than improving patient care (Ferrell, Virani, Smith, & Juarez, 2003). Palliative care is sometimes viewed as being for people who have “failed” medical treatment or equated just with “end of life” (Paice, Ferrell, Coyle, Coyne, & Callaway, 2008). Furthermore, palliative care interventions are sometimes interpreted as hastening death (De Veer et al., 2008). Inaccurate perceptions of palliative care can delay or prohibit hospitalized patients from receiving its benefits.

Significance

The utilization of palliative care services is known to improve quality of life of patients and their family members, decrease hospital lengths of stays, and reduce hospital resource utilization costs. The current healthcare system focuses on care delivery to extend life, especially in the hospital setting (Chen, 2008). This includes a focus on resuscitation and aggressive treatment plans of care, which may contribute to reducing the quality of life for patients and patients' family members. Because most physicians are trained to extend the lives of patients with a major focus on cure, many may not value what palliative care can offer and therefore do not refer their patients to this important resource (Vissers et al., 2013). Studies found a significant reduction in symptom distress and enhancement in quality of life in patients receiving palliative care (Bakitas et al., 2009; Bull, Zafar, & Wheeler, 2010; Gilbert, Howell, & King, 2012). Another study of 151 ambulatory patients, with newly diagnosed metastatic non-small-cell lung cancer, who were randomized to receive either standard oncologic care or standard oncologic care with the integration of palliative care, resulted in increased quality of life in the following ways for those receiving the integrated palliative care: a) better clarification of understanding of the serious illness diagnoses affecting them; b) improved advance care planning; c) less depression; d) fewer aggressive end-of-life interventions; and, e) increased survival advantage (Temel et al., 2010).

Patients with serious illnesses represent approximately five percent of the total patient population but account for greater than half of all healthcare costs. These patients are at the highest risk for poor clinical outcomes, prolonged hospital stays, repeated hospitalizations, and frequent care transitions (American Hospital Association & Center to Advance Palliative Care, 2012). In addition to helping patients and their families, hospital palliative care teams also assist in reducing extensive length of stays and hospital costs (Center to Advance Palliative Care, 2013).Studies have shown that patients who receive hospital-based palliative care services have decreased intensive care unit (7 days for those referred versus 11 days for those not referred) and general hospital length of stays (palliative care referral within two days of admission resulted in a 13 percent reduction in length of stay) (Walker, Mayo, Camire, & Kearney, 2013). One retrospective, cohort study of 408 seriously ill and hospitalized Medicare patients found that those involved with the hospital's multidisciplinary palliative care team had lower 30-day hospital readmission rates. Approximately 10% of discharged patients who received the palliative care services were readmitted within 30 days even though they were sicker than the overall discharged population. This percentage was lower than the hospitals' usual 15% overall readmission rate among older adults (Enguidanos, Vesper, & Lorenz, 2012).

Evidence also shows that hospital palliative care referrals lower healthcare costs. Using hospital administration data, a landmark retrospective case control study that examined the effect of palliative care teams on hospital costs at 8 hospitals found that patients who received palliative care incurred lower hospital costs than a matched group receiving 'usual care'. Within the hospital setting, palliative care was associated with a decrease in direct hospital costs of almost $1,700 per admission for patients discharged alive and a decrease of almost $5,000 per admission for patients who died while hospitalized (Morrison et al., 2008). In a similar analysis, a savings of $464 per day was noted for patients who were referred to palliative care in the hospital setting (Penrod et al., 2010). Focusing on the Medicaid population, a study by Morrison et al. (2011) attributed $6,900 less in hospital costs per admission for Medicaid patients receiving a palliative care services than those Medicaid patients who received usual care. In summary, evidence supports increased quality of care, reduced hospital length of stay, and decreased healthcare costs with hospital palliative care services.

In addition to inaccurate perceptions of palliative care, the confidence of hospital healthcare providers being able to engage in end of life discussions impacts the utilization of palliative care. Self-efficacy, or confidence, of a healthcare provider for engaging in end of life discussions with patients and their families is an important avenue that could lead to patients having access to palliative care services when needed within the hospital setting. According to Smith et al. (1995), high self-efficacy is related to the successful use of skills. Previous research has also shown a strong relationship between self-efficacy and behavior, indicating that people who are more confident about an action are more likely to carry it out (Bandura, 1977; Bandura, 1982).

NPs practicing within hospital medicine teams play a significant role in caring for patients who might benefit from palliative care services; however, the factors that influence their decision to refer patients for palliative care have not been studied. Identifying factors that influence NPs referring hospitalized patients to palliative care is essential to ensure that patients have access to these important services. Understanding how facilitators, barriers, and confidence with end of life discussions influence the intention to refer to palliative care among hospital medicine NPs will enable appropriate utilization of these valuable services. This will result in improved patient-centered care, quality, hospital resource utilization, and discussions with patients and families.

Purpose

The purpose of this cross-sectional, predictive correlational study was to examine the relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussions, history of referral, and referring to palliative care among NPs in hospital medicine.

Hypotheses

The study's aim and the hypotheses are delineated in this section. The specific aim was to explore which variables produce variance with history of referring and referring to palliative care.

The following hypotheses were proposed for this study:

In a sample of NPs in hospital medicine:

1. Perceived facilitators to referral will be associated with a higher history of referral and a higher number of referrals to palliative care among NPs in hospital medicine.
2. Perceived barriers to referral will be associated with a lower history of referral and a lower number of referrals to palliative care among NPs in hospital medicine.
3. Increased self-efficacy with end of life discussions will be associated with a higher history of referral and a higher number of referrals to palliative care among NPs in hospital medicine.

4. Perceived facilitators to referral, perceived barriers to referral, and self – efficacy with end of life discussions will contribute a significant variance in the history of referral to palliative care among NPs in hospital medicine.
5. Perceived facilitators to referral, perceived barriers to referral, and self – efficacy with end of life discussions will contribute a significant variance in the number of referrals to palliative care among NPs in hospital medicine.

Theoretical Framework

Theory of Planned Behavior

The Theory of Planned Behavior (TPB) is useful in understanding how individuals behave. In this section, how the TPB can serve as a framework for understanding the beliefs and behaviors of healthcare providers in relation to referring patients to palliative care will be discussed.

Definition and concepts. TPB is a theory that links an individual's beliefs and behavior. This theory was developed to improve on the predictive influence of the Theory of Reasoned Action (TRA) with the addition of the concept of behavioral control (Ajzen, 1991). While the TRA applied only to volitional (under one's own control) behavior, the TPB takes into account non-volitional (not under one's own control) behavior. In essence, the TPB purports to predict goal-directed behaviors that an individual perceives as potentially impeded by factors not under his or her control (Ajzen, 1991). Behavior is the outcome variable in the TPB. The relationships in the theory assert that attitude towards behavior, subjective norms, and perceived behavioral control are predictors of an individual's behavioral intention(s), which determines behavior(s).

The TPB suggests that there are three direct determinants of behavioral intention: attitudes, subjective norms, and perceived behavioral control. Attitude towards the behavior is the perceived advantages and disadvantages of performing a behavior. Subjective norms is defined as the perceived social pressure to perform the behavior. Perceived behavioral control is the perceived ease or difficulty of performing the behavior and self-efficacy for performing the behavior (Ajzen, 1991). Perceived behavioral control originates from the self-efficacy theory proposed by Bandura (from the social cognitive theory) (Bandura, 1977). Perceived behavioral control is expected to have both a direct impact on behavior and an indirect impact on behavior through its influence on behavioral intention (Azjen, 1991). According to Bandura (1977), self-efficacy is the conviction that one can successfully execute the behavior required to produce outcomes. At its core, the TPB is concerned with the prediction of intentions and behaviors by attitudes, subjective norms, and perceived behavioral control. The Theory of Planned Behavior is illustrated in Figure 1.

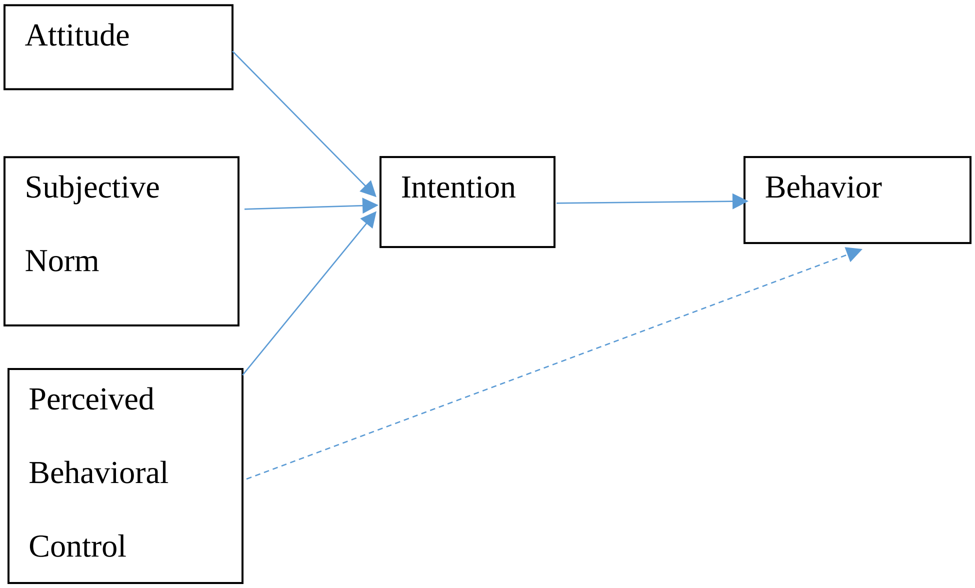

Figure 1. Theory of Planned Behavior (Ajzen, 1991)

TPB conceptual relationships. All of the following conceptual relationships of the TPB were conveyed by Ajzen (1991). Attitudes are formed by beliefs. The TPB postulates that behavior is a function of significant beliefs relevant to the behavior. In other words, salient beliefs are the predominant determinants of a person's intentions and actions. The more favorable the attitude and subjective norm with respect to behavior, and the greater the perceived behavioral control, the stronger should be an individual's intention to perform the behavior. Perceived behavioral control, together with behavioral intention, directly predict behavioral achievement. For desirable behaviors, greater perceived behavioral control lead to stronger intentions and behavior performance. The TPB implies that intentions and perceptions of behavioral control interact in the prediction of behavior. Another relational dynamic is that past behavior does not significantly improve the prediction of later behavior. Lastly, the more favorable the attitude and subjective norm with respect to behavior, and the greater the perceived behavioral control, the stronger should be an individual's intention to perform the behavior.

Utility of TPB for current study. Due to Azjen's perspective that perceived behavioral control, together with behavioral intention, directly predict behavioral achievement, only the TPB construct of *perceived behavioral control* (PBC) served as a framework to examine the relationships among factors as related to hospitalist NPs' history of referring and actual referral of patients to palliative care in this study. Variables within the PBC construct identified in the literature as related to hospital physicians referring patients to palliative care within the hospital setting were measured for this study. These variables are facilitators of referring to palliative care, barriers to referring to palliative care, and self-efficacy related to confidence in end of life discussions. For this study, the TPB construct of *perceived behavioral control* was the hospitalist NP's perceived ease or difficulty of the history of referring and referring to palliative care. The application of the PBC, intention, and behavior constructs of the Theory of Planned Behavior that used for this study is illustrated in Figure 2.

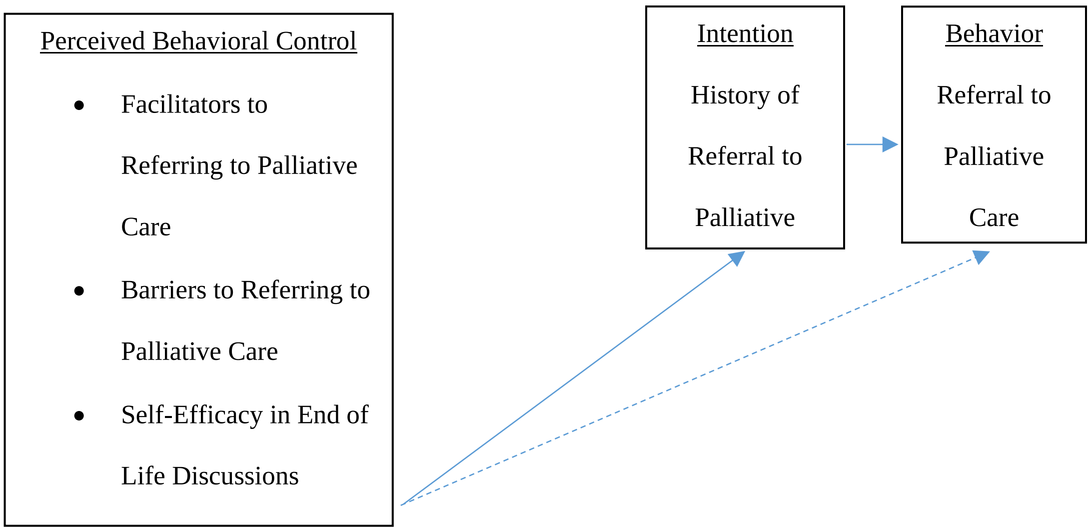

Figure 2. Application of Azjen's Theory of Planned Behavior for Palliative Care Referral Behavior Among Nurse Practitioners in Hospital Medicine

Assumptions

Lopez and Willis (2004) believed that the experiences of a researcher can influence how research should be conducted in order to produce meaningful results, and that the presuppositions of the researcher "are valuable guides to inquiry and, in fact, make the inquiry a meaningful undertaking" (Lopez & Willis, 2004, p. 729). As a NP employed on a hospital palliative care consultation team, I have direct personal knowledge and have observed hospitalist NPs referring (and not referring) hospitalized patients to palliative care. My understanding of the perceived behavior control construct of the TPB and its application to understanding the palliative care referral practices of hospitalist NPs is that they will intend to refer to palliative care when there is ease and confidence in their ability to do so.

This study was conducted under the following assumptions:

I. Facilitators assist in bringing about an outcome.
II. Barriers hinder movement or action.
III. One's sense of self-efficacy can play a major role in how one approaches goals, tasks, and challenges.
IV. People will intend to perform actions that seem to benefit others.
V. The study of hospitalist NPs' intentions to refer patients to hospital palliative care teams will contribute to future research that will assist in hospitalized patients having increased access to palliative care when needed.

Summary

Palliative care has evolved over time and is specialized care for people living with serious illnesses that focuses on improving quality of life. The presence of palliative care teams in U.S. hospitals has increased significantly within the last ten years. Most hospitals provide palliative care with a consultation service model. This requires a referral (request) in order for the palliative care team to enter into a patient's plan of care. Many hospitalized patients in need of palliative care services are not referred. Evidence shows that healthcare providers practicing in U.S. hospitals refer and do not refer their hospitalized patients with serious illnesses to palliative care when needed for many reasons. Palliative care referrals in U.S. hospitals improve the quality of life of patients, decrease hospital lengths of stays, and reduce overall healthcare utilization costs.

Current research has identified that little is known of the hospitalist NP’s role with referring patients to hospital palliative care programs. The purpose of this study was to examine the relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussions, history of referral, and referring to palliative care among NPs in hospital medicine. The findings from this study demonstrated significant relationships between some of the facilitators to referral, barriers to referral, self-efficacy with end of life discussions, history of referral, and referring to palliative care. The results from this study can be used to design interventions to assist more NPs in referring more patients for palliative care services.

CHAPTER II

REVIEW OF THE LITERATURE

The presence of hospital-based palliative care services has increased in the United States within the last 10 years (Center to Advance Palliative Care & National Palliative Care Research Center, 2015). Palliative care services in hospital settings are usually initiated by request and aim to improve the quality of life of patients. Despite the significant role that palliative care plays in the lives of patients with serious illnesses, several factors may influence a healthcare provider’s decision to refer to palliative care.

Hospital medicine programs are located within the hospital setting and utilize hospital medicine providers to manage the care of complex, seriously ill patients (Butcher, 2014; Wachter & Goldman, 2002). It is one of the fastest growing medical specialties (Cantlupe, 2013). NPs are also providers in the hospital medicine specialty, with their presence increasing in number. This literature review discusses the state of the science regarding factors that influence hospital-based healthcare providers’ practices in referring to palliative care.

Hospital Medicine: Key Role in Hospital Palliative Care Referrals

Hospital medicine programs launched in 1999 and are those in which hospitalist providers work strictly in the hospital setting and oversee the care of complex patients (Butcher, 2014; Wachter & Goldman, 2002). The hospitalist medicine specialty is among healthcare's fastest growing specialties, with at least 60% of hospitals now employing these professionals according to the Society of Hospital Medicine (Cantlupe, 2013). Hospital medicine providers consist of physicians, NPs, and physician assistants. In 2014, 65.5% of hospital medicine teams employed NPs and physician assistants (Society of Hospital Medicine, 2014). Hospital medicine providers dedicate their practice to the care of the hospitalized patient and are hired by hospitals to be available to care for patients 24 hours a day, 7 days a week (Cantlupe, 2013). They treat patients in acute, episodic, and critically ill disease states (Whitaker, 1996). In 2014, data from the Society of Hospital Medicine's biannual survey report showed that adult hospital medicine programs contributed to the following areas within the hospital: medical co-management (89.1%), surgical co-management (87.0%), care of patients in an ICU (69.7%), nighttime admissions for other physicians (57.1%), responsibility for an observation/short stay unit (51.7%), responsibility for the rapid response team (45.3%), and responsibility of the code blue (resuscitation) team (42.4%) (Society of Hospital Medicine, 2014).

There are many reasons that contributed to the development of hospital medicine programs. They were developed as a result of hospitals recognizing the need to reduce the transferring of patients from one physician to another and to make healthcare delivery more streamlined (Wachter & Goldman, 2002). Efforts related to improving the process of the patient throughput, enhancing the quality of patient care, and increasing cost savings also played significant roles in the launching these programs (Depuccio, 2014; Wachter, Whitcomb, & Nelson, 1999). Increased patient acuity and reimbursement standards based upon quality of care were also catalysts for the birth of hospital medicine programs. The overall aim of hospital medicine program is to demonstrate greater hospital efficiency.

Hospital medicine providers are well positioned to recognize a patient’s sentinel hospitalization, a transitional point in a patient’s disease course that heralds a need to reassess prognosis, patient understanding, treatment options, and goals of care. They can use that opportunity to gain input from the patient’s primary care physician or subspecialist (i.e., pulmonologist, cardiologist), develop a comprehensive strategy to evaluate disease management, and integrate palliative care (to improve patients’ quality of life and control costs). Furthermore, hospital medicine providers consider patients’ recent history of illness, offer an impartial overview of illness progression, and have detachment from longitudinal patient-physician relationships. This may enable them to have more accurate medical prognostication (Anderson, Kools, & Lyndon, 2013). Hospital patients’ access to palliative care services are increasingly dependent upon being referred by hospital medicine providers.

Physicians on Hospital Medicine Teams

Physicians who work in hospital medicine are usually described as “hospitalist physicians” and have varying backgrounds of experience. Some begin practicing hospital medicine directly after residency. However, some hospitalist physicians gained decades of experience in more traditional primary care before becoming hospitalists. Most hospitalist physicians are board-certified in internal medicine. Although most are trained in internal medicine, some hospitalist physicians are family practice doctors or medical subspecialists who have opted to become hospitalist physicians (Newman, 2015). The median number of hospitalist physicians working full time in an adult hospital medicine team was ten in 2014 (Society of Hospital Medicine, 2014). Today, more than 40,000 hospitalist physicians are in practice (Cantlupe, 2013). With this trend, hospitalist physicians are responsible for the oversight of the majority of hospitalized patients and are well-positioned to recognize the need for palliative care and refer patients to hospital palliative care teams when needed.

Nurse Practitioners on Hospital Medicine Teams

NPs on hospital medicine teams are increasing in number, serve in varying roles, and bring forth significant worth. NPs who work on hospital medicine teams are described as “hospitalist NPs.” Most hospitalist NPs are certified as acute care NPs (ACNP) (Ford, 2009). Others are certified as adult NPs (ANP), family NPs (FNP), pediatric NPs (PNP), or geriatric NPs (GNP). ANPs, FNPs, PNPs, and GNPs may seek post- masters ACNP certification as well (Kleinpell et al., 2008; National Organization of NP Faculties, 2011). It is estimated that nearly 65% of all adult hospital medicine programs and 33% of all pediatric hospital medicine programs use NPs in some capacity (2016 State of Hospital Medicine Report, 2017). A national survey of 74 academic medical centers in 2011 showed that 42% of the hospital medicine teams employed NPs (Moote, Krsek, Kleinpell, & Todd, 2011). The Association of Academic Medical College predicted that the hospital inpatient setting will experience a 36.6% increase in service demands, with the use of hospitalist NPs contributing to the potential solution to this problem (Furfari, Rosenthal, Tad-y, Wofe, & Glasheen, 2014). Tracy Cardin, who became the first NP elected to the Society of Hospital Medicine board of directors in

2016, attributes the increased use of NPs in hospital medicine to hospitals being unable to afford a hospitalist staff that is primarily comprised of physicians during the decline of hospital revenues (Butcher, 2017). Hospitalist NPs will continue to be used to increasingly meet the needs of those hospital medicine programs with insufficient quantities of healthcare providers (IHS, Inc., 2016).

The contribution of hospitalist NPs to hospital medicine teams is valuable. The expanding roles of NPs in the hospital setting and on hospital medicine teams are mainly due to changes in medical residency requirements (limitations on number of hours allowable for working in hospital settings), pressures to reduce inpatient length of stay, increased patient acuity, and the need to reduce healthcare costs (Rosenthal & Guerrasio, 2010). Other evidence leads to the fact that NPs are being added to hospital care teams (including hospital medicine) to assist in meeting the demands for lower cost, higher quality, and safer patient care (Kapu & Steaban, 2016). Lastly, results from other studies have shown that NPs result in increased adherence to evidence-based care, a decrease in unnecessary resource utilization, heightened patient experiences, and improved patient outcomes (Cowan et al., 2006; Kapu, Kleinpell, & Pilon, 2014; Newhouse et al., 2011; Sise et al., 2011). Overall, the hospitalist NP is an added value to hospital medicine teams.

Hospitalist NPs take on many roles within hospital medicine teams. They diagnose, prescribe medications, order and interpret laboratory and diagnostic tests, manage hospitalized patients, and coordinate patient care with the interdisciplinary team (Ford, 2009). They admit patients to the hospital, manage and discharge patients in the hospital, and perform certain procedures (based upon delegated hospital privileges) (Ford, 2009). Other responsibilities of hospitalist NPs are the following: a) coordinate hospital follow-up care, b) transfer patients to varying levels of care, c) render patient and family education, d) engage as rapid response team providers, e) deliver staff education, f) participate in quality improvement initiatives, and g) join varying hospital committees (Kleinpell et al., 2008). In summary, hospitalist NPs make valuable contributions and serve in a variety of capacities.

Nurse Practitioners on Hospital Medicine Teams: Collaborative Relationships and Billing for Patient Services

Hospitalist NPs often work in collaboration with physicians on the hospital medicine teams. Collaboration between healthcare professionals is important for the provision of safe, high quality, and cost-effective healthcare delivery (Maylone, Ranieri, Quinn Griffin, McNulty, & Fitzpatrick, 2009). Collaboration has been defined as a partnership in which both sides value each other’s power and accept their separate areas of responsibility, as well as working together with planning, shared decision making, and communication (Dougherty & Larson, 2005; Taylor, 2009). NPs and physicians work together towards a goal of exceptional patient care. They work in an interrelated fashion to achieve a common goal (Bridges, 2014; Makowsky et al., 2009). Collaboration involves the following: a) an interdisciplinary course of action as a stimulus for decision making, and b) communication to foster the use of individual skills and the knowledge of the healthcare providers. From a clinical standpoint, the overall goal of the NPs and the physicians positively collaborating with each other in the hospital environment is to achieve high quality patient care (Makowsky et al., 2009; Martin, O'Brien, Heyworth, & Meyer, 2005). Collaboration is greatly needed to enhance professionalism and mutual understanding between NPs and physicians who work together (Neale, 1999).

Many hospitals have hospital medicine teams that are comprised of physicians, NPs, and physician assistants caring for the patients within the hospital setting. In those states where NPs are supervised by physicians, all of the patients managed by the hospitalist NP must be seen by a hospitalist physician as well. The hospitalist physician is required to see the patient after the hospitalist NP and write a brief attestation note (Ford, 2009). This requires a relationship between the two providers that is open, sharing, and collegial. Some of the patient related issues in which hospitalist NPs collaborate with the hospitalist physician are plans of care for patients, medication and diagnostic testing orders, results of findings, admission orders, discharge planning, and decisions regarding consulting other specialists (i.e., palliative care) for patients. Research has shown that communication and collaboration have improved when acute care NPs are integrated into hospitalist teams in hospital settings (Vazirani, Hays, Shapiro, & Cowan, 2005).

When it comes to managing patients and making decisions about patient care, it is also very important to understand the regulations of billing services and how they relate to the collaborative relationship between hospitalist physicians and hospitalist NPs. In hospital settings, the hospitalist NP can bill for patient services independently or via the shared/split method. This is determined by billing regulations by each state and hospital organization, as well as the degrees of physician supervision within the collaborative domain (Pohlig, 2013). In many states, NPs can manage patients independently with the collaborating physician who does not have to be on-site of clinical care (Butcher, 2017). With this model, the collaborating physician must be available by either phone or pager with an agreement set forth by the supervisory/collaborative agreement established by that hospital organization. A physician co-signature is not required on clinical notes and orders documented by the NP, including orders for consulting other specialty services. Medicare and some commercial insurances reimburse these services at 85% of the allowable physician rate (Pohlig, 2013).

A shared/split method contains other stipulations when it comes to hospitalist NPs referring patients to palliative care. A shared/split visit involving a NP is one in which five things must be present: 1) two providers, attending physician and a NP, from the same group perform the same service to a patient on the same calendar day, 2) a contractual/collaborative agreement must exist between the attending physician and the NP, 3) patient encounters from the two providers are allowed to be combined and reported under one of the providers' names (usually the physician for 100% insurance reimbursement), 4) attending physician and NP must document the patient encounter separately with the documentation linked, and 5) attending physician and the NP must work for the same employer (Magdic, 2006; Pohlig, 2011). A key component of the shared/split model is that the service must be within the NP's scope of practice, and that documentation of the patient encounter must comprise all or some portion of the patient's history, physical exam, or clinical decision making. The attending physician must also document his/her involvement in the patient's care, as well an agreement with the NP's documentation regarding the patient encounter (Stantz, 2013). In the case of hospitalist NPs referring patients to palliative care under the shared/split method, the supervising/collaborative hospitalist physician must be in agreement with this in order for the referral to be initiated. In summary, the collaborative relationship with hospitalist physicians, as well as the type of patient billing method utilized, could impact the decisions of hospitalist NPs related to referring patients to palliative care.

Attitudes and Knowledge in the Decision to Refer to Palliative Care

Attitudes towards and knowledge of palliative care play key roles in hospital healthcare providers referring their patients. One study involving 74 hospital physicians of multiple disciplines, who did and did not refer to palliative care, showed that physicians were more likely to disagree that a palliative care specialist was best to render palliative care services to their patients and that the patients' care was not enhanced with palliative care. The physicians felt as though they were equally qualified to take care of their patients in the same manner as a palliative care specialist. In a descriptive study of 170 hospital lung cancer specialists, 26% had negative attitudes towards palliative care that led to fewer palliative care referrals for lung cancer patients. Alternatively, some hospital physicians have reported favorable attitudes towards palliative care with three studies reporting that hospital physicians of varying specialties have referred their patients to palliative care for goals of care clarification and symptom management (Fenstad et al., 2014; Karlekar et al., 2014; Snow et al., 2009).

Some studies have shown that primary care providers, cardiologists, pulmonologists, and oncologists have not referred their patients to palliative care due to their misperceptions that palliative care has a limited scope and is only needed for those patients who are dying (Enguidanos et al., 2009). Some hospital physicians misunderstand the goals of palliative care. In a study by Fenstad et al. (2014), 43% of physicians indicated that feeling as though they were "giving up hope" on their patients was a barrier to referral. This was mainly due to physicians' inaccurate understanding of the goals of palliative care (with possibly thinking it is "giving up hope" or equivalent to hospice services). The term "palliative" has been also viewed negatively by physicians, thus leading to decreased referrals. About 4% of hospital physicians of varying specialties at New York Presbyterian Hospital indicated that the stigma of the word "palliative" led them to have a negative attitude, and thus led to not refer (Snow et al., 2009).

In a mixed-methods study of hospital medicine physicians (N = 79) who managed pulmonary hypertension patients, 67% (pulmonologists) of them cited that "palliative" had a negative connotation and that contributed to their not referring to palliative care (Fenstad, 2014). Lastly, in a descriptive study of 74 physicians, half did not refer to palliative care due to their unawareness of the existing palliative care team at their hospital (Snow et al., 2009). Both attitude towards and knowledge of palliative care are important when it comes to hospital physicians referring patients to palliative care. No studies have examined NP's attitudes towards and knowledge about palliative care.

Pressure from Administrative Sources and the Decision to Refer to Palliative Care

Hospital healthcare providers may refer patients to palliative care due to the pressure of reducing hospital length of stay (LOS). With the beginning of Medicare's prospective payment system (PPS) in 1983, which pays hospitals a fixed price per admission diagnosis, U.S. hospitals have been financially motivated to reduce inpatient LOS (Gyrd-Hansen, Olsen, & Sorensen, 2012). Inpatient hospital LOS has been widely used as an indicator of hospital performance and efficiency of the hospital delivery process (Siciliani, Spivey, & Street, 2012). In the study by Smith et al. (2012), 59% of the 155 lung cancer physicians in the hospital setting referred their patients to palliative care due to the need to decrease LOS, indicating that this is an important consideration in the decision to refer.

Perceived Behavioral Control of Palliative Care Referrals

Perceived behavioral control is the perceived ease or difficulty in performing an action. Factors related to perceived control of referring to palliative care are barriers to palliative care referral, facilitators to palliative care referral, and self-efficacy in having end of life discussions with patients and families.

Barriers to making palliative care referrals. **S**pecific barriers are major contributors known to impede physicians from referring their patients to palliative care within the hospital setting. In studies, physicians cited that patients and patients' families are huge barriers to when it comes to initiating a palliative care referral, mainly due to their having unrealistic prognosis expectations and not desiring these services (Enguidanos et al., 2009; Fenstad et al., 2014; Snow et al., 2009).

Some physicians may interfere with palliative care referrals. Oncologists caring for hospitalized patients were reluctant to refer their cancer patients to palliative care because of persistent conceptions of palliative care as an alternative philosophy of care incompatible with cancer therapy, a predominant belief that providing palliative care is an integral part of the oncologist's role, and a lack of knowledge about locally available palliative care services (Schenker, Tiver, Hong, & White, 2012; Smith et al., 2012). Lack of knowledge on how to access the palliative care team and the unavailability of palliative care services after normal business hours have led to challenges to palliative care referrals by physicians practicing in hospital settings (Enguidanos et al., 2009; Kavalieratos et al., 2014). In summary, the research has shown that barriers hinder hospital physicians from referring patients to palliative care consultation teams. However, no research has examined barriers to NPs referring patients to palliative care.

Facilitators of palliative care referrals. Needing help for patients has been identified as a facilitator of hospital palliative care referrals. Results of studies showed that patients were referred to palliative care when they were not improving, needed goals of care established, had poor prognoses, and had failed to progress during a hospital stay (Fenstad et al., 2014; Tilden, Williams, & Tucker, 2009). In two studies, 19 of the 79 (25%) physicians (Fenstad et al., 2014) and nine trauma surgeons (Tilden et al., 2009) revealed that the need for managing pain for their hospitalized patients was a reason that they initiated a referral to the palliative care team.

Lack of time by physicians for patient discussions has also been associated with referring patients to palliative care. Hospital healthcare providers are under pressure to maximize productivity within the hospital setting. Benchmark recommendations for U.S. hospitalist workload in the past ranged from 10 to 15 patient encounters per day (Elliott, Young, Brice, Aguiar, & Kolm, 2014). However, in a recent national survey, 40% of hospitalists reported exceeding their perception of a safe patient workload at least monthly. This, in turn, led to delays in care and poor communication between hospitalists and patients. High workloads contributed to a reduction in hospitalists' abilities to fully discuss the plan of care with patients and families (Michtalik, Yeh, Pronovost, & Brotman, 2013). In the Smith et al. (2012) study, of those who referred greater than 25% of their patients to palliative care, they did so as a result of assuming that palliative care specialists had more time than they did to discuss complex issues with patients and patients' families. It is reasonable to assume that the workload of hospitalists limits their time for discussions with patients and families leading to increased opportunities to refer to palliative care.

The use of automatic triggers is also shown as a facilitator of palliative care referrals. Automatic triggers focus on either a population of patient (i.e., patients with metastatic cancer) or clinical characteristics (i.e., length of stay, age with comorbidities) and are sometimes used at hospitals as a basis for the initiation of a palliative care consultation (Temel et al., 2010). They assist with no longer needing to wait for a healthcare provider to refer patients to palliative care (Weismann & Meier, 2011). With automatic triggers for palliative care consultations, the process of identifying patients in need of palliative care services is made standardized and more objective and not dependent upon a healthcare provider's subjective decision of whether or not to refer to palliative care (Chai, 2017). Several factors have been identified that facilitate hospital physicians referring patients to palliative care, but no studies have examined facilitators for NPs referring patients to palliative care.

Self-efficacy with end of life discussions. Research has shown that one barrier to timely referral of patients to hospital palliative care consultation teams has been related to healthcare providers either avoiding uncomfortable conversations about death and dying or not engaging in conversations with patients about their serious illnesses and prognoses (Broom, Kirby, Good, Wootton, & Adams, 2012; Callaway, 2012).

The literature suggests that many healthcare providers in the hospital setting are not confident concerning conversations about serious illness, giving bad news to patients, and discussing end of life issues. In a large pediatric U.S. hospital, 104 pediatric medical residents participated in a cross-sectional study to examine pediatric residents' attitudes about communication skills with difficult discussions related to end of life, serious illness, and giving bad news. Results indicated that: a) only 19% were rather/very confident that they had the ability to discuss end of life issues with patients and/or family, b) only 23% were rather/very confident with speaking to children about serious illness, and c) only 27% were rather/very confident with giving bad news about a patient's illness to the patient and family (Rider, Volkan, & Hafler, 2008). In another study involving 50 physicians and 45 NPs and physician assistants about their personal level of confidence in discussing goals of care and end of life issues with heart failure patients, half (52%) hesitated to discuss end of life care. The NPs and the physician assistants cited discomfort with the conversation, concern about the perception of patient/family being negative about the conversation, and fear of destroying patients' hope (Dunlay et al., 2015). Hospital healthcare providers' lack of confidence with difficult conversations about care may result in fewer discussions about palliative care and lead to missed opportunities for referral to palliative care services. Confidence, or self-efficacy, in having end of life discussions with patients and families could influence a hospital healthcare provider’s referral to palliative care. The delivery of quality health care requires effective provider-patient communication about aspects of care. Due to the need to possibly address end of life issues with some hospitalized patients before making a palliative care referral, lack of confidence in this arena may result in fewer referrals to palliative care. Research on NPs’ self-efficacy for palliative care referral and discussions about end of life is limited.

Theory of Planned Behavior Use in Research

The TPB has been used in a number of healthcare studies to gain more clarity of the clinical practices of healthcare workers. A systematic review of the TPB showed that it is very helpful in explaining healthcare professionals’ behaviors and intentions to wearing gloves (Godin, Belanger-Gravel, Eccles, & Grimshaw, 2008). The TPB also significantly predicted pharmacists’ asthma counseling behavior with children and their parents and nurses’ intention to provide support to their patients (Pradel, Obeidat, & Tsoukleris, 2007; Sauls, 2007). To this date, the TPB has been used a few times to predict the referral practices of physicians. In one exploratory, cross-sectional study by Kam et al. (2012), the TPB was used to describe oncology professionals’ (N = 72) (73.6% nurses and 19.4% physicians) patterns of referral to existing community and psychological support services. The TPB variables explained 51% of the variance in the outcome of *intention to refer*. Furthermore, another exploratory, cross-sectional study examined the utility of the TPB to explain the intention of Iranian family physicians to reduce the referral rate of patients with respiratory diseases to medical specialists. A stepwise regression with direct measures from the TPB variables explained 35% of the intention, with perceived behavioral control being the strongest predictor (Mohaghegh et al., 2014). As noted, the TPB has been used to enhance the insight on the intentions and behaviors of healthcare workers.

Summary and Gaps in Literature

The review of literature showed that many factors influenced healthcare providers' palliative care referral practices. Hospital medicine programs, the primary specialty domain for this study, are healthcare's fastest growing specialty in the U.S., with at least 60% of hospitals employing hospital medicine providers (physicians, NPs, and physician assistants). Providers on hospital medicine teams are situated to identify when a patient's illness warrants the need for palliative care referral. NPs on hospital medicine teams have an increased presence, oversee the management of many patients during their workdays, and contribute significantly due to the varying roles they serve. Their collaborative relationships and regulatory practices around generating revenue for patient encounters within the hospital medicine program could possibly influence their palliative care referral practices.

The types of study participants, research design, and instrumentation in the existing research about referring patients to palliative care led to the need for this study. Most of the studies within the hospital setting of referring patients to palliative care have been focused on physician participants. As discussed earlier in the paper, the role of the hospitalist NP is integral as related to seriously ill, hospitalized patients being referred to palliative care. After an exhaustive search of the existing literature, there were no identified studies related to acute care NPs in general or hospitalist NPs referring patients to hospital palliative care consultation teams. To address these gaps in knowledge, research was needed in evaluating the factors that affect hospitalist NPs referring patients to palliative care.

The research design in most of the existing studies of referring patients to palliative care were either qualitative, mixed methods, exploratory, or descriptive in nature. Most studies have reported only descriptive data. Few studies have used more sophisticated analytical techniques to identify unique predictors for referral to palliative care. Those studies that incorporated quantitative analyses included surveys that were developed by the researchers without evidence of reliability and validity. No studies were identified that utilized instruments with confirmed psychometrics, were driven by theory, or evaluated the palliative care referral practices of healthcare providers in hospital medicine. The existing scientific evidence related to factors influencing palliative care utilization by other physicians practicing in hospitals served as an important platform to design a study specifically targeted to hospitalist NPs. Identifying facilitators, barriers, and self-efficacy related to confidence with end of life conversations that influence hospitalist NPs referring to palliative care will assist in improving the quality of life of seriously ill patients, enhancing palliative care education and training programs for NPs, and providing a foundation for future studies.

CHAPTER III

METHODS

This chapter presents the research design that was used for conducting the study and is organized as follows: research design, sample, sample size, recruitment settings, measures, recruitment procedure, data collection procedures, validities and reliabilities of the scales, data analysis plan, and protection of human subjects.

Research Design

Design

A non-experimental, cross-sectional, predictive correlational research design was used to examine the relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussions, history of referral, and referring to palliative care among NPs in hospital medicine. Correlational research involved the investigation of relationships between or among two or more variables. A predictive correlational design was used since the study investigated relationships among variables without the manipulation of the variables (Grove et al., 2013). The components of the PBC that were measured are barriers to referring to palliative care, facilitators to referring to palliative care, and self-efficacy in confidence with end of life conversations. The population of interest was NPs working in hospital medicine departments within hospital settings. Data were collected using online surveys. Hypotheses were tested, and the relationships among the independent variables were evaluated for their influence on participants' intent and referral to palliative care.

Sample

A non-random sample was used for this study. Convenience sampling is commonly used in research when either an unusual or a highly specific group is being studied (LoBiondo-Wood & Haber, 2014). For this study, the specific targeted participants were NPs working within hospital medicine in a hospital setting. NPs within hospital medicine departments in academic, urban, and community hospitals in the United States who met the inclusion criteria were recruited. Simple random sampling was not feasible for this study. A list of all NPs who work in hospital medicine did not exist at the time of this study.

The NPs who meet the following criteria were invited to participate in this study. The inclusion criteria were:

NPs participating in this study must:

- Hold a certification as a NP
- Work as a hospital medicine NP employed by a hospital
- Have worked for current employer for at least 3 months
- Be employed full-time or part-time
- Work > 50% of the time in a clinical role
- Primarily manage patients in the medical-surgical or emergency room areas of the hospital setting
- Have the ability to read and write English

NPs that were excluded from participating were those:

- Functioning primarily in a management role within the hospital medicine department > 75% of the time
- Functioning as consultants in any specialty area (i.e., within cardiology, nephrology, neurology, etc.)
- Employed only in an outpatient healthcare setting
- Practicing in a palliative care service or setting

Sample Size

A power analysis was calculated using a-priori sample size calculator for a multiple regression model (Free Statistics Calculators, 2016). Using a medium effect size of $R^2 = 0.15$, a statistical power level of 0.8 with 3 predictor variables, and the probability level of 0.05, a minimum of 76 participants was estimated as needed for this study. A total of 76 participants were enrolled with all of them completing the all surveys.

Recruitment Settings

The study participants were recruited from the following sources in Table 2.

Table 2

Sources for Ongoing Recruitment of Study Participants

Source	**Details**	**Strategy**
Hospitals	• Hospitals within the Southeastern United States that employ NPs within hospital medicine departments	• Emailing flyer in Appendix A to administrators of hospital medicine departments
Varying Professional Organizations (to either purchase mailing listserv or complete application for distribution of any information allowed regarding recruiting for the study)	• Society of Hospital Medicine • American Association of NPs • United Advance Practice Registered Nurses of Georgia	• Sending an online or paper (via postal mail) announcement as shown in Appendix B
Online Forums	• AANP (American Association of NPs) Network for Research • STTI (Sigma Theta Tau International) General Forum	• Sending either an online announcement or postal mail announcement as shown in Appendix B
Online LinkedIn Groups	• NP Group • Advance for NP's & PA's	• Sending an online announcement as shown in Appendix B

Measures

All instruments are described first follow by the validity and reliability testing of the instruments.

Outcome Variables

History of referral to palliative care. This is defined at the historical nature of referring patients to palliative care. This was measured with an investigator-developed three item instrument, Palliative Care Referral History Survey, that emphasized the historical nature of referring to palliative care. The participants were given three questions: 1) *Think back to the patients assigned to you during the last three months. What percentage of those patients did you care for that could have benefitted from a palliative care referral?*, 2) *Of these in question 1, what percentage did you actually refer to the palliative care team?*, and 3) *As related to question 2, why did you refer or not refer?* The participants answered with entering a number (0 – 100) that reflected the percentage amount on the first two questions and with an open response on the third question (see Appendix C). The response for the items yielded two separate percentage scores, with possible total scores of 0 – 100 for each. These percentage scores reflected either the hospital medicine NP having a lesser degree (lower scores) or higher degree (higher scores) to having recognized patients that could have benefitted from a palliative care referral and having actually referred to palliative care during the previous 3 months. All open responses were evaluated as well for the reasoning of why he/she did or did not refer to palliative care. History of referring to palliative care was then examined by exploring its association with the elements of facilitators to referring to palliative care, barriers to referring to palliative care, and self-efficacy with end of life discussions.

Referral to palliative care. The second outcome variable measured was the actual behavior of referring to palliative care and consisted of an investigator-developed three item instrument, Palliative Care Referral Case Study Survey. The participants were given three case studies about hospitalized patients that meet the criteria to be referred to palliative care. After reading each case study, the participants were given two questions: 1) *Will you refer this patient to the palliative care consultation team*?, and 2) *Why or why not?* For question one, the participants had to choose one of the following answers from a two - point scale: 0 = “No” or 1 = “Yes”. They also answered with an open response for the second question (see Appendix C). Scores reflected the hospital medicine NP either not referring to palliative care (0) or referring to palliative care (1). All open responses were evaluated as well for the reasoning of why he/she did or did not refer to palliative care. Referring to palliative care was then examined by exploring its association with the elements of facilitators to referring to palliative care, barriers to referring to palliative care, and self-efficacy with end of life discussions.

Predictor Variables

Facilitators and barriers to referring to palliative care. The facilitators and barriers to referring to palliative care were measured using one question from the Health Care Provider Questionnaire Version 2.1 E by Smith et al. (2011). This questionnaire was originally designed to identify factors influencing the decisions of physicians of lung cancer patients to refer to palliative care. Question 14, consisting of a total of 17 items (labeled letter “a” through “q”), explored the physicians’ views about referral of their patients to a palliative care specialist. The introductory statement was the following: “*The following items explore your views about referral of patients with serious illness to a palliative care specialist. Please indicate your level of agreement with each of these statements*”. Eight items (b, c, g, i, k, m, p, and q) with the stem of “I am inclined to refer….” related to what would facilitate referring a patient to a palliative care specialist. Nine items (a, d, e, f, h, j, l, n, and o) with the stem of “I hesitate to refer….” and “I don’t need to refer….” related to what would be a barrier to referring a patient to a palliative care specialist. Response options for these items were on a Likert scale from 1 – 4 (strongly agree, agree, disagree, strongly disagree). Psychometrics were not performed on the original survey when it was used in research by Smith et al (2011). For this study, the items in question 14 were modified in the following manner:

- introduction statement to question 14: the words “lung cancer” replaced with serious illness
- item a: the words “lung cancer” replaced with “serious illness”
- item e: the words “lung cancer physician” replaced with “attending healthcare team”
- item j: the words “lung cancer prognosis’ replaced with “prognosis related to serious illness”
- item l: original question deleted and replaced with *I am hesitant to refer if I have not discussed with the collaboration/supervising physician*.
- item n: the words “on an outpatient basis” replaced with “when I need them”

- item p: the words “advanced disease” replaced with “serious illnesses/poor prognoses”

Permission from the developer of the Health Care Provider Questionnaire Version 2.1 E was granted for the use of the original items and the modification of those items listed above for this study (Appendix D). Therefore, a final survey to assess the facilitators and the barriers to referring to palliative care, Facilitators and Barriers to Palliative Care Referral Survey, consisted of 17 items (see Appendix C). Eight items (b, c, g, i, k, l, o, and p) and represented facilitators to referral. Nine items (a, d, e, f, h, j, m, n, and q) represented barriers to referral. The same introductory statement and Likert scale from 1 – 4 (strongly agree, somewhat agree, disagree, strongly disagree) from the original survey were used for the items in the final survey for this research. Total scores were computed by summing the 17 items with possible total scores of 8 – 32 (facilitators to referral) and 9 – 36 (barriers to referral). Scores reflected the hospital medicine NPs’ either increased inclination to refer or increased hesitancy to refer.

Self-efficacy for confidence with end of life discussions. The self-efficacy for confidence in end of life discussions was measured by using domain I of a larger survey, Palliative Medicine Comfort - Confidence Survey. This survey was originally designed to measure end of life care competencies and concerns of physician trainees (Weissman, Ambuel, Norton, Wang-Cheng, & Schiedermayer, 1998). The introduction statement for the six Palliative Medicine Comfort – Confidence Survey questions is the following: *Please rank your degree of competence with the following patient-family interactions using the following scale.* Response options for these questions were on a Likert scale from 1 – 4 (1 – need further basic instruction, 2 – competent to perform with close supervision/coaching, 3 – competent to perform with minimal supervision, and 4 – competent to perform independently). The questions related to conducting a family conference, giving bad news, discussing hospice, etc. An example of the first item is the following: *Conducting a family conference to discuss important end of life decisions*. According to the developer of the instrument, psychometrics had never been performed to assess its validity and reliability. For this study, the survey was modified in the following manner:

- Questions 4: removed the words “home hospice” so as the question read *Discussing palliative care referral*
- add one question: question 7 added and read *Discussing advance care planning*
- Response scale: Changing to *1 – Not at all confident, 2 – Slightly confident, 3 – Moderately confident, and 4 – Very confident.*

Permission from the developer of the Palliative Care Comfort – Confidence Survey was granted for the use of the original items and the modification of those items listed above to complement this study (Appendix D). Therefore, a final survey to assess the self-efficacy for confidence in end of life conversations, Self – Assessment with End – of – Life Discussions, consisted of 7 questions with the modifications as above (see Appendix C). Even though the introductory statement and the Likert scale (from 1 – 4) from the original survey remained the same, the response items changed to the following in the final survey for this research: 1 – Not at all confident, 2 – slightly confident, 3 – Moderately confident, and 4 – Very confident). Total scores were computed by summing the 7 items with possible total scores of 7 – 28. Scores reflected either the hospital medicine NPs having less (lower scores) or more (higher scores) confidence with end of life discussions with patients and families. Please refer to Table 3 for a summary of the instruments to be used in this study.

Table 3

Instruments for Palliative Care Referral Behavior among NPs in Hospital Medicine Referring to Palliative Care

Variables	**Instruments**	**# of Items & Scoring**
Outcome Variable ➢ History of Referral to Palliative Care	Palliative Care Referral History Survey	• 3 items • Continuous scale • Scoring (items # 1 and # 2): 0 - 100 • Total Score Range (items # 1 and # 2): 0 – 100 • One open-ended question (item # 3) asking why patients were/were not referred • Lower scores reflect lesser degree to having recognized patients that could have benefitted from a palliative care referral and having actually referred. • Higher scores reflect higher degree to having recognized patients that could have benefitted from a palliative care referral and having actually referred. • All open responses were evaluated for referring/not referring rationalizations.

(Continues)

Table 3 (Continued)

Variables	**Instruments**	**# of Items & Scoring**
Outcome Variable ➢ Referral to Palliative Care	Palliative Care Referral Case Study Survey	• 3 items (case studies) • 2 -point scale • Scoring: 0 – No; 1 – Yes • Total Score Range: 0 or 1 • 0 = reflects not referring; 1 = reflects referring • One open-ended question per case study asking why was referring or not referring chosen. • All open responses were evaluated for referring/not referring rationalizations.
Predictor Variable ➢ Facilitators and Barriers to Referring to Palliative Care	Facilitators and Barriers to Palliative Care Referral Survey	• 17 items • Likert Scale • Scoring: 1 – Strongly Agree; 2 – Somewhat Agree; 3 – Disagree; 4 – Strongly Disagree • Total Score Range: 8 – 32 (Facilitators) & 9 – 36 (Barriers) • Reversed scored so that higher scores reflected higher barriers to referral and higher facilitators to referral

(Continues)

Table 3 (Continued)

Variables	**Instruments**	**# of Items & Scoring**
Predictor Variable ➢ Self-Efficacy with End of Life Discussions	Self-Assessment with End-Of-Life Discussions	• 7 items • Likert Scale • Scoring: 1 – Not at all confident; 2 – Slightly confident; 3 – Moderately confident; 4 – Very confident • Total Score Range: 7 – 28 • Higher scores reflect more confidence in end of life discussions with patients and families

Demographic Information

Socio-demographic background of the participants was assessed using an investigator-developed demographic form. The demographic form included questions concerning: gender, race, age, length of time as a NP, in general and in hospital medicine, length of time with current employer, location of current employer (state in the U.S.), hospital type and size, and employment status (full time versus part time). Semi-structured and open-ended questions related specifically to their palliative care knowledge, training, and experiences prior to this study were used on the demographic form as well. For example: a) Have you had any formal palliative care training? (Yes or

No); b) If you have had any formal palliative care training, explain the type and length of training (participant to narratively write in answer); c) Have you had any previous employment at a hospital that had a palliative care consult service? (Yes or No); d) If you have had any previous employment at a hospital that had a palliative care consult service, how long ago? (< 1 year; 1 – 5 years; > 5 years). Please refer to Appendix G to see the demographic form that was used in this study.

Procedures

The approval for this study was obtained from the Institutional Review Board (IRB) at Georgia State University.

Validity and Reliability of Instruments: Pre-Data Collection

Polit and Beck (2012) define the validity of a questionnaire as the degree in which the instrument measures what it is intended to measure. The questionnaire should adequately address all aspects of the issues being studied. Face validity is the verification that the instrument appears to measure the construct it is supposed to measure (Grove, Burns, & Gray, 2013). Content validity examines the extent to which the instruments being used include all the elements relevant to the construct being measured (Grove et al., 2013). Both face validity and content validity of the revised survey instruments were evaluated in order to determine how well the questions reflected the concepts being studied and that the scope of the questions were adequate.

Reliability refers to the consistency of the measures yielding the same results on repeated measures (LoBiondo-Wood & Haber, 2014). Test- retest reliability assesses the stability of an instrument by correlating the scores obtained on two administrations.

Internal consistency testing “examines the extent to which all the items in the instrument consistently measure a concept” (Grove et al., 2013, p. 391). Internal consistency reliability of the revised survey instruments was assessed using Cronbach’s alpha reliability coefficient and is the most commonly used test to determine the internal consistency of an instrument, with the value of this coefficient ranging from zero (low reliability) to 1.0 (high reliability) (Heale & Twycross, 2015). According to LoBiondo-Wood and Haber (2014), a research instrument is considered reliable with a reliability coefficient of .70 or above. A general rule is that a Cronbach alpha of .60 to .70 indicates an acceptable level of reliability (Hulin, Netemeyer, & Cudeck, 2001; Ursachi, Horodnic, & Zait, 2015), and an alpha greater than or equal to .60 is regarded as acceptable for new instruments (Alotaibi & Youssef, 2013; Ware et al., 1980).

Prior to the use in the study, the instruments were evaluated for content validity, face validity, and test-retest reliability. The principal investigator developed paper surveys asking subject matter experts to assess each item on the instruments for relevancy and clarity (see Appendix F). A panel of four subject matter experts from Georgia and Tennessee (two palliative care physicians, one palliative care NP, and a doctorally prepared nurse with an expertise in measurement) reviewed the instruments and rated the items on relevance and clarity. They were asked to rank the items on all of the instruments for both relevance to the topic (1 – not relevant, 2 – somewhat relevant, 3 – very relevant, 4 – completely relevant) and clarity (1 – very unclear; needs to be completely revised, 2 – fairly unclear; needs to be revised quite a bit, 3 – fairly clear; needs to be only minimally revised, 4 – completely clear; no revisions are needed) (Polit, Beck, & Owen, 2007). Once all subject matter experts submitted their ratings, the Content Validity Index (CVI) for relevancy and clarity were calculated for each item. CVI for each scale item was the proportion of experts who rated the item as a 3 or 4 on a 4 – point scale.

Items that received a rating of 3 or 4 by the experts on both relevance and clarity by a minimum of 80% were included on the final survey instruments. Item revisions were not recommended. See Appendix F. All scaled items scored at 1.00 for relevancy and clarity. This suggested good overall content validity. It was decided that all items would be included on the final survey instruments.

Following content validity evaluation, the instruments were pilot-tested with eight hospital medicine NPs to evaluate them for internal consistency and test-retest reliability. The instruments were administered to them twice within a two-week time frame (administered approximately 14 days after they initially completed them). These eight hospital medicine NPs were employed within a hospital in Georgia and were not participants within the study. The eight NPs evaluating the instruments received paper copies of the general overview of the purpose of the study, survey instruments, instructions on evaluating the instruments, and instrument rating tools (see Appendix E). The principal investigator developed paper surveys asking each of the eight hospital medicine NPs to assess each instrument to see if it gave the appearance of measuring its intended purpose. At the end of each instrument, the eight NPs were given a question to answer: *Is there anything about this instrument that you would change?* All of the NPs indicated that the Palliative Care Referral History Survey, Palliative Care Case Study

Survey, Facilitators and Barriers to Palliative Care Referral Survey, and the Self-Assessment with End-of-Life Discussions Survey appeared to have measured their purposes with no suggestions of changes for any of the instruments. The test-retest Pearson correlation coefficients for the scales were all statistically significant and had the following ranges: a) .87 -1.00 for facilitators to referring to palliative care scale, b) .75 – 1.00 for barriers to referring to palliative care scale, c) .97 – 1.00 for self-efficacy with end of life discussions, d) .99 for history of referral to palliative care scale, and e) 1.00 for referral to palliative care scale. Since all Pearson correlation coefficients were above 0.7, there was evidence indicating the stability of all the scales. The statistically significant Cronbach alphas for all the scales ranged from .85 – 1.00 and supported the internal consistency of all the scales.

After the instruments for use in the study were finalized with validity and reliability, the student PI developed an electronic survey with the Survey Monkey online platform. The finalized electronic survey was housed on the student PI’s laptop computer. The online survey was also printed in its entirety for those participants who completed paper surveys for the study. The online survey’s welcome screen and the first page of the paper survey included the study’s inclusion and exclusion criteria. Participants were asked to check any of the criteria that applied to them. If no exclusion items were selected, then the participants were directed to the consent form (second screen of online survey or second page of paper survey). After this, the demographic form and survey were completed respectively. If any of the exclusion criteria were checked with the online survey, participants were informed that they did not meet criteria, thanked for their willingness to participate, and then exited from the website. Those NPs receiving the paper survey were instructed in the paper recruitment letter to not move forward with completing the paper survey if they did not meet inclusion criteria standards. The online survey was designed so that the participants could check and change their responses if they desired. Participants could also check and change their responses on the paper survey prior to mailing it back to the student PI.

Data Collection

With the use of recruitment flyers, the participants were recruited using multiple social media platforms (i.e., Facebook, LinkedIn, Instagram), via email listservs, and by mail. As for the recruitment by postal mail, the principal investigator retrieved a confidential list (with names and home addresses only) of 100 NPs employed in hospital medicine from the American Association of NPs. The principal investigator then mailed out an envelope containing a recruitment letter and the paper version of the on-line survey to the 100 NPs. The potential participants from social media who indicated to the study PI that they were interested in participating were given an explanation about the purpose and importance of the study, inclusion criteria, time commitment required, and incentives for participation. The student PI screened for eligibility criteria. Instructions for how to access the survey on-line were also described. The potential participants from postal mail recruitment were also given the phone number and email address of the principal investigator to address any questions that they may have had.

The participants were encouraged to ask any questions regarding the study and the consent. The student PI insured that each participant understood his or her role in the study, confidentiality, and that voluntary withdrawal could occur at any time during the study. A manual data log was kept listing the assigned unique identification (ID) number, name, address, phone number, and email address of each participant agreeing to complete the online and postal mail surveys. This data log was utilized for maintaining a master list of those agreeing to participate and for housing the contact information for the purpose of the distribution of the gasoline cards.

Instructions to access the survey via a web address were included in the information packets, flyers, and emails. Study participants who agreed to take the online survey were instructed that the study survey would be sent over the internet directly to them via a link and to not submit responses unless he or she had read the informed consent form (available after clicking on the link to the survey), located in Appendix H, and agreed to participate. The student PI informed them that their identities would remain anonymous with names or other identifying information not being collected via the online survey platform. The participants who agreed to take the online survey were asked to complete the survey within two weeks of receiving the survey link. The student PI was able to track when the online surveys were completed by the participants' email addresses that were linked to the online surveys. As for the surveys that were mailed out to the 100 NPs, the student PI simply waited for the return of any completed surveys by postal mail. The student PI monitored the completed online and post mail surveys while documenting the assigned unique ID number attached to them. Cross referencing the uniquely assigned ID numbers with the email addresses of the completed surveys was performed. A $10.00 gasoline card, by means of U.S. postal mail, was given to each study participant completing the online and paper surveys.

Data Management Plan

A code book was developed to direct data entry and to ensure systematic and replicable coding of data. The online survey program as well as the postal received completed paper surveys were kept secure. The responses from the online and paper surveys were uploaded into version 26 of the Statistical Package for Social Sciences (SPSS) by the student PI. During data entry, the student PI documented the item codes, variable names, and other changes to the data. All steps taken to recode data were documented. Data consistency was achieved by auditing 10% of the data for accuracy. Electronic copies of the system codes, data, and any other related files were stored on the student PI's password-protected computer system. For the online survey completions, the data files for this study were managed, processed, and stored in a secure environment (student PI's lockable computer system with password in her home office, firewall system in place, power surge protected, and virus/malicious intruder protection) and by controlling access to the digital files with password protection. Additional backup files of the online survey results (on an external USB drive), the manual data log, and the code book were kept in a locked cabinet in the student PI's home office. Online access to the data was password protected. All completed paper surveys were locked in a filing cabinet in a secure environment within the home of the student PI. During data analysis, the data were accessible only by the student PI. All analyses were supervised by both the student PI and the faculty advisor.

Data Analysis

Data from the electronic surveys were uploaded into version 26 of the Statistical Package for Social Sciences (SPSS) by the student PI. The uploaded data were inspected, cleaned, and checked for errors. A Missing Values Analysis (MVA) in SPSS and case mean substitution did not need to be performed due to no missing data existing. Study variables were examined to assess distribution, to identify outlying or extreme observations, and to determine the need for data transformation. Scores on the questionnaires were evaluated for outliers. Cronbach's alpha reliability coefficients were computed for instruments as appropriate. Data analysis of the study variables was initiated with descriptive statistics to characterize the sample and major study variables. To create total scores for the surveys, responses to individual items were summed for analysis. All analyses were performed by setting statistical significance at $p < .05$. Frequencies and percentages were calculated for the categorical data. Prior to performing inferential data analyses, study variables were examined for outliers, influential observations, and assumption violations (linearity, normality, and homoscedasticity). The following statistical analyses were conducted to evaluate the study's hypotheses:

1. Perceived facilitators to referral will be associated with a higher history of referral and a higher number of referrals to palliative care among NPs in hospital medicine. ➔ Pearson's Correlation Coefficient and Point-Biserial Correlation were the proposed statistical analyses. However, since the data deviated from normal distribution, Pearson's Correlation Coefficient was not utilized, and the

non-parametric procedure of Spearman’s Rho was performed instead. Point-Biserial Correlation was utilized as indicated by the study proposal.

2. Perceived barriers to referral will be associated with a lower history of referral and a lower number of referrals to palliative care among NPs in hospital medicine. ➔ Pearson’s Correlation Coefficient and Point-Biserial Correlation were the proposed statistical analyses. However, since the data deviated from normal distribution, Pearson’s Correlation Coefficient was not utilized, and the non-parametric procedure of Spearman’s Rho was performed instead. Point-Biserial Correlation was utilized as indicated by the study proposal.
3. Increased self-efficacy with end of life discussions will be associated with a higher history of referral and a higher number of referrals to palliative care among NPs in hospital medicine. ➔ Pearson’s Correlation Coefficient and Point-Biserial Correlation were the proposed statistical analyses. However, since the data deviated from normal distribution, Pearson’s Correlation Coefficient was not utilized, and the non-parametric procedure of Spearman’s Rho was performed instead. Point-Biserial Correlation was utilized as indicated by the study proposal.

4. Perceived facilitators to referral, perceived barriers to referral, and self – efficacy with end of life discussions will contribute a significant variance in the history of referral to palliative care among NPs in hospital medicine. ➔ Multiple Linear Regression was the proposed statistical analysis, and it was utilized for this study.
5. Perceived facilitators to referral, perceived barriers to referral, and self – efficacy with end of life discussions will contribute a significant variance in the number of referrals to palliative care among NPs in hospital medicine. ➔ Logistic Regression Point-biserial correlations and chi-square analyses were the proposed statistical analyses to examine the relationship between the history of referral and referral to palliative care, and they were utilized for this study.

Means and t-tests were the proposed statistical analyses to compare the NPs in hospital medicine who refer and not refer the patient to palliative care in the case study. However, since the data deviated from normal distribution, the Mann-Whitney U Test was performed instead. Responses from the open-ended questions on the instruments were analyzed with coding by content analysis for thematic development.

Protection of Human Subjects

Data collection did not begin until IRB approval was obtained from Georgia State University. The student PI explained the purpose of the study, overall procedure of the study, and potential risks and benefits of participating in the study to the potential participants. Any questions the potential participants had prior to obtaining electronic or written informed consent were answered by the researcher. All participants were told that their participation was voluntary, and that they could withdraw from the study at any time. Participant involvement took about 15-20 minutes to complete the instruments.

There were no known risks of harm from participation in the study. Providing information about their employer or place of employment may have been concerning to some participants. Participants were assured that their names would not be given to hospital administration. They were also told that they are free to stop the survey at any time or to skip any question for any reason. Confidentiality of the data was assured by the following procedures: a) only the student PI and the faculty advisor had access to the data, b) results were reported only in aggregate/summary statistics, so responses could not be indirectly linked to individuals via unique patterns of demographic or other survey responses, and c) all computer databases were password protected. The online survey results were maintained in a separate location from the manual data log (participant contact information list) and consent forms. The data files, manual data log, and code book for this study were managed, processed, and stored in a secure environment (student PI's lockable, password protected computer system and locked cabinet) in the student PI's home office. The student PI and the faculty advisor were the only individuals with access to the coding information.

Potential Benefits of Proposed Research

Participants received no direct benefit from participating in this study other than the knowledge of their contributions to information about the factors that influence referral to palliative care. With a better understanding of how facilitators, barriers, and confidence with end of life conversations influence referring to palliative care among hospital medicine NPs, the results of the study could aid in designing interventions to improve palliative care referrals for NPs and potentially other providers and assist hospitalized patients in obtaining palliative care services. The results could also bring forth awareness in the area of educating and empowering NPs and other healthcare providers in the areas of confidence and effectiveness in discussing end of life issues with patients and their families. The outcomes of the study can bring more attention to the benefits of palliative care and be helpful in bringing insight to other non-palliative care healthcare providers, including NPs, as related to referring patients to palliative care.

CHAPTER IV

RESULTS

The results of this non-experimental, cross sectional, correlational study of relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussions, and referring to palliative care among NPs in hospital medicine will be presented in this chapter. A description of the sample characteristics, reliabilities of the instruments (post-data collection), findings from the questionnaires, hypothesis testing, and other data analyses are reported.

Description of the Sample

The sample consisted of 76 NPs who worked in hospital medicine within the United States. Due to recruiting on multiple social media platforms (i.e., Facebook, LinkedIn, Instagram) and via email listservs, the inability to calculate the exact number of how many hospital medicine NPs were invited to participate in the study existed and led to the response rate not being able to be calculated. Between January 2019 and January 2020, a total of 76 NPs participated in the study. From the recruitment on the social media platforms, fourteen of the participants answered the surveys electronically via Survey Monkey. The response rate from social media recruitment was unknown. Paper surveys were also mailed out to 100 NPs employed in hospital medicine from an American Association of NPs listserv resulting in 52 of those NPs mailing the completed surveys back to the principal investigator. With that, the response rate from the mailed surveys was 52%. All surveys were completed fully without missing data.

The demographic questionnaire (Appendix G) was completed by each participant after the consent form was signed. There were 71 women and 5 men who participated in the study. Over half of them were of white (Caucasian) race with the overall sample having a mean age of 42 years. The majority of the participants had a master's degree (86.8%), worked in non-academic hospital settings (64.5%), were employed fulltime (85.5%), and typically cared for patients within the adult/geriatric arena (89.5%). Most of their NP specialties were either in the acute care, family, or acute care/family domains. None of them had ever worked in palliative care, and only 19.7% had ever had any formal palliative care training. Moreover, 49% of the participants indicated that their self-awareness that patients could benefit from palliative care services was helpful in referring patients to palliative care. Characteristics of the total sample (N = 76) are in Table 4.

Table 4

Demographic Characteristics of Participants (N = 76)

Variable	M (SD) or n (%)
Gender	
Male	5 (6.60)
Female	71 (93.40)
Race	
White or Caucasian	42 (55.30)
Black or African American	25 (32.90)
Hispanic or Latino	7 (9.20)
Asian or Asian American	2 (2.60)
American Indian or Alaska Native	0 (0.00)
Native Hawaiian or Other Pacific Islander	0 (0.00)
Age	41.82 (9.36)
Highest Level of Education	
Masters	66 (86.80)
Doctorate	10 (13.20)
Years Practicing as Registered Nurse	16.70 (8.94)
Years Practicing as NP	7.39 (5.19)
Years in Practice as Hospital Medicine NP	5.61 (8.59)
Years Employed at Current Hospital in Hospital Medicine	4.07 (4.87)

(Continues)

Table 4 (Continued)

Variable	M (SD) or n (%)
Type of NP	
Pediatric	1 (1.30)
Acute Care	26 (34.20)
Family	17 (22.40)
Adult-Gerontology	0 (0.00)
Adult Primary Care	0 (0.00)
Adult-Gerontology + Acute Care	7 (9.20)
Family + Acute Care	25 (32.90)
Location of Current Employer (U.S. Regions)	
West	5 (6.80)
Southwest	3 (3.90)
Midwest	22 (28.80)
Northeast	15 (19.60)
Southeast	31 (41.00)
Type of Hospital Employed	
Academic	27 (35.5)
Non-Academic	49 (64.5)
Type of Patients You Typically Care For	
Children/Adolescent Only	0 (0.00)
Adults (non-geriatric) Only	1 (1.30)
Children/Adolescents/Adults (non-geriatric) Only	7 (9.20)
Geriatrics Only	0 (0.00)
Adults/Geriatrics Only	68 (89.50)

(Continues)

Table 4 (Continued)

Variable	M (SD) or n (%)
Hospital Bed Size Where Employed	
Less Than 100	4 (5.30)
100 – 199	10 (13.20)
200 – 299	34 (44.70)
300 – 399	21 (27.60)
400 – 499	6 (7.90)
500 or More	1 (1.30)
Employment Status	
Full Time	65 (85.50)
Part Time	11 (14.50)
Ever worked in palliative medicine?	
Yes	0 (0.00)
No	76 (100.00)
Ever had any formal palliative care training?	
Yes	15 (19.70)
No	61 (80.30)
Type of formal palliative care training	
N/A: No formal palliative care training	62 (81.60)
Part of academic curriculum during NP program of study	5 (6.60)
Continuing education (conference and/or independent study)	9 (11.80)
Other	0 (0.00)

(Continues)

Table 4 (Continued)

Variable	M (SD) or n (%)
Length of formal palliative care training	
N/A: No formal palliative care training	62 (81.60)
1 Day lecture: 1 topic w/past academic lecture	2 (2.60)
1 Academic Session: 1 academic course	2 (2.60)
Academic track (in NP program or other)	1 (1.30)
Less than 5 hours: >/= 1 separate continuing education sessions	9 (11.80)
Previous Employment at Hospital with Palliative Care Service	
Yes	38 (50.00)
No	38 (50.00)
Length of Time from Previous Employer with Palliative Care	
Less than 1 year	5 (6.60)
1 – 5 years	13 (17.10)
Greater than 5 years	20 (26.30)
N/A: Never worked with previous employer with palliative care	38 (50.00)
Availability of palliative care at current hospital?	
24/7 – In Person	13 (17.10)
24/7 – Hybrid of in Person & By Phone (after hours/WE)	28 (36.80)
Monday – Friday Day Shift Only – In Person	35 (46.10)
Other	0 (0.00)

(*Continues*)

Table 4 (Continued)

Variable	M (SD) or n (%)
Number of patients referred to palliative care during average week?	4.58 (3.180)
What/who ***helps*** you to refer patients to palliative care?	
Automatic Triggers/Pre-established criteria	1 (1.30)
Self-Awareness that patient could benefit from referral	49 (64.50)
Multidisciplinary team members, patients, and/or patients' families	26 (34.20)
What/who prevents you from referring patients to palliative care?	
Not aware of role of palliative care consultation teams	2 (2.60)
Lack of availability of palliative care consultation team	22 (28.90)
Multidisciplinary team members, patients, and/or patients' families	52 (68.40)

Results of Data Analysis

The following reports the results of the measurement tools used in the study. One measurement tool was used to collect data about the dependent variable, and four measurement tools were used for data collection on the predictor variables. The items incorporated within the Palliative Care Referral Case Study Survey were designed to determine the dependent variable of referral to palliative care (behavior). Moreover, the items on the Palliative Care Referral History Survey, Facilitators And Barriers To Referring To Palliative Care Referral Survey, and Self-Assessment With End-Of-Life Discussions Survey were designed to determine the predictors of intention (history of referral to palliative care) and perceived behavioral control (facilitators to referring to palliative care, barriers to referring to palliative care, and self-efficacy with end – of – life discussions) respectively. Relationships among all of the variables of interest were also determined.

Reliabilities of the Instruments: Post - Data Collection

The history of referral to palliative care scale (as denoted by the Palliative Care Referral History Survey) prompted the participants to answer the first two questions with percentage numbers in regard to their palliative care referral of patients within the last three previous months, followed by two open-ended questions of why or why not did the referrals take place. Three scales (facilitators to palliative care referral, barriers to palliative care referral, and self-efficacy of end of life discussions) contained Likert-type response items. The facilitators to palliative care referral scale was comprised of questions 2, 3, 7, 9, 11, 12, 15, and 16 of the Facilitators and Barriers to Referring to Palliative Care Survey. The barriers to palliative care referral scale was comprised of questions 1, 4, 5, 6, 8, 10, 13, 14, and 17 of the Facilitators and Barriers to Referring to Palliative Care Survey. The self-efficacy with end of life discussions scale comprised of its own seven questions with the Self-Assessment with End – of – Life Discussions Survey.

Reliabilities of these four scales were calculated using Cronbach's coefficient alpha (see Table 5). Only the first two questions (ratio level) of the history of referral to palliative care scale were examined for reliability. Questions 3 and 4 of this scale were two open-ended questions that were content coded for thematic analysis. The history of referral to palliative care scale resulted in an overall Cronbach alpha of .69. The barriers to referring to palliative care scale and the facilitators to referring to palliative care scale initially resulted in Cronbach alphas of .59 and .71 respectively. The Cronbach alpha for the self-efficacy in end of life discussions scale was .93. A general rule is that a Cronbach alpha of .70 indicates an acceptable level of reliability (Ursachi, Horodnic, & Zait, 2015; Hulin, Netemeyer, & Cudeck, 2001), and an alpha greater than or equal to .60 is regarded as acceptable for new instruments (Alotaibi & Youssef, 2013; Ware et al., 1980). Based on this, the four scales were further examined for the Item-Total Statistics results. These results were evaluated to assess for items with corrected item-total correlations of less than .20 and whether or not the Cronbach alpha value of the domain would increase if any item was deleted. For the self-efficacy with end of life discussions scale, there were not any items that presented with less than .20 for an item-total correlation or that would increase the domain Cronbach alpha if removed. It was decided to use the self-efficacy with end of life discussion scale in its entirety for the remaining data analyses. However, in order to improve the reliabilities of the barriers to referring to palliative care scale and the facilitators to referring to palliative care scale, the decision was made to remove questions 6 and 12 of the Facilitators and Barriers to Referring to Palliative Care Survey. They both had less than .20 item-total correlation and had the ability to increase the overall Cronbach alpha of both scales if removed. Item 6 was on the barriers to referring to palliative care scale and queried the participants about their hesitancy to refer to palliative care due to being able to address patients' palliative care needs on their own. Item 12 was on the facilitators to referring to palliative care scale and queried the participants about their inclination to refer to palliative care due to the palliative care consultation team being able to help manage patients' emotional symptoms. These item removals led to the revision of the barriers to referring to palliative care scale (decreased from 8 items to 7 items) and the facilitators to referring to palliative care scale (decreased from 9 items to 8 items). Both Cronbach alphas improved to .60 and .75 respectively for the two scales. The revised versions of these two scales were used in the remaining analyses.

For the history of referral to palliative care scale, there were not any items that presented with less than .20 for an item-total correlation or that would increase the domain Cronbach alpha if removed. Additionally, in regard to the history of referral to palliative care scale, calculating one overall reliability coefficient could not be performed due to the scale measuring in both quantitative (ratio level questions) and qualitative (open-ended questions) formats. The decision was made to include all of the items from the history of referral to palliative care scale for the remaining analyses.

Table 5

Reliability of the Scales Measured by Cronbach's Alpha in Theoretical Variables

Scale	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Facilitators to Referring to Palliative Care [a]	.75	.76	7
Barriers to Referring to Palliative Care [b]	.60	.61	8
Self-Efficacy in EOL Discussions [c]	.93	.93	7
History of Referral to Palliative Care [d]	.69	.70	2

Note: EOL = End-of-Life; [a]Facilitators and Barriers to Referring to Palliative Care Survey – Facilitators; [b]Facilitators and Barriers to Referring to Palliative Care Survey – Barriers; [c]Self-Efficacy with End-of-Life Discussions Survey; [d] Palliative Care Referral History Survey (excluding open-ended questions)

Lastly, the referral to palliative care scale utilized the Palliative Care Referral History Survey to query the participants on a dichotomous scale of whether or not (yes/no) they would refer three separate case study patients to palliative care, followed by an open-ended question of why or why not each referral did or did not take place. Only the dichotomous section of the scale underwent reliability testing. Reliability of scales using dichotomous scoring is best evaluated using the Kuder-Richardson 20 method (Di lorio, 2005). The KR-20 reliability coefficient for the dichotomous section of the scale resulted in .43 (Table 6). Due to some alphas being affected by the length of a scale (3 items in this case), it is necessary to examine the matrix of correlations between the individual items for determining reliability (Streiner, 2003). In cases where the scales measure narrower topics (i.e., referring to palliative care in this case), a recommended correlation between .40 to .50 would deem acceptable for reliability (Clark & Watson, 1995; Streiner, 2003). All three of the correlations between the items resulted between .43 to .50 (Table 7). It is noted that each case study scenario was quite different, resulting in decreased relationships that these individual case studies had with each other. As for the open-ended question for each case study requiring the participants to indicate why they did or did not refer the patients to palliative care, all responses were content coded for thematic analysis. Calculating one overall reliability of the palliative care case study referral scale could not be performed due to the scale measuring in both quantitative (dichotomous question) and qualitative (open-ended question) formats. Due to the favorable correlations between the dichotomous items on the scale, the decision was made to retain all of the items from the referral to palliative care scale for the remaining analyses.

Table 6

Reliability of the Scales Measured by Kuder-Richardson 20 for Dichotomous Items in Theoretical Variable of Referral to Palliative Care

Scale	Kuder-Richardson 20 Reliability Coefficient	N of Items
Referral to Palliative Care [a]	.43	3

Note: [a] Palliative Care Referral Case Study Survey

Table 7

Reliability: Inter-Item Correlation Matrix of the Scales Measured by Kuder-Richardson 20 for Theoretical Variable of Referral to Palliative Care

	CS1: Will You Refer?	CS2: Will You Refer?	CS3: Will You Refer?
CS1: Will You Refer? [a]	1.000	.433	.466
CS2: Will You Refer? [a]	.433	1.000	.500
CS3: Will You Refer? [a]	.466	.500	1.000

Note: [a] Palliative Care Referral Case Study Survey

Descriptive Statistics for Major Study Variables

Pre-analysis data screening was conducted prior to statistical analysis. This included screening for errors with data entry, normal distribution, outliers, multicollinearity, and missing data. Normality for all interval/ration level variables was assessed by analyzing skewness, kurtosis, and histograms as outlined by Field (2009). The Shapiro-Wilk and Kolmogorov-Smirnov was conducted to check normality on all theoretical variables. Screening indicated that all variables were not normally distributed.

Concepts of the Theory of Planned Behavior

Descriptive statistics for all variables are reported, including the theoretical concepts, intention (history of referral to palliative care), perceived behavioral control (facilitators to referring to palliative care, barriers to referring to palliative care, and self-efficacy in end of life discussions), and behavior (referral to palliative care) will be presented for the participants who completed the study (N = 76). Intention and perceived behavioral control were predictor variables for the outcome of behavior.

History of Referral to Palliative Care

Participants reported the percent of patients assigned to them during the last three months who could have benefited from a palliative care referral and the percentage of those patients they actually referred to the palliative care team. On average, participants indicated that 44.6 % (range of 1% to 100%) of the patients within the last three months could have benefited from a palliative care referral, and 22.3 % (range of 0% to 60%) of them were actually referred. A percentage for each participant was calculated from the percentage of those patients he/she felt could have benefited from palliative care and the percentage of patients he/she actually referred to palliative care during the last three months. As shown in Table 8, the overall percentage of actual referrals from potential beneficial referrals was 51.6 %. Participants answered two open-ended questions indicating reasons for referring and for not referring to the palliative care team. These responses were analyzed and coded for themes. The most common reasons that the participants referred patients to palliative care during the previous 3 months were recurrent hospitalizations, requests, support needed, symptom management, goals of care, serious illnesses of patients, and end of life discussion. Reasons for not referring to palliative care were resistance, constraints due to limitations of palliative care team, distress in referring, workplace restrictions, palliative care not needed, and time constraints. Tables 9 and 10 present the major themes and examples of data for each theme.

Table 8

Palliative Care Referral History Survey Results (N = 76)

Variable	M % (SD)
During last three months, what percentage of those patients you cared for **could have benefited** from a palliative care referral?	44.6 (20.64)
During last three months, what percentage did you **actually refer** to the palliative care team?	22.3 (16.05)

(*Continues*)

Table 8 (Continued)

Variable	M % (SD)
Overall Percentage of Actual Referrals from Potential Beneficial Referrals	51.6 (32.63)

Table 9

Palliative Care Referral History Survey Results – Themed Responses (N = 76)

Why did you refer?

Recurrent Hospitalizations

> “Multiple E.R. visits for non-emergent complaints.”; “Recurrent hospitalizations for chronic illnesses.”

Requests

> “Family asked.”; “Patients had expressed their wishes in previous admissions.”

Support Needed

> “Family guidance and support”; “Their need of extra support”; “Patient support”

Symptom Management

> “Symptoms”; “Pain control”; “Pain”

Goals of Care

> “Goals of care”; “Goals”

Advanced Care Planning

> “Code status”; “Clarification of code status”; “Completion of POLST (Physician Order of Life Sustaining Treatment)”

(*Continues*)

Table 9 (Continued)

Why did you refer?
Serious Illnesses of Patients
"Serious illness"; "Patients' illnesses serious"; "Chronic debilitating disease process"; "Multiple Co-morbidities"
End of Life Discussions
"End of life discussions"

Table 10

Palliative Care Referral History Survey Results – Themed Responses (N = 76)

Why did you not refer?
Resistance
"Patient declined."; "Patients refused."; "Resistance from family. They think we are trying to kill their loved one."; "Family dynamics; Unwilling to see palliative care team."; "Oncology requested to not consult palliative care."; "Prevention of rounding physician."; "Push back from private attendings."; "IDT [Interdisciplinary Team] members."; "Multidisciplinary team members."
Constraints Due to Limitations of Palliative Care Team
"[Palliative care] Access issues."; "After service hours/weekend."; "Palliative care not staffed when I work."; "Palliative care team not around."; "Unavailability of palliative care team."; "Our Palliative Care Team is small, so we utilize them only for those patients we deem need it most."

(*Continues*)

Table 10 (Continued)

Why did you not refer?

Distress in Referring

> “My discomfort.”; “Uncomfortable referring at times.”; “Uncertainty.”; “Was unsure at times.”; “Do not want patients angry.”

Workplace Restrictions

> “Supervising physician.”; “An MD to MD review/sign out is required to consult palliative care.”

Palliative Care Not Needed

> “Could hand discussions myself”; “Able to have discussions with success with goals of care.”

Time Constraints

> “Time constraints”; “Patient needed to be discharged”; “[Patients] Being discharged”

Facilitators to Referring to Palliative Care

Most participants either strongly agreed or agreed with the facilitators that were listed in the items. The majority of them agreed that the following facilitators inclined them to refer to palliative care: the palliative care team a) has more time to discuss complex issues, b) is able to manage patients’ physical symptoms, c) is helpful in establishing goals of care with patients and families, d) can handle analgesic side effects, and e) deals with patients with serious illnesses/poor prognoses (Table 11).

Table 11

Facilitators to Palliative Care Referral Results, (N = 76)

Survey Questions		**n (%)**			
	M (SD)	***Strongly Disagree***	***Disagree***	***Agree***	***Strongly Agree***
Facilitators*					
Q2: PC Team w/more time to discuss complex issues	3.43 (0.66)	0 (0.0)	7 (9.2)	29 (38.2)	40 (52.6)
Q3: PC Team helpful w/ managing physical symptoms	3.30 (0.54)	1 (1.3)	0 (0.0)	50 (65.8)	25 (32.9)
Q7: PC can help decrease LOS in hospital	2.59 (0.90)	10 (13.2)	22 (28.9)	33 (43.4)	11 (14.5)
Q9: PC Team helpful w/est. goals of care	3.64 (0.48)	0 (0.0)	0 (0.0)	27 (35.5)	49 64.5)
Q11: PC can help address patients' spiritual concerns	2.57 (0.85)	4 (5.3)	39 (51.3)	19 (25.0)	14 (18.4)
Q15: PC can be helpful in managing analgesic side effects	3.28 (0.62)	1 (1.3)	4 (5.3)	44 (57.9)	27 (35.5)
Q16: Patients w/serious illnesses and/or poor prognoses	3.50 (0.53)	0 (0.0)	1 (1.3)	36 (47.7)	39 (51.3)

Note: PC = Palliative Care; LOS = Length of Stay; Q = Question; *Higher scores indicate agreement with facilitators (1 – Strongly Disagree; 2 – Disagree; 3 – Agree; 4 – Strongly Agree)

Barriers to Referring to Palliative Care

Most of the participants either disagreed or strongly disagreed that the following barriers prevented them from referring patients to palliative care: expect less likely to receive disease-modifying treatment, patients/families alarmed by the word “palliative”, role of primary team becomes less important, able to address a patient’s palliative care needs on my own, most patients do not want to discuss prognoses, unless death is imminent, and palliative care not routinely available. There was one item related to the barriers to referring to palliative care in which there was somewhat of an even spread across the Likert-type responses. This item was related to if the NP had not discussed or had approval from the collaborating/supervising physician for referring a patient to palliative care (Table 12).

Table 12

Barriers to Palliative Care Referral Results, (N = 76)

Survey Questions		**n (%)**			
	M (SD)	***Strongly Disagree***	***Disagree***	***Agree***	***Strongly Agree***
Barriers*					
Q1: Expect less likely to receive disease-modifying Tx	1.71 (0.76)	36 (47.4)	26 (34.2)	14 (18.4)	0 (0.0)
Q4: Patients/families alarmed by "palliative"	2.47 (0.99)	12 (15.8)	31 (40.8)	18 (23.7)	15 (19.7)
Q5: Role of primary team becomes less important	1.62 (0.67)	37 (48.7)	31 (40.8)	8 (10.5)	0 (0.0)
Q8: Unless death is imminent	1.26 (0.44)	56 (73.7)	20 (26.3)	0 (0.0)	0 (0.0)
Q10: Most patients do not want to discuss prognoses	2.08 (0.58)	10 (13.2)	50 (65.8)	16 (21.1)	0 (0.0)
Q13: So much uncertainty about a patient's prognosis	2.04 (0.58)	11(14.5)	51 (67.1)	14 (18.4)	0 (0.0)
Q14: PC not routinely available when I need them	1.78 (0.78)	30 (39.5)	36 (47.4)	7 (9.2)	3 (3.9)
Q17: Have not discussed/had approval of collaborating/ supervising MD	2.28 (1.00)	21 (27.6)	22 (28.9)	24 (31.6)	9 (11.8)

Note: PC = Palliative Care; MD = Medical Doctor; Q = Question; Tx = Treatment; *Higher scores indicate agreement with barriers (1 – Strongly Disagree; 2 – Disagree; 3 – Agree; 4 – Strongly Agree)

Self-Efficacy in End of Life Discussions

Participants reported their degree of confidence in varying arenas of end-of-life (EOL) discussions with Likert-type response items, with higher scores indicating higher confidence. Most of the participants reported being either slightly or moderately confident in conducting a family conference to discuss EOL decisions, and 43.4% of the participants were slightly confident with giving bad news to a patient or family member. Discussing do not resuscitate (DNR) orders was cited by the participants with assurances of being moderately confident (32.9%) and very confident (31.6%). Less than half of the participants were slightly confident in discussing palliative care referral (42.1%), a shift in treatment approach from curative to comfort care (44.7%), and treatment withdrawal (46.1%). Lastly, half of the participants were slightly or moderately confident in discussing advance care planning at 34.2% and 32.9% respectively (Table 13).

Table 13

Self-Assessment with End-Of-Life Discussions Survey Results (N = 76)

Survey Questions	***M* (SD)**	**n (%)** ***Not At All Confident***	***Slightly Confident***	***Moderately Confident***	***Very Confident***
Self-Efficacy w/EOL Discussions*					
Q1: Conducting a family conference to discuss EOL decisions	2.38 (0.94)	14 (18.4)	29 (38.2)	23 (30.3)	10 (13.2)
Q2: Giving bad news to a patient or	2.33 (0.97)	15 (19.7)	33 (43.4)	16 (21.1)	12 (15.8)
Q3: Discussing do not resuscitate (DNR) orders	2.87 (0.97)	7 (9.2)	20 (26.3)	25 (32.9)	24 (31.6)
Q4: Discussing palliative care referral	2.57 (0.97)	9 (11.8)	32 (42.1)	18 (23.7)	17 (22.4)
Q5: Discussing a shift in treatment approach from curative to comfort care	2.21 (1.00)	19 (25.0)	34 (44.7)	11 (14.5)	12 (15.8)
Q6: Discussing treatment withdrawal	2.12 (1.01)	22 (28.9)	35 (46.1)	7 (9.2)	12 (15.8)
Q7: Discussing advance care planning	2.71 (0.94)	7 (9.2)	26 (34.2)	25 (32.9)	18 (23.7)

Note: EOL = End of Life; *Higher scores associated with higher confidence (1 – Not at All Confident; 2 – Slightly Confident; 3 – Moderately Confident; 4 – Very Confident)

Referral to Palliative Care

Table 14 displays the results of the three case study scenarios. All patients in the scenarios met the criteria to be referred to palliative care. The majority of the participants indicated that they would refer case study patients 1 (76.3%) and 3 (92.1%) to palliative care. However, for the patient in case study 2, half of the participants indicated that they would refer the patient to palliative care and half did not (Table 14). The reasons stated for the referral decisions were content coded for thematic analysis. The themes are displayed in Tables 15, 16, and 17.

Table 14

Palliative Care Referral Case Study Survey Results (N = 76)

	Referral Decision	**n (%)**
Case Study 1	Yes	58 (76.3)
	No	18 (23.7)
Case Study 2	Yes	38 (50.0)
	No	38 (50.0)
Case Study 3	Yes	70 (92.1)
	No	6 (7.9)

Table 15

Palliative Care Referral Case Study Survey Results – Themes (N = 76)

Reasons for Referral Decision – Case Study 1

Themes of Reasons for Referring

1. Multiple Co-morbidities/Serious Illness Present
2. Address Code Status
3. "Needs It"
4. Family/Healthcare Team Discussion Needed
5. Support (of patient)
6. Goals of Care
7. Family Education of Hemodialysis and Dementia
8. Age of Patient
9. Advance Care Planning

Themes of Reasons for Not Referring

1. Too premature of case to refer
2. Patient's Age
3. Threatens Hope
4. Need to Delay Until Future Overall Decline
5. Allow for Hemodialysis Tolerance
6. Stability of Patient
7. Stress of Patient/Patient's Spouse

Table 16

Palliative Care Referral Case Study Survey Results – Themes (N = 76)

Reasons for Referral Decision – Case Study 2

Themes of Reasons for Referring

1. Serious Illness Education Needed
2. Support (Emotional and Overall)
3. Goals of Care
4. Establishment of Healthcare Power of Attorney
5. Enhance Quality of Life
6. High Risk of Failure to Thrive
7. Discussions of Trajectory of Parkinson's Disease Needed
8. Advance Care Planning

(*Continues*)

Table 16 (Continued)

Reasons for Referral Decision – Case Study 2

Themes of Reasons for Not Referring

1. Deficiency in End-stage/Terminal Health Conditions of Patient
2. Age (Too Young)
3. Refer Only if Hospitalized Again
4. Neurologist's Responsibility to Have Serious Discussions with Patient
5. Parkinson's Disease Controlled
6. Supportive Family Exists
7. Too Early
8. Full Recovery Expected
9. Currently Stable Health
10. Hospital Medicine Team Capable of Managing

Table 17

Palliative Care Referral Case Study Survey Results – Themes (N = 76)

Reasons for Referral Decision – Case Study 3

Themes of Reasons for Referring

1. Patient and Family Education
2. Multiple Serious Illnesses
3. Symptom Management
4. Patient Desires Palliative Care Referral
5. Goals of Care
6. Need of Palliative Care
7. Quality of Life Threatened
8. Overall Support
9. Code Status Discussion
10. Navigation of Serious Illness
11. Assistance with Hospice Transition Decisions
12. Advance Care Planning

(*Continues*)

Table 17 (Continued)

Reasons for Referral Decision – Case Study 3

Themes of Reasons for Not Referring

1. Current Hospice Path
2. Patient’s Appropriate Self-Analysis of Own Health
3. Health Plan Trajectory Established
4. Oncologist: Responsible for Symptom Management
5. Oncologist: Responsible for Guiding Patient

Hypothesis Testing

Hypothesis 1: *Perceived facilitators to referral will be associated with a higher history of referral and a higher number of referrals to palliative care among NPs in hospital medicine.*

The results from the bivariate correlation analysis revealed weak and statistically significant relationships between three of the hypothesized facilitators and historical referring to palliative care (Table 18). Higher scores for palliative care being needed to decrease the length of stay of patients was negatively associated with historical referral to palliative care (r = -.25, p =.033)and accounted for a 6% variance. Higher scores on the question related to palliative care addressing spiritual concerns was negatively associated with historical referral to palliative care (r = -.23, p = .043) and accounted for 5% of variance. Conversely, higher scores for palliative care establishing goals of care (r = .23, p = .045) was positively associated with historical referral to palliative care and accounted for 5% of variance. Four of the seven hypothesized facilitators were not associated with historical patients being referred to palliative care.

A point biserial correlation was performed on the facilitators to referral to palliative care variables and the data from the three palliative care case studies. Table 19 displays the results for case study 1. Only one facilitator was significantly associated with referral to palliative care. Higher scores with the palliative care team being helpful with establishing goals of care were negatively associated with referring the patient in case study 1 to palliative care ($r = -.23$, $p = .043$, $R^2 = .05$). None of the other six facilitators were associated with referring the patient in case study 1 to palliative care. For case studies 2 and 3, there were no statistically significant associations between the facilitator predictor variables and referring to palliative care. Overall, hypothesis one was partially supported.

Table 18

Relationship Between Facilitators to Referring to Palliative Care and History of Referral to Palliative Care (N = 76)

	Spearman's Rho Correlation (*r*)
Variables	Overall % of Actual Referrals from Potential Beneficial Referrals
1. PC team w/more time to discuss complex issues [a]	-.03
2. PC team helpful w/managing physical symptoms [a]	-.21
3. PC can help decrease LOS in hospital [a]	-.25*
4. PC team helpful w/est. GOC [a]	.23*
5. PC can help address patients' spiritual concerns [a]	-.23*
6. PC can be helpful in managing [a] analgesic side effects	-.11
7. Patients w/serious illnesses &/or poor prognoses [a]	.23

Note: *p < .05, two-tailed, [a] Spearman's Rho correlation reported.; GOC = Goals of Care; LOS = Length of Stay; PC = Palliative Care

Table 19

Relationship Between Facilitators to Referring to Palliative Care and Referral to Palliative Care (N = 76)

	Point Biserial Correlation (*r*)		
Variables	Case Study 1	Case Study 2	Case Study 3
1 . Case Study 1 [a]	1.00	-	-
2. Case Study 2 [a]	-	1.00	-
3. Case Study 3 [a]	-	-	1.00
4. PC team w/more time to discuss complex issues [a]	-.09	.06	.10
5. PC team helpful w/managing physical symptoms [a]	.09	.12	-.17
6. PC can help decrease LOS in hospital [a]	-.02	.10	-.14
7. PC team helpful w/est. GOC [a]	-.23*****	- .14	-.19
8. PC can help address patients’ spiritual concerns [a]	-.12	.11	-.14
9. PC can be helpful in managing analgesic side effects [a]	-.10	-.02	.03
10. Patients w/serious illnesses &/or poor prognoses [a]	.06	.15	-.09

Note: *p < .05, two-tailed, [a] Point Biserial correlation reported.; GOC = Goals of Care; LOS = Length of Stay; PC = Palliative Care

Hypothesis 2: *Perceived barriers to referral will be associated with a lower history of referral and a lower number of referrals to palliative care among NPs in hospital medicine.*

The results from bivariate correlation analysis revealed a weak and statistically significant negative relationship between one barrier to referral to palliative care variable that was associated with history of referral (Table 20). Higher scoring for palliative care services not routinely available when I need them was associated with a lower historical referral to palliative care (r = -.25, p =.027). "Palliative care services not routinely available when I need them" (question 14) accounted for only 6 % of the variance associated with the barriers when it comes to the history of referring to palliative care. Overall, 7 of the 8 questions related to barriers to referral to palliative care did not show statistically significant associations with patients being referred to palliative care historically.

Using point biserial correlation, case studies 1 and 3 did not reveal any statistically significant barriers to referral (Table 21). For case study 2, one barrier ("Hesitant to refer: Unless death is imminent") was negatively associated with referring to palliative care (r = -.24, p = .038, R^2 = .06). As noted, case study 2 resulted in 50% of the participants indicating that they would refer the patient to palliative care and 50% indicating that they would not refer. Overall, hypothesis two was partially supported.

Table 20

Relationships among Barriers to Referring to Palliative Care and History of Referral (N = 76)

	Spearman's Rho Correlation (*r*)
Variables	Overall % of Actual Referrals from Potential Beneficial Referrals
Expect less like to receive disease-modifying Tx [a]	.00
Patients/families alarmed by "palliative" [a]	-.11
Role of primary team becomes less important [a]	-.07
Unless death is imminent [a]	.02
Most patients do not want to discuss prognoses [a]	.02
So much uncertainty about a patient's prognosis [a]	-.00
PC not routinely available when I need them [a]	-.25*
Have not discussed/had approval of collaborating/supervising MD [a]	-.20

Note: *p < .05, two-tailed, [a] Spearman's Rho correlation reported.; MD = Medical Doctor; PC = Palliative Care; Tx = Treatment

Table 21

Relationships of Barriers to Referring to Palliative Care and Referral to Palliative Care (N = 76)

	Point Biserial Correlation (*r*)		
Variables	Case Study 1	Case Study 2	Case Study 3
Expect less likely to receive disease-modifying Tx [a]	.05	-.21	-.02
Patients/families alarmed by "palliative" [a]	.02	-.08	-.09
Role of primary team becomes less important [a]	.09	-.02	-.05
Unless death is imminent [a]	-.12	-.24*	-.06
Most patients do not want to discuss prognoses [a]	-.02	-.09	-.21
So much uncertainty about a patient's prognosis [a]	.07	.02	.07
PC not routinely available when when I need them [a]	.04	-.05	-.04
Have not discussed/had approval of collaborating/supervising MD [a]	.00	-.01	.02

Note: *p < .05, two-tailed, [a] Point Biserial correlation reported.; MD Medical Doctor; PC = Palliative Care; Tx = Treatment

Hypothesis 3: *Increased self-efficacy with end of life discussions will be associated with a higher history of referral and a higher number of referrals to palliative care among NPs in hospital medicine.*

Using α = .05 (two-tailed), the results from the bivariate correlation analysis revealed a moderately negative and statistically significant relationship between one self-efficacy item and history of referral (Table 22). Lower scoring (denoting either absent or slight confidence) for giving bad news to a patient or family member (r = -.34, p =.003) was associated with a higher percentage of patients historically referred to palliative care and accounted for a total of 11 % of the variance. All of the other self-efficacy items in end of life discussion variables were non-significant.

A point biserial correlation was performed on the self-efficacy in end of life discussion variables and the data from the three palliative care case studies. Case study 1 and case study 3 did not reveal any statistically significant correlations. Case study 2 was the only one indicating any statistically significant results at the α = .05 (two-tailed) level (Table 23). Two self-efficacy items ("Discussing do not resuscitate orders" – question 3; "Discussing palliative care referral" – question 4) were weak and positive associations with referring to palliative care (r = .25, p = .032, R^2 = .06; r = .26, p = .024, R^2 = .07). Higher confidence in discussing do not resuscitate orders and discussing palliative care referral was associated with referring the patient in case study 2 to palliative care. Overall, hypothesis three was partially supported.

Table 22

Relationship Between Self-Efficacy with End-of-Life Discussions and History of Referral to Palliative Care (N = 76)

	Spearman's Rho Correlation (*r*)
Variables	Overall % of Actual Referrals from Potential Beneficial Referrals
1. Conducting a family conference to discuss EOL discussion [a]	-.04
2. Giving bad news to a patient or family member [a]	-.34*
3. Discussing DNR orders [a]	-.19
4. Discussing palliative care referral [a]	-.22
5. Discussing a shift in treatment approach from curative to comfort care [a]	-.23
6. Discussing treatment withdrawal [a]	-.09
7. Discussing advance care planning [a] when I need them [a]	-.21*

Note: *p < .05, two-tailed, [a] Spearman's Rho correlation reported.; DNR = Do Not Resuscitate; EOL = End-Of-Life

Table 23

Relationship Between Self-Efficacy with End-of-Life Discussions and Referral to Palliative Care (N = 76)

	Point Biserial Correlation (*r*)		
Variables	Case Study 1	Case Study 2	Case Study 3
1. Conducting a family conference to discuss EOL decisions [a]	-.06	.01	.19
2. Giving bad news to a patient or family member [a]	.00	.01	.15
3. Discussing DNR orders [a]	.11	.25*	.14
4. Discussing palliative care referral [a]	.06	.26*	.18
5. Discussing a shift in treatment approach from curative to comfort care [a]	.07	.05	.14
6. Discussing treatment withdrawal [a]	.06	.09	.16
7. Discussing advance care planning when I need them [a]	.07	.06	.04

Note: *p < .05, two-tailed, [a] Point Biserial correlation reported.; DNR = Do Not Resuscitate; EOL = End-Of-Life

Hypothesis 4: *Perceived facilitators to referral, perceived barriers to referral, and self-efficacy with end-of-life discussions will contribute a significant variance in the history of referral to palliative care among NPs in hospital medicine.*

Multiple regression stepwise analyses were conducted to examine the relationship between the history of referral to palliative care and the following predictors: a) facilitators to referring to palliative care, b) barriers to referring to palliative care, and c) self-efficacy with end of life discussions. Multicollinearity diagnostics using condition indexes and tolerances/VIFs indicated that the analysis did not have substantive multicollinearity problems. All tolerances were greater than .75, and all VIFs were less than 1.35. The stepwise regression entered three of the original twenty-two predictor variables in the final model. After the inclusion of the three predictor variables, the multiple regression (based upon the stepwise method) stopped, because other statistically significant predictors to the history of referral to palliative care could not be found (Table 24). The three variables were “Inclined to refer: Palliative care can help decrease length of stay in hospital” (facilitator predictor), “Most inclined to refer: Patients with serious illnesses and/or poor prognoses” (facilitator predictor), and “Giving bad news to a patient or family member” (self-efficacy predictor). The variables had beta values that were significant at the .05 level. The overall fit of the model was good with an R^2 of .158. This model explained 15.8% of the variance in the history of referral to palliative care. A significant regression equation was found [F (3, 72) = 10.124, p = .000). Participants predicted history of referral to palliative care was equal to 19.280 (Constant) – 6.565 (Inclined to refer: Palliative care can help decrease length of stay in hospital) + 8.149

(Most inclined to refer: Patients with serious illnesses and/or poor prognoses) – 3.653 (Giving bad new to a patient or family member), where “Inclined to refer: Palliative care can help decrease length of stay in hospital” and “ Most inclined to refer: Patients with serious illnesses and/or poor prognoses” were measured as 1 for *strongly disagree* to 4 for *strongly agree*. “Giving bad news to a patient or family member” was measured as 1 for *not at all confident* to 4 for *very confident*. The overall percentage of actual referrals from potential beneficial referrals historically decreased 6.57 percent for each *strongly agree* answer selected on the question inclined to refer when palliative care can help decrease the length of stay in hospitals and increased 8.15 percent for each *strongly agree* answer selected on the question most inclined to refer patients with serious illnesses and/or poor prognoses to palliative care. The overall percentage of actual referrals from potential beneficial referrals historically also decreased 3.65 percent for each *very confident* answer selected on the question related to giving bad news to a patient or family member. “Inclined to refer: Palliative care can help decrease length of stay in hospital”, “Most inclined to refer: Patients with serious illnesses and/or poor prognoses”, and “Giving bad news to a patient or family member” questions were significant predictors of the overall percentage of actual referrals from potential beneficial referrals historically. Overall, hypothesis four was partially supported.

Table 24

Summary of Stepwise Regression Model Predicting History of Referral to Palliative Care (N = 76)

	B	*SE B*	*β*
Step 1			
Constant	42.566	5.127	
Inclined to Refer: PC can help decrease LOS in hospital	-7.828	1.870	-.437*
Step 2			
Constant	16.304	11.646	
Inclined to Refer: PC can help decrease LOS in hospital	-8.018	1.809	-.448*
Most inclined to refer: Patients with serious illnesses and/or poor prognoses	7.644	3.068	.252*

(*Continues*)

Table 24 (Continued)

	B	*SE B*	*β*
Step 3			
Constant	19.280	11.482	
Inclined to Refer: PC can help decrease LOS in hospital	-6.565	1.904	-.367*
Most inclined to refer: Patients with serious illnesses and/or poor prognoses	8.149	3.011	-.269*
Giving bad news to a patient or family member	-3.653	1.764	-.221*

Note: p < .05*; R^2 = .19 for Step 1, ΔR^2 = .06 for Step 2, ΔR^2 = .04 for Step 3 (p < .05); *F* for change in R^2 = 4.290*; LOS = Length of Stay; PC = Palliative Care

Hypothesis 5: *Perceived facilitators to referral, perceived barriers to referral, and self-efficacy with end-of-life discussions will contribute a significant variance in the number of referrals to palliative care among NPs in hospital medicine.*

Logistic regression was performed to ascertain the effects of the predictor variables of facilitators to referring to palliative care, barriers to referring to palliative care, and self-efficacy with end of life discussions on the likelihood that participants would refer the patient to palliative care in case study 1, case study 2, and case study 3. For the logistic regression analyses with all three case studies, SPSS assigned a “1” to “No” (not referring to palliative care for case study 1). With this, the analyses predicted the odds of not referring to palliative care since the “no” was given a larger internal value code.

With case study 1, the logistic regression model was statistically significant, χ^2=9.608, p = .008. The model explained 17.8% (Niekerk R^2) of the variance in referring to palliative care and correctly classified 77.6% of cases. The item related to being inclined to refer due to the palliative care team being helpful with establishing goals of care (facilitator variable) was statistically significant (p = .017) and influenced how the participants answered the case study question to a degree of them being .07 times likely not to refer if in disagreement that the palliative care team is helpful with establishing goals of care in case study 1. No other predictor variables contributed a significant variance in the number of referrals to palliative care for case study1 (Table 25).

With case study 2, the logistic regression model was statistically significant, χ^2=11.257, p = .004. The model explained 18.4% (Nagelkerke R^2) of the variance in referring to palliative care and correctly classified 67.1% of cases. The items related to giving bad news to a patient or family member (self-efficacy variable; p = .023) and discussing palliative care referral were both statistically significant (self-efficacy variable; p = .003). The items influenced how the participants answered the case study question to a degree of them being .37 times less likely not to refer the patient to palliative care the more confidence with giving bad news and 3.9 times more likely not to choose to refer the patient to palliative care the more confidence with discussing palliative care referral in case study 2. In other words, they would mostly likely indicate that the patient would be referred to palliative care when confident with giving bad news and would not be referred to palliative care when confident with discussing palliative care referral. No other predictor variables contributed a significant variance in the number of referrals to palliative care for case study 2 (Table 26). Lastly, with case study 3, the logistic regression model was statistically significant, χ^2=41.981, p = .006. The model explained 100% (Nagelkerke R^2) of the variance in referring to palliative care and correctly classified 92.1% of cases. No predictor variables contributed a significant variance in the number of referrals to palliative care for case study 3 (Table 27). Overall, hypothesis five was partially supported.

Table 25

Summary of Logistic Regression Analysis for Variables Predicting Not Referring the Patient to Palliative Care in Case Study 1 (N = 76), Controlling for Perceived Facilitators, Perceived Barriers, and Self-Efficacy with End of Life Discussions

Predictor		*B*	*SE B*	*Wald*	e^B
Step 2^a	Inclined to Refer: PC Team Helpful w/est. goals of care	-2.2667*	1.114	5.727	.07
Constant		.881	2.135	.170	2.413
χ^2				9.608	
df				1	

Note: *p < .05; a. variable entered on Step 2; e^B = exponentiated *B*; PC = Palliative Care; Referral to palliative care coded at 1 for *no* and 0 for *yes*; Reference category = Not referring to palliative care; “Inclined to refer to palliative care team was helpful with establishing goals of care” scored from 1 for *strongly disagree* to 4 for *strongly agree*.

Table 26

Summary of Logistic Regression Analysis for Variables Predicting Not Referring the Patient to Palliative Care in Case Study 2 (N = 76), Controlling for Perceived Facilitators, Perceived Barriers, and Self-Efficacy with End of Life Discussions

Predictor		*B*	*SE B*	*Wald*	e^B
Step 2[a]	Giving bad news to a patient or family member	-.989[*]	.435	5.172	.372
Step 2[a]	Discussing palliative care referral	1.363	.465	8.576	3.908
Constant		-1.198	.734	2.664	.302
χ^2			11.257		
df			2		

Note: *p < .05; a. variable(s) entered on Step 2; e^B = exponentiated *B*; Referral to palliative care coded at 1 for *no* and 0 for *yes*; Reference category = Not referring to palliative care; “Giving bad new to patient or family member” and “Discussing palliative care referral” scored from 1 for *not at all confident* to 4 for *very confident*.

Table 27

Summary of Logistic Regression Analysis for Variables Predicting Not Referring the Patient to Palliative Care in Case Study 3 (N = 76), Controlling for Perceived Facilitators, Perceived Barriers, and Self-Efficacy with End of Life Discussions

Predictor		*B*	*SE B*	*Wald*	e^B
Step 0	Constant	-2.457	.425	33.354	.086
χ^2				41.981*	
df				1	

Note: *p < .05; e^B = exponentiated *B*; PC = Palliative Care; Referral to palliative care coded at 1 for *no* and 0 for *yes*; Reference category = Not referring to palliative care

Further Relationship and Comparative Statistical Analyses

Further statistical analyses were conducted on the study variables to seek whether or not relationships existed between history of referral to palliative care and referral to palliative care. Moreover, a statistical comparison was performed between those study participants who referred and did not refer the patients to palliative care in the three case studies.

Relationships between the History of Referral to Palliative Care and Referral to Palliative Care

A point biserial correlation was performed to examine the relationship between the history of referral to palliative care and referral to palliative care (participants' decisions of whether or not to refer the patients to palliative care among all three case studies). The relationship between the referral to palliative care between case studies 1 and 2 was the only one indicating any statistically significance with a positively correlated result at the α = .05 (two-tailed) level (r = .433, p = .000, R^2 = .187), indicating that the answer placed on case study 1 was associated with a similar answer placed on case study 2. There were no statistically significant results showing a relationship between the history of referral and referral to palliative care. Moreover, no other significant relationships resulted in the model (Table 28).

Table 28

Relationships among History of Referral and Referral to Palliative Care (N = 76)

	Case Study 1	Case Study 2	Case Study 3	Overall Percentage of Actual Referrals from Potential Beneficial Referrals
Case Study 1 [a]	-	.433*	.066	-.002
Case Study 2 [a]	.433*	-	.000	-.069
Case Study 3 [a]	.066	.000	-	.190

Note: *p < .05, two-tailed, [a] Point Biserial correlation reported.

Relationships of Referring Between the Case Studies

Chi-square tests of independence were performed to examine the relationships between referring patients to palliative care in the three case studies. For case studies 1 and 2, the relation between the variables showed that there was a significant association between referring patients to palliative care in both case studies, χ^2 (1, 76) = 12.303, p = .000 (Table 29). The Phi and Cramer's V values of .433 indicated a very strong association between the variables (Akoglu, 2018). Alternatively, the chi-square test for independence for case studies 1 and 3 revealed that there was not a significant association between referring patients to palliative care in the case studies, χ^2 (1, 76) = .623, p = .623 (Table 30). The Phi and Cramer's V values of .066 further validated a weak association between the variables. Lastly, the Chi-square test for independence for case studies 2 and 3 showed that there was not a significant association between referring patients to palliative care in case studies, χ^2 (1, 76) = 1.000, p = 1.000 (Table 31). Furthermore, the Phi and Cramer's V values of .000 indicated no association between the variables.

Table 29

Relationship of Referring in Case Study 1 & Case Study 2 (Chi-Square Tests) (N = 76)

	Value	*df*	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	14.268 [a]	1	.000		
Continuity Correction [b]	12.303	1	.000		
Likelihood Ratio	15.808	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	14.080	1	.000		

Note: * p < .05; a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.00.; b. Computed only for a 2 X 2 table

Table 30

Relationship of Referring in Case Study 1 & Case Study 3 (Chi-Square Tests) (N = 76)

	Value	*df*	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	.336 [a]	1	.562		
Continuity Correction [b]	.006	1	.937		
Likelihood Ratio	.312	1	.576		
Fisher's Exact Test				.623	.438
Linear-by-Linear Association	.331	1	.565		

Note: * p < .05; a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.42.; b. Computed only for a 2 X 2 table

Table 31

Relationship of Referring in Case Study 2 & Case Study 3 (Chi-Square Tests) (N = 76)

	Value	*df*	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	.000[a]	1	1.000		
Continuity Correction [b]	.000	1	1.000		
Likelihood Ratio	.000	1	1.000		
Fisher's Exact Test				1.000	.663
Linear-by-Linear Association	.000	1	1.000		

Note: * p < .05; a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 3.00.; b. Computed only for a 2 X 2 table

Comparing the Palliative Care Referral Decisions of the Nurse Practitioners in Hospital Medicine in the Three Case Studies to Their History of Referral

For case study 1, the results indicated that there was not a significant difference (U = 516.500, p = .946) between the NPs in hospital medicine who referred and did not refer the patient to palliative care as compared to the history of referral of these NPs (Tables 32 and 33). For case study 2, the results indicated that there was not a significant difference (U = 671.500, p = .596) between the NPs in hospital medicine who referred and did not refer the patient to palliative as compared to the history of referral of these NPs (Tables 34 and 35). Lastly, for case study 3, the results indicated again that there was not a significant difference (U = 127.500, p = .108) between the NPs in hospital medicine who referred and did not refer the patient to palliative care as compared to the history of referral of these NPs (Tables 36 and 37). Overall, across all three case studies, the results showed that there were not statistically significant differences (using α = .05) between those NPs who referred and did not refer the patients to palliative care in each case study to their histories of referring to palliative care.

Table 32

Overall Percentage of Actual Referrals from Potential Beneficial Referrals and Case Study 1 (Mann-Whitney U Test; Test Statistics) (N = 76)

	Overall Percentage of Actual Referrals from Potential Beneficial Referrals [a]
Mann-Whitney U	516.50
Wilcoxon W	2227.50
Z	-.068
Asymp. Sign. (2 – tailed)	.946

Note: * p < .05; a. Grouping Variable: Case Study 1: Will You Refer?

Table 33

Overall Percentage of Actual Referrals from Potential Beneficial Referrals and Case Study 1 (Mann-Whitney U Test; Ranks) (N = 76)

	Case Study 1: Will You Refer?	
	Yes (n = 58)	**No** (n = 18)
	Mean Rank/Sum of Ranks	**Mean Rank/Sum of Ranks**
Overall Percentage of Actual Referrals from Potential Beneficial Referrals	38.41/2227.50	38.81/698.50

Note: * p < .05

Table 34

Overall Percentage of Actual Referrals from Potential Beneficial Referrals and Case Study 2 (Mann-Whitney U Test; Test Statistics) (N = 76)

	Overall Percentage of Actual Referrals from Potential Beneficial Referrals [a]
Mann-Whitney U	671.50
Wilcoxon W	1412.50
Z	-.53
Asymp. Sign. (2 – tailed)	.596

Note: * p < .05; a. Grouping Variable: Case Study 2: Will You Refer?

Table 35

Overall Percentage of Actual Referrals from Potential Beneficial Referrals and Case Study 2 (Mann-Whitney U Test; Ranks) (N = 76)

	Case Study 2: Will You Refer?	
	Yes (n = 38)	**No** (n = 38)
	Mean Rank/Sum of Ranks	**Mean Rank/Sum of Ranks**
Overall Percentage of Actual Referrals from Potential Beneficial Referrals	39.83/1513.50	37.17/1412.50

Note: * p < .05

Table 36

Overall Percentage of Actual Referrals from Potential Beneficial Referrals and Case Study 3 (Mann-Whitney U Test; Test Statistics) (N = 76)

	Overall Percentage of Actual Referrals from Potential Beneficial Referrals [a]
Mann-Whitney U	127.50
Wilcoxon W	2612.50
Z	-1.606
Asymp. Sign. (2 – tailed)	.108

Note: * p < .05; a. Grouping Variable: Case Study 3: Will You Refer?

Table 37

Overall Percentage of Actual Referrals from Potential Beneficial Referrals and Case Study 3 (Mann-Whitney U Test; Ranks) (N = 76)

	Case Study 3: Will You Refer?	
	Yes (n = 70)	**No** (n = 6)
	Mean Rank/Sum of Ranks	**Mean Rank/Sum of Ranks**
Overall Percentage of Actual Referrals from Potential Beneficial Referrals	37.32/2612.50	52.25/313.50

Note: * $p < .05$

This chapter presented the results of a non-experimental, cross sectional, correlational study of the relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussions, and referring to palliative care among NPs in hospital medicine. Findings from the questionnaires, results from hypothesis testing, and other relationship and comparative statistical analyses were reported from the 76 NPs who worked in hospital medicine who completed the data collection.

All five of the hypotheses were partially supported. Some of the perceived facilitators, perceived barriers, and self-efficacy with end of life discussions variables had some associations and contributed significantly in the history of referring to palliative care and referring to palliative care. Moreover, only a relationship with referring to palliative care between case studies 1 and 2 was statistically significant. No statistically significant differences emerged between the palliative care referral decisions in the three case studies among the hospital medicine NPs to their history of referral. A discussion of these results will be presented in Chapter V.

CHAPTER V

DISCUSSIONS AND CONCLUSIONS

Chapter V contains a discussion of the study findings and conclusions of the study results. This chapter ends with a discussion of the study limitations, strengths of the study, implications for practice, use of the Theory of Planned Behavior in palliative care referral behavior among NPs in hospital medicine, and future research. The purpose of the study was to examine the relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussions, history of referral, and referring to palliative care among NPs in hospital medicine. All previous studies of referring patients to palliative within the hospital setting care have focused on physician practices. This study adds to the limited body of knowledge, because there are no identified studies related to hospital medicine NPs (or acute care NPs in general) referring patients to hospital palliative care consultation teams. This is also the first study to examine facilitators and barriers to referring patients to palliative care by NPs.

Discussion of the Findings

The current study examined the relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussions, history of referral, and referring to palliative care among NPs in hospital medicine.

Participants

In general, 64.5% of the participants indicated that what helped them the most with referring patients to palliative care was being self-aware that patients could benefit from being referred to palliative care. Most participants (82%) had no formal palliative care training, meaning that any academic preparation and/or continuing education did not incorporate palliative care education. Only 18.4 % had any form of formal palliative care training, and it was limited to either part of an academic curriculum during an NP program of study (6.6%) or continuing education (11.8%). As of 2016, ten universities within the United States offered a postmaster's certificate palliative care program, and eight universities had nursing master's programs with a minor or palliative care track in the NP programs (Carr and Musselman, 2016). In 2017, the Society of Hospital Medicine named palliative care as a core competency for hospitalists and partnered with the Center to Advance Palliative Care to create ongoing clinical training in core skills related to palliative care for healthcare providers in hospital medicine, including NPs (CAPC, 2020; Society of Hospital Medicine, 2020). These training tools are located on the Society of Hospital Medicine organizations' website and emphasize skills such as communication about patient goals and priorities, pain and symptom management, and how to collaborate with palliative care specialist for patient and family support (Society of Hospital Medicine, 2020). These training tools are integral to hospital medicine NPs who are responsible for patients within hospitals, because they are faced with palliative care referral decisions often with no preparation to make them.

Nearly half (46%) of the participants worked in settings where their palliative care consultation team was only available Monday through Friday day shift only and in person. In person refers to only providing palliative care consultations while on hospital premises (excludes telephone consultations). This finding is consistent with the findings from the 2018 National Consensus Project where less than half (46.1%) of all adult palliative care programs in hospitals within the United States involved a structure of 24/7 availability to patients and families (National Coalition for Hospice and Palliative Care, 2018). In 2014, Kavalieratos et al found that the unavailability of palliative care services after normal business hours led to challenges in patients being referred to palliative care by physicians working in hospital settings.

Factors Affecting Palliative Care Referrals

The variables in this study yielded results that supported the purpose of this study.

History of referral to palliative care. The most common factors that emerged and were analogous with other research findings leading to the referrals were the following: a) increased hospital encounters, b) requests, c) support needed, d) symptom management, e) goals of care, f) serious illnesses of patients, and g) end of life discussions. Past research involving physicians (Karlekar et al, 2014; Snow et al, 2009; Weismann and Meier, 2010) listed frequent hospitalizations, managing patients' symptoms, establishing goals of care, and having quality of life and end of life discussions with serious ill patients as being the reasons for referring to palliative care. In the current study, reasons for not referring were identified as resistance, attitudes towards the palliative care team, distress in referring, workplace restrictions, palliative care not needed, and time constraints. Those identified as resisting the referrals to palliative care included patients, families, oncology specialists, and multidisciplinary team members. These findings were consistent with the studies of Schenker et al (2012), Schenker et al. (2014), and Smith et al. (2012) who investigated palliative care referrals of cancer patients. They found that oncologists perceived palliative care as an "alternative" philosophy of care and were hesitant to refer. Oncologists viewed palliative care being an "alternative" philosophy as equated to an alternative to cancer therapy as in the following: a) Oncologists strategize to take a more aggressive approach to making patients live longer, and referring to palliative care might make the patient feel that the oncologist is incapable of making him/her live longer.; and, b) Oncologists view cancer therapy as continuing to engage in treatments and see palliative care as requiring patients to quit all treatments. Palliative care access issues (i.e., unavailability, limited hours, size of palliative care team) and time constraints (patients needed to be discharged from the hospital) in this study also resulted in patients not being referred to palliative care. Resistance, palliative care access issues, and time constraints have been acknowledged in previous studies as being the stimuli for historically either delaying or halting patients from being referred to palliative care by many physicians who worked in hospital settings (Enguidanos et al., 2009; Fenstad et al., 2014; Snow et al., 2009).

Lastly, this current study revealed that another reason cited for historically not referring to palliative care was workplace restrictions. These include practice models, practice agreements, billing issues, and scope of practice related to the relationship between the supervising physician and the NPs (either by directly preventing or with a delay in reviewing/signing off on the order to consult palliative care). The review of literature shows that hospital medicine NPs often work in collaboration with physicians on the hospital medicine teams. The overall goal of the NPs and physicians in hospital medicine is to work together collaboratively in order to achieve high quality patient care and to enhance professionalism and mutual understanding (Makowsky et al., 2009; Martin et al., 2005; Neale, 1999). In states where NPs work in a split/shared model of billing with physicians, the supervising/collaborative physician must be in agreement with the NP's decision to make patient referrals (including palliative care referrals) before referrals can be initiated (Stantz, 2013). If the hospital medicine NP participants in this current study experienced any issues either with collaborating with or not having a common agreement with a palliative care referral with their physician colleagues on the hospital medicine team, then this could account for the data showing workplace restrictions as being a reason for not referring to palliative care. Roughly 89% of the participants in this current study practiced as NPs in states with either restricted practice or reduced practice laws. The laws in those states with full restrictions require either career long supervision, delegation or team management in order for an NP to practice. Whereas the laws in those states where NPs have reduced practice abilities require career-long regulated collaborative agreements with another healthcare provider in order for the NP to practice (American Association of NPs, 2019).

Facilitators to referring to palliative care. In the current study, the following factors facilitated referral to palliative care teams: 1) palliative care team having more time to discuss complex issues, 2) being able to manage patients' physical symptoms,

3) establishing goals of care with patients and families, 4) handling analgesic side effects, and 5) dealing with patients with serious illnesses/poor prognoses inclined them to refer to palliative care. These findings are consistent with previous studies that showed that patients were referred to palliative care by physicians in hospitals when the patients were not improving, needed goals of care established, had poor prognoses, and needed pain managed (Fendstad et al., 2014; Tilden et al., 2009). Mitchtalik et al. (2013) also cited that the high workloads of hospital medicine physicians limited their abilities to fully discuss plans of care and complex health issues with patients. In a Smith et al. (2012) study, physicians in hospitals who referred greater than 25% of their patients to palliative care did so assuming that palliative care providers had more time to discuss complex issues with patients and patients' families. Moreover, two facilitator items *(palliative care can help decrease length of stay in hospital* and *dealing with patients with serious illnesses and/or poor prognoses*) were significant in the multiple regression model in this current study.

Barriers to referring to palliative care. In the current study, the following barriers prevented participants from referring patients to palliative care: 1) expectation of less likely to receive disease-modifying treatment, 2) patients/families alarmed by the word "palliative", 3) role of primary team becomes less important, 4) able to address a patient's palliative care needs on my own, 5) most patients do not want to discuss prognoses**,** 6) palliative care not routinely available, and 7) unless death is imminent. These findings did align with previous studies that had outcomes of barriers to referring to palliative care being directly related to the connotation of the word "palliative"

(Fenstad et al., 2014), palliative care incompatible with aggressive therapy (Schenker et al., 2012; Smith et al., 2012), unavailability of palliative care team (Kenguidano et al., 2009; Kavalieratos et al., 2014), and patients and families not desiring a palliative care consult (Enguidanos et al., 2009; Fendstad et al., 2014; Snow et al., 2009), and palliative care was only needed for those patients who were dying (Enguidanos et al., 2009). The barrier item of "*I hesitate to refer if I have not discussed with the collaborating/supervising physician"* in the current study resulted in responses that were evenly distributed from strongly agree to strongly disagree, indicating that this varies as a barrier to referring to palliative care. In those states where NPs work in a split/shared model of billing with physicians, the supervising/collaborative physician must be in agreement with the NP's decision to make patient referrals (including palliative care referrals) before referrals can be initiated (Stantz, 2013). Barriers to NP practice could account for this finding. If the participants in this current study resided evenly across those states where a split/shared model of billing existed and did not exist, then that could account for the increased variability in this barrier. Overall, barrier scores were low in this current study. None of them were significant in the multiple regression model. Barriers to referral may vary with the individual NP and unique practice settings, but it is still important to measure them.

Self-efficacy in end of life discussions. Most of the participants in the current study were moderately and very confident with discussing do not resuscitate (DNR) orders and reported being slightly confident in discussing palliative care referral, a shift in treatment approach from curative to comfort care, and treatment withdrawal. They were either slightly or moderately confident conducting a family conference to discuss end of life decisions and discussing advance care planning. These findings were consistent with other research. In a study by Rizzo, Engelhardt, Tobin, Della Penna, Feigenbaum, Sisselman, and Lombardo (2010), results showed providers reluctant to initiate end-of-life discussions due to personal discomfort. An intervention (Advanced Illness Coordinated Care Program) in that study that was delivered in the outpatient settings was designed to train healthcare providers on how to counsel, educate, and assist with coordination of care for patients at the end of life. The intervention improved the providers' communication skills as related to end-of-life discussions. Moreover, a systematic review by Frost, Cook, Heyland, and Fowler (2011) examined 6,259 publications that focused on factors affecting discussions by healthcare providers regarding end of life and patients with serious illnesses. The review found that healthcare providers' specialties, training locations, and varying work and life experiences impacted their actions regarding serious illness and end-of-life discussions. Since lack of confidence is a theoretical barrier, referrals to palliative care can be affected by the amount of confidence NPs have in this arena. In another study by Dunlay et al. (2015) that involved investigating 50 physicians and 45 NPs and physician assistants for their level of confidence in discussing goals of care and providing end-of-life care to their patients with heart failure. The physicians, NPs, and physician assistants in that study showed decreased confidence with initiating prognosis or end-of-life discussions, enrolling patients into hospice, or providing end-of-life care. They were concerned about whether or not the patient/family would find the discussions negative and had fears of destroying patients' hopes. For this current study, only one self-efficacy item (giving bad news to a patient or family member) was significant in the multiple regression mode. Other aspects of self-efficacy may be important in specific situations.

Referral to palliative care. All patients in the three case study scenarios met the criteria to be referred to palliative care. The majority of the participants in the current study indicated that they would refer case study patients 1 (76.3%) and 3 (92.1%) to palliative care. However, with case study 2, only half of the participants indicated that they would refer the patient to palliative care. Qualitative responses from the study participants regarding what influenced their decisions of whether or not to refer supported the quantitative data of referring the patients in each case study. In all three case studies, a majority of the reasons from the qualitative data cited by the study participants for referring to palliative care have been supported by previous studies related to physicians referring patients to palliative care: serious illness of patient, advance care planning, addressing code status, goals of care, support, patient/family education, and symptom management. This study revealed two other factors affecting referral to palliative care: a) the age of the patient, and b) the patient's desire for palliative care. The influence of age of the patient as a reason to refer to palliative care was recently studied by Kistler, Stevens, Scott, Philpotts, Greer, and Greenwald (2020) as a trigger for palliative care consults for hospitalized and emergency department patients. This study was a systematic review that yielded 20 studies for final analysis with more than 17,000 patients represented. Two of those studies cited age ("elderly" and "older than 65") as a factor for referring patients to palliative care in the emergency department and in the

ICUs. A Delphi study by Hui et al. (2016) was performed to develop a consensus for a list of criteria for referral of patients with advanced cancer at hospitals to an outpatient palliative care service. Within that study, 90%, 86%, and 95% of the physician respondents indicated agreement within the first, second, and third Delphi rounds respectively that “patient request” was a major criterion in referring patients to outpatient palliative care. “Patient request” was shown to be a statistically significant factor as a major criterion by the third round. There are not any other studies found that addressed patients requesting a palliative care referral.

In all three case studies in the current study, a majority of the themes from the qualitative data for not referring to palliative care have been supported by multiple previous studies related to barriers in which healthcare providers face when needing to refer patients to palliative care: too early, threatens hope, age (too young), and prognostication of stable health. These findings were consistent with research by Snow et al. (2009) and Fendstad et al. (2014) that involved physicians denoting barriers to referring patients to palliative care as early referral to palliative care creating confusion, palliative care viewed as “giving up hope”, and difficulty in considering palliative care referrals for patients young in age. Healthcare providers may not refer to palliative care due to either prognostication uncertainty or the overestimation of remaining life expectancy (McAteer & Wellbery, 2013). However, the participants in the current study also indicated that the two other reasons, ability to manage the palliative care needs of the patient in case study 2 and deferring the responsibilities of symptom management and guiding the patient to the oncology team in case study 3, were reasons for not referring.

The hospital medicine NPs in the current study who indicated that they did not refer due to their ability to manage the palliative care needs of the patient is case study 2 is consistent with previous research findings. Research by Le Blanc et al. (2015), Fendstad et al. (2014), and Rodriguez et al. (2007) resulted in oncologists, pulmonologists, and primary care physicians giving reasons of being able to manage their patients' own palliative care needs as reasons for not referring to palliative care. In this, their decisions to refer to palliative care were influenced by the thoughts of being able to take of needs of their patients that a palliative care provider might have otherwise managed.

Hypotheses

All of the hypotheses in the current study were partially supported by the data and aligned with the purpose of the study.

Hypothesis 1. There were some perceived facilitators to referral that were statistically significant and associated with history of referral and referring to palliative care**.** When NPs perceived that palliative care can help to decrease length of stay, this was negatively associated with historical referral to palliative care. This finding is in contrast from previous research where 155 lung cancer physicians in the hospital setting referred their patients to palliative care due to a need to decrease hospital length of stays of patients (Smith et al., 2012). In a retrospective study of 319 hemorrhagic stroke patients, early palliative care referral decreased hospital length of stay by three days due to the palliative care teams rendering prompt clarification of goals of care and hastened discharge to hospice (Schloss, Tversky, Katz, & Wright, 2017). However, one explanation of why the hospital medicine NPs might not be referring to palliative care with the goal of decreasing the patient's hospital length of stay in mind could be related to the measurement of length of stay. Perhaps some of the participants in the current study had experienced situations where referring to palliative care with the hopes of decreasing length of stay were not favorable options from a hospital metrics standpoint. There are times when hospital medicine providers are responsible for the total amount of the length of stay of patients upon hospital discharge regardless of whether or not the hospital medicine team managed the patients during the entire hospital stay. With this, a referral to palliative care with the hopes of not accruing a penalty for an extensive length of stay would not benefit the hospital medicine NP due to the fact that the patient's entire hospital length of stay would have been inherited by the hospital medicine NP (Colwell, 2014). Another consideration is that for those hospitals where the palliative care teams are not available 24/7, then perhaps the workplace restrictions related to the availability of the palliative care team would not accomplish a decrease in length of stay. Therefore, referring to palliative care was not perceived as a facilitator.

Spiritual concerns were negatively associated with historical referral to palliative care, statistically significant, and accounted for 5% of variance. This result also contradicts what is in the literature about palliative care's important role when it comes to spiritual care support in hospital settings. A retrospective review with qualitative analysis of a palliative care chaplain's clinical documentation of 20 patient encounters by Kearney, Fischer, and Groninger (2017) showed that palliative care teams that integrate spiritual care offer broad and beneficial spiritual care, overall support, and goals of care discussions for patients and their families. Weismann and Meier (2011) also found that secondary criteria for palliative care assessment during each hospital day was for patient, family or surrogate spiritual needs. Furthermore, studies by Karlekar et al. (2014) and Smith et al. reported that 48% and 89% of the physician participants respectively cited spiritual support to patients and families as a benefit for referring to palliative care. One might conclude that, although the hospital medicine NP participants in this study agreed that palliative care teams address spiritual concerns, this did not facilitate referring to palliative care.

Participants recognized the usefulness of palliative care teams in establishing goals of care, and this factor was positively associated with historical referral to palliative care, which is consistent with the previous research (Fendstad et al., 2014; Tilden et al., 2009). Higher scores with the palliative care team being helpful with establishing goals of care were negatively associated with referring the patient in case study 1 to palliative care. This finding is not aligned with previous research. For case study 1, 24% of the study participants indicated they would not refer the patient to palliative care. Other reasons for not referring to palliative care (i.e., availability of palliative care team) were likely more important when the NPs considered this particular patient situation.

Hypothesis 2. When palliative care services were not routinely available, this barrier was associated with a lower historical referral to palliative care. This finding is consistent with previous research. Enguidanos et al. (2009), Karlekar et al. (2014), and Kavalieratos et al. (2014) found in their research that the unavailability of palliative care services after normal business hours and lack of availability of the palliative care team in general have led to challenges to referring to palliative care by physicians within hospital settings. For case study 2, one barrier ("Hesitant to refer: Unless death is imminent") was negatively associated with referring to palliative care. This can be surmised as the study participants did not perceive that death was imminent with the patient in case study 2 in the current study. In a study by Rodriguez et al. (2007), physicians (ICU and surgeons), nursing managers, bedside nurses, social workers, and hospital chaplains were interviewed and cited that palliative care referrals were also deemed necessary for care of actively dying patients. Conversely, another study by Tilden et al. (2009) showed that surgeons did not refer patients who were imminently dying to the palliative care teams in hospitals.

Hypothesis 3. Some self-efficacy with end-of-life discussions items were statistically significant and associated with history of referral and referring to palliative care**.** Those participants in the current study with lower confidence in giving bad news to a patient or family member were more likely to refer patients historically to palliative care. This is consistent with previous research by Snow et al. (2009) where 74 physicians at New York Presbyterian Hospital were studied related to how they utilized an inpatient palliative care service. Fifty-six percent of the physicians in that study who referred patients to palliative care agreed that they were uncomfortable with feelings of anxiety of having to relay bad news to patients or patients' family members.

Furthermore, those hospital medicine NP participants in the current study who had higher confidence in discussing do not resuscitate (DNR) orders were more likely to refer the patient in case study 2 to palliative care. These findings are synonymous with previous research regarding providers referring to palliative care. In regards to the discussing DNR orders, O'Mahony et al. (2010) performed a study related to critical care providers referring patients to palliative care and found out that 33% of patients that were referred to palliative care already had "Do Not Resuscitate" discussions (and DNR orders placed) provided by the critical care staff prior to being referred to palliative care. This can be interpreted that these critical care providers possessed some confidence in holding these code status discussions with the patients prior to referring them to palliative care.

The hospital NP participants in the current study who had higher confidence in discussing palliative care referral were more also likely to refer the patient in case study 2 to palliative care. However, this finding is not consistent with previous research. With the qualitative study by Enguidanos et al. (2009) that examined the ease of integrating palliative care programs into hospital culture, some of the physician participants expressed their discomfort in describing and/or recommending palliative care services to patients and their families. This led to them being more apprehensive about referring to palliative care.

Hypothesis 4. There were some perceived facilitators to referral and one self-efficacy with end-of-life discussions item that were statistically significant and contributed to the history of referral to palliative care. For the hospital medicine NPs in the current study, the overall percentage of actual referrals from potential beneficial referrals historically decreased 6.57 percent for each *strongly agree* answer selected on the question inclined to refer when palliative care can help decrease the length of stay (LOS) in hospitals. The overall percentage of actual referrals from potential beneficial referrals historically increased 8.15 percent for each *strongly agree* answer selected on the question most inclined to refer patients with serious illnesses and/or poor prognoses to palliative care. As related to LOS, there is previous research that aligns with and does not support the findings from this current study. In her research involving the timing of palliative care referrals, Callaway (2010) elaborated that hospital healthcare providers did see positive impacts in the realm of decreasing the LOS of patients who were referred to palliative care. Conversely, very few trauma ICU physicians (19.8% and 16.5% respectively) felt that referring their patients to palliative care in the hospital setting led to decreased stay in the ICU or decreased length of stay in the hospital in general. As for referring to palliative care when patients have serious illnesses and/or poor prognoses, this does align with previous research where physicians acknowledged these reasons as their basis for retrieving the support of the hospitals' palliative care teams. Research by Karlekar et al. (2014), Smith et al. (2012), and Snow et al. (2009) denoted that general hospital physicians, lung cancer physicians, and trauma surgeons referred patients to palliative care as related to serious illnesses and the need to discuss prognoses. Moreover, for the hospital medicine NPs in the current study, the overall percentage of actual referrals from potential beneficial referrals historically also decreased 3.65 percent for each *very confident* answer selected on the item related to giving bad news to a patient or family member. This is not consistent with previous research by Snow et al. (2009) where 74 physicians at New York Presbyterian Hospital were studied related to how they utilized an inpatient palliative care service. With this, 56% of the physicians in that study who referred patients to palliative care agreed that they were uncomfortable with feelings of anxiety of having to relay bad news to patients or patients' family members.

Hypothesis 5. There was one perceived facilitator item to referral and two self-efficacy with end-of-life discussions items that were statistically significant and contributed to referring to palliative care. All three case studies were quite different patient scenarios in which the hospital medicine NPs had to decide whether or not to refer to palliative care. All of the patients in the three case studies met criteria for palliative care referrals. With case study 1, the item related to being inclined to refer due to the palliative care team being helpful with establishing goals of care (facilitator) influenced how the current study participants answered the case study question. They were .07 times likely not to refer if in disagreement that the palliative care team is helpful with establishing goals of care. This is consistent with previous research in the area of palliative care referrals and establishing goals of care with patients and their families. Previous studies showed that patients were referred to palliative care by physicians in hospitals when the patients needed goals of care established (Fendstad et al., 2014; Tilden et al., 2009). Based on case study 2, the current study participants were more likely to refer the patient to palliative care when confident with giving bad news and less likely to refer the patient when confident with discussing palliative care referral. These findings are not consistent with previous research. As mentioned earlier in previous research by Snow et al. (2009), 56% of the physicians who referred patients to palliative care agreed that they were uncomfortable with feelings of anxiety of having to relay bad news to patients or patients’ family members. Being confident in discussing the palliative care referral prior to referring patients to palliative care was not measured in previous research. With the qualitative study by Enguidanos et al. (2009) that examined the ease of integrating palliative care programs into hospital culture, some of the physician participants expressed their discomfort in describing and/or recommending palliative care services to patients and their families. This led to them being more apprehensive about referring to palliative care.

Relationships between the History of Referral to Palliative Care and Referral to Palliative Care

Further statistical analyses were conducted on the study variables to seek whether or not relationships existed between history of referral to palliative care and referral to palliative care. There were no statistically significant results showing a relationship between the history of referral and referral to palliative care. This can be possibly explained by the perspective that the decision to refer to palliative care varies from patient to patient. NPs assess each patient as an individual in a specific situation. Historically, perhaps the hospital medicine NPs in this current study may not have had the exact patient scenarios as the patients in the three case studies from the Palliative Care Referral Case Study Survey. Even if the current study participants had similar patients as mentioned in the three case studies, they may have still not allowed their palliative care referral decisions in the past to influence their current referral practices.

Chi-square analyses were also performed between those study participants who referred and did not refer the patients to palliative care in the three case studies. There was a very strong and significant association between referring patients to palliative care in both case studies 1 and 2 only. This can perhaps be explained due to the patients in case studies 1 and 2, although meeting criteria for being referred to palliative care, possibly required much thought on the part of the current study participants on whether or not to refer the patients to palliative care. Unlike case study 3 where the patient had already come to terms with her poor prognosis, made a decision regarding when to initiate hospice services, and clarified the time frame in which she change her code status, the patients in case studies 1 and 2 had not made any types of goals of care or advanced care planning decisions. With case study 1 and 2 being similar in their need for much consideration of whether or not palliative care is needed could possibly explain why there was such a strong and significant association between them.

Comparing the Palliative Care Referral Decisions of the NPs in Hospital Medicine in the Three Case Studies to Their History of Referral

For all three case studies, the results indicated that there was not a significant difference between the NPs in hospital medicine who referred and did not refer the patient to palliative care as compared to the history of referral of these NPs. This can be possibly explained by the aspect that the patients in the case studies were all different with unique health issues and needs.

Limitations of the Study

The limitations must be considered when examining the findings of the study. First, since this was a cross sectional, correlational study, palliative care referral behavior (historically and currently) was not evaluated over time. This resulted in the study participants having to recollect their referral behavior from the last three months and render decisions about current referral behavior based upon case study scenarios (and not assessing the present-day palliative care referral actions). Another limitation was the representativeness of the study sample. Ninety-three percent of the participants were female. Gender differences may influence working conditions, and male and female NPs may have varying workplace dynamics (i.e., collaboration with supervising physicians) and other patient-provider aspects (i.e., patient relationships based on male vs. female NP) that might factor into referring patients to palliative care. Another limitation was that two-thirds of the participants practiced in non-academic hospital settings. This could have had a tremendous impact on how the study participants answered the surveys. Non-academic hospitals could potentially have fewer resources for staff and patients when it comes to palliative care, which could have impacted the results of this study. Furthermore, although there are NPs working in hospitals within all types of specialty areas that encounter patients who need palliative care referrals, this study only included hospital medicine NPs (and excluded NPs who worked in other specialties within hospital settings). This decreased the generalizability of the study's findings. Lastly, before conducting this study, instruments from previous research were not available for measuring the variables of interest. The principal investigator had to adapt two previously used instruments from other studies and develop two instruments for this study (*Facilitators and Barriers to Palliative Care Referral* and *Self – Assessment of Confidence with End-of-Life Discussions*). Due to facilitators and barriers to palliative care referral specifically not being fully recognized, the instruments will require further development for use in future studies. All of these instruments had to undergo validity and reliability with pilot testing before being used in the current study. This was also the first time in which case studies were used in data collection.

Strengths of the Study

This study had several strengths. First, the study was guided by the Theory of Planned Behavior (TPB), a well-established theoretical model, as a framework to examine the relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussions, history of referral, and referring to palliative care among NPs in hospital medicine. Secondly, there were no missing data in this study. All participants answered 100% of the questions for the demographics portion and for the study instruments. Third, this study collected qualitative data to support the quantitative data for the variables of history of referral and referral to palliative care. This brought forth additional support, clarity, and justification to the quantitative data for referring to palliative care historically and currently. Fourth, the instruments used for measuring the variables of facilitators to referring to palliative care, barriers to referring to palliative care, and self-efficacy with end of life discussions in this study were adapted from instruments developed by other researchers but underwent psychometric analyses for use in this study. While in their original versions, researchers in the past did not report psychometrics on the instruments to demonstrate validity and reliability when used in studies. However, instruments developed by the principal investigator and those adapted from previous researchers were psychometrically analyzed for use in this study. Lastly, the study participants were from every region of the United States. This brought forth strength to this study since the NPs were working in hospital medicine within hospitals across the United States who are involved with referring patients to palliative care.

Implications for Theory Building

This study measured the perceived behavioral control (PBC), intention, and behavior constructs of the Theory of Planned Behavior (TPB) to examine the relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussions, history of referral and referring to palliative care among NPs in hospital medicine. This was due to Ajzen (1991) conveying that perceived behavioral control, together with behavioral intention, directly predict behavioral achievement. Based on the findings of the study, some of the facilitators to referring to palliative care, barriers to referring to palliative care, and self-efficacy in end of life discussions were associated with predicting history of referral and referring to palliative care. However, some of the qualitative data results from the Palliative Care Referral History Survey and the Palliative Care Referral Case Study Survey showed varying attitudes and subjective norms of the study participants that influenced their decisions to refer to palliative care historically and refer the patients in the three case studies. Given the complexities of the factors that possibly influence healthcare providers in referring patients to palliative care, measuring the effect of all of the constructs (attitude, subjective norm, perceived behavioral control, intention, and behavior) of the TPB may have better explained the relationships among factors that influenced hospital medicine NPs in referring to palliative care. Other theoretical models of behavior can also be considered for examining the relationships of factors affecting referring to palliative care.

Implications for Practice

The data from the participants in this study represent the views of those NPs who are employed in hospital medicine within the United States. An opportunity exists in the clinical practice arena related to the availability of palliative care services and the influence of hospital organizations when it comes to referring to palliative care. The issues around the unavailability of the palliative care teams within the hospitals was identified by many study participants and was a factor that led to a decrease in their historical referrals to palliative care. With palliative care being a specialty that has been shown to improve the quality of life of hospitalized patients (and their families), hospitals should consider investing more funding into expanding their palliative care programs in order to increase palliative care providers along with extending the option of palliative care being available within the hospital 24/7. Furthermore, the dynamics of the hospital organization was noted by the study participants as impacting their decisions to refer to palliative care. Workplace restrictions related to not having the approval of a supervising physician as well as the existence of a requirement that only a physician-to-physician review/sign out must occur before a palliative care referral can be initiated were identified in the qualitative data by the participants in this study as being reasons for not referring to palliative care historically. Delays in patients receiving palliative care referrals based upon either physician-NP agreement supervision protocols and/or other policies related to physician control of the referral process should be evaluated and revised by hospitals with the goal of making sure patients receive efficient access to palliative care when needed. Furthermore, for those states where obstacles related to the autonomy and scope of practice of NPs continue to be present, legislators should also continue to review those existing practice barriers with the goal of eliminating them. Removing all mentioned restrictions could lead to patients being referred to palliative care in a timely manner and enhancing their quality of life.

The data from the study participants also showed that lower confidence levels in giving bad news to patients/patients' family members and discussing advance care planning led to increased percentages of patients historically being referred to palliative care. The Society of Hospital Medicine (SHM), in alliance with the Center to Advance Palliative Care (CAPC), offers a complementary document on its website entitled "Improving Communications about Serious Illness Implementation Guide" that can be downloaded. Strategies related to prognosis determination, advance care planning discussions, and goals of care communication are described in depth throughout the document. This document also offers websites and webinars for improving communication with patients/families, advanced care planning resources, prognostication tools, palliative medicine assistance blogs, and recommended books related to primary palliative care. NPs practicing in the field of hospital medicine should make it a priority to utilize all of these resources that are provided by the Society of Hospital Medicine. NPs need to seek out these programs independently and should be encouraged by their employers and colleagues to seek out continuing education conferences and trainings that focus on having difficult discussions with patients. NPs working in hospital settings who gain increased confidence with facilitating difficult discussions with patients and their families could ultimately lead to better clarity and communication for patients and their family members. This, in turn, will foster an avenue for appropriate goals of care to be established that will impact the future quality of life of patients. Initiating discussions around poor prognosis and advanced care planning prior to patients being referred to palliative care would also benefit those patients. The palliative care consultation would then result in support and goal setting rather than used for the discovery of the details about a decline in health. Regarding formal palliative care education, 81.6% of the participants in this study indicated that they had not received any formal palliative care training. Formal palliative care training can come in the format of either continuing education or academic curricula. As mentioned earlier, hospital medicine NPs should make it a priority to utilize the palliative care education provided by the SHM as well as attend sessions at conferences related to primary palliative care and/or referring to palliative care. When it comes to higher education learning, only a few NP graduate degree programs within the United States offer any type of course in primary palliative care as part of the academic curriculum. If there was formal palliative care education in more graduate NP programs, then NPs could be more equipped to better utilize and refer to palliative care in the clinical arena as well as increase their abilities to recognize those patients who could possibly benefit from it.

Public awareness about palliative care has a profound impact on its timely utilization as well. Resistance was one of the themed responses from the qualitative data of the participants in this study when describing why they did not refer patients to palliative care historically. The resistance came most commonly from the patients and their family members. Understanding the role and benefits of the palliative care team of a hospital is an integral aspect of the hospital stay of those patients who suffer from serious illnesses. To enhance patient and family awareness of palliative care, hospital leaders could consider increasing palliative care's visibility throughout the patient's hospital stays. One way of incorporating this is with a brief introduction to the meaning and purpose of palliative care services at the hospital being included in the routine admission literature given to all patients admitted to the hospital. Another idea of increasing patient and family awareness of palliative care is that hospitals could also place complimentary literature (i.e., brochures, handouts) in the lobbies and other waiting areas associated with emergency rooms, general nursing units, and intensive care units. These strategies could serve to educate patients and their families about palliative care as well as possibly prompt them to seek palliative care services during the hospitalization if they feel as though they could benefit from its services. These strategies of making patients and their family members more aware of the availability, purpose, and role of palliative care services within the hospital could also assist in decreasing the burden from those hospital medicine NPs who may not have confidence in explaining the role of and need for the integration of palliative care into a patient's plan of care. Overall, the findings from this study do suggest that improving palliative care access, resolving NP decision-making constraints, expanding palliative care education of healthcare providers, and increasing public awareness of palliative care resources, could ultimately positively impact referrals to palliative care within hospital settings.

Recommendations for Future Research

Although significant relationships were found with some of the theoretical variables, further evaluation of palliative care referral among NPs (NPs) in hospital medicine (and NPs working within hospital settings in general) is needed. The use of all the constructs of the TPB framework should also be strongly considered in future research to elicit attitude and subject norm data that would be helpful with examining referring to palliative care. Since there is an increase in NPs practicing within hospital settings, future studies should use a larger sample size and incorporate hospital medicine NPs and other types of NPs that work in hospitals. This would increase the generalizability of the findings. Due to the lack of validated and reliable instruments, future research regarding the development of instruments with detailed psychometric analysis for measuring factors related to healthcare providers referring to palliative care should be strongly considered. The instruments developed for this study should also be further evaluated for validity and reliability. Finally, with the possibility that variables that influence NPs in referring to palliative care might not be captured within instruments, future research in this area should focus on gathering data either from a purely qualitative method or with a mixed methodology strategy.

Conclusion

This was the first study specifically investigating the palliative care referral behavior of NPs with the hospital setting. In this study about referral to palliative care, the following influenced the palliative care referral decisions of hospital medicine NPs: a) four facilitators ➔ palliative care establishing goals of care, palliative care helping to decrease LOS, spiritual concerns, and when patients have serious illness and/or poor prognoses; b) two barriers ➔ palliative care not routinely available and unless death is imminent; and c) two self-efficacy aspects ➔ giving bad news to a patient and/or family member and discussing DNR orders. Referral history did not influence decisions of NPs with case examples of patients who met criteria for palliative care services. Few NPs practicing within hospital medicine have any education or training in palliative care, even though the Society of Hospital Medicine lists this as a core competency for hospitalist physicians. The findings from this study demonstrated significant relationships between some of the facilitators to referral, barriers to referral, self-efficacy with end of life discussions, history of referral, and referring to palliative care. The instruments developed for this study should be used for future research on this topic. The knowledge gained from this study should be applied to a larger body of knowledge that aims to guide NPs and other healthcare providers with referring patients to palliative care in hospital settings. Further research is needed related to NPs who work in hospital settings and what factors influence their behaviors of referring to palliative care.

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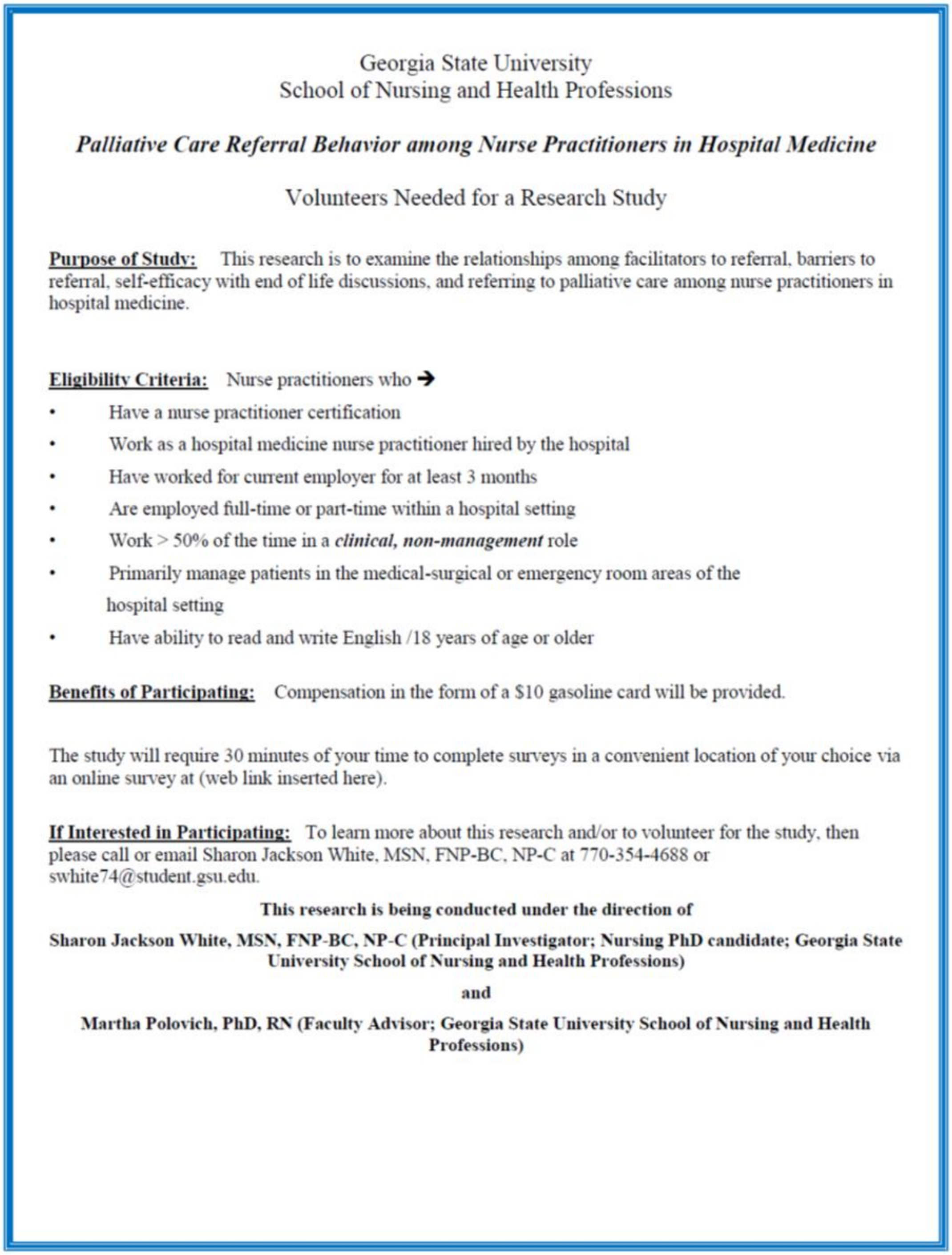
APPENDICES

Appendix A

Recruitment Flyer



Georgia State University
School of Nursing and Health Professions

Palliative Care Referral Behavior among Nurse Practitioners in Hospital Medicine

Volunteers Needed for a Research Study

Purpose of Study: This research is to examine the relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussions, and referring to palliative care among nurse practitioners in hospital medicine.

Eligibility Criteria: Nurse practitioners who ➔

- Have a nurse practitioner certification
- Work as a hospital medicine nurse practitioner hired by the hospital
- Have worked for current employer for at least 3 months
- Are employed full-time or part-time within a hospital setting
- Work > 50% of the time in a ***clinical, non-management*** role
- Primarily manage patients in the medical-surgical or emergency room areas of the hospital setting
- Have ability to read and write English /18 years of age or older

Benefits of Participating: Compensation in the form of a $10 gasoline card will be provided.

The study will require 30 minutes of your time to complete surveys in a convenient location of your choice via an online survey at (web link inserted here).

If Interested in Participating: To learn more about this research and/or to volunteer for the study, then please call or email Sharon Jackson White, MSN, FNP-BC, NP-C at 770-354-4688 or swhite74@student.gsu.edu.

This research is being conducted under the direction of

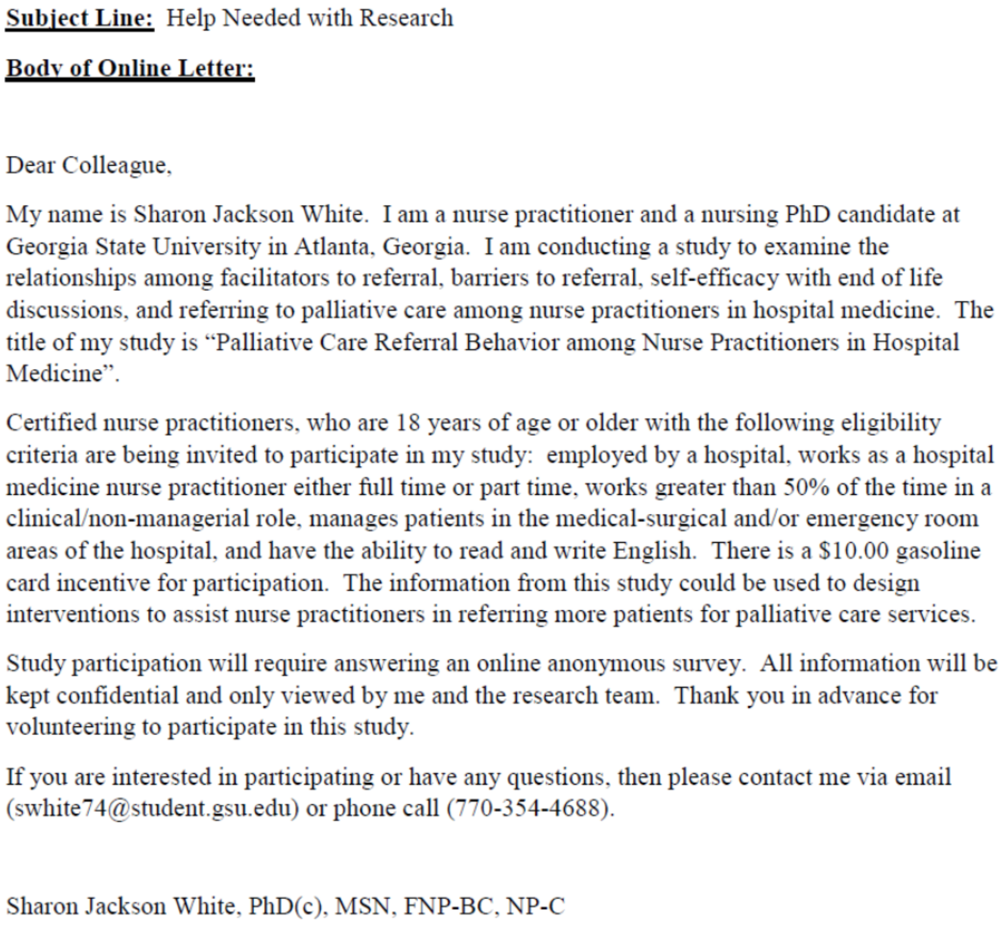
Sharon Jackson White, MSN, FNP-BC, NP-C (Principal Investigator; Nursing PhD candidate; Georgia State University School of Nursing and Health Professions)

and

Martha Polovich, PhD, RN (Faculty Advisor; Georgia State University School of Nursing and Health Professions)

Appendix B

Recruitment Announcements for Online Forums and Mailed Surveys



Subject Line: Help Needed with Research

Body of Online Letter:

Dear Colleague,

My name is Sharon Jackson White. I am a nurse practitioner and a nursing PhD candidate at Georgia State University in Atlanta, Georgia. I am conducting a study to examine the relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussions, and referring to palliative care among nurse practitioners in hospital medicine. The title of my study is "Palliative Care Referral Behavior among Nurse Practitioners in Hospital Medicine".

Certified nurse practitioners, who are 18 years of age or older with the following eligibility criteria are being invited to participate in my study: employed by a hospital, works as a hospital medicine nurse practitioner either full time or part time, works greater than 50% of the time in a clinical/non-managerial role, manages patients in the medical-surgical and/or emergency room areas of the hospital, and have the ability to read and write English. There is a $10.00 gasoline card incentive for participation. The information from this study could be used to design interventions to assist nurse practitioners in referring more patients for palliative care services.

Study participation will require answering an online anonymous survey. All information will be kept confidential and only viewed by me and the research team. Thank you in advance for volunteering to participate in this study.

If you are interested in participating or have any questions, then please contact me via email (swhite74@student.gsu.edu) or phone call (770-354-4688).

Sharon Jackson White, PhD(c), MSN, FNP-BC, NP-C

<u>Body of Postal Mail Announcement (Accompanying Paper Mailed Surveys):</u>

Dear Nurse Practitioner Colleague,

My name is Sharon Jackson White. I am a nurse practitioner and a nursing PhD candidate at Georgia State University in Atlanta, Georgia. I am conducting a study to examine the relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussion, and referring to palliative care among nurse practitioner in hospital medicine. The title of my study is “Palliative Care Referral Behavior among Nurse Practitioners in Hospital Medicine”.

Your help is needed to enhance palliative care access for hospitalized patients. Your name and address were **<u>securely</u>** provided to me by the American Association of Nurse Practitioners as being a nurse practitioner working in a hospital within a hospital medicine department. If there is a palliative care consultation team within your hospital, please consider completing the paper survey to assist me with investigating this issue.

Certified nurse practitioners who are 18 years of age or older with the following eligibility criteria are being invited to participate in my study: employed by a hospital, works as a hospital medicine nurse practitioner either full time or part time, works greater than 50% of the time in a clinical/non-managerial role, manages patients in the medical-surgical and/or emergency room areas of the hospital, and have the ability to read and write English. **There is a $10.00 incentive for participation in the form of a gasoline card**. The information from this study could be used to design interventions to assist nurse practitioners in referring more patients for palliative care services.

Study participation will require answering an anonymous survey. I have included the paper survey within this envelope. All information will be kept confidential and only viewed by me and the research team. Thank you in advance for volunteering to participate in this study.

Please complete the paper survey and mail back in the included self-addressed stamped envelope (SASE) *<u>only if you meet the inclusion eligibility criteria as listed above</u>*.

For your $10.00 incentive to be mailed to you, place your name and mailing address on a **<u>separate piece of paper</u>** (AND NOT ON THE SURVEY) and place in the SASE when you mail back the completed survey. I will separate the piece of paper with your name and mailing address from the mailed back completed survey for anonymity. If you prefer to answer the survey via an online weblink, then please contact me via email (swhite74@student.gsu.edu) or phone call (770-354-4688).

This research has been reviewed and approved by the Georgia State University Institutional Review Board.

Sincerely,

Sharon Jackson White, MSN, FNP-BC, NP-C

Appendix C

Instruments

Palliative Care Referral History Survey

Think back to the patients assigned to you during the last three months. What percentage of those patients did you care for that could have benefitted from a palliative care referral?	**Type in the percentage amount** **(0 – 100): _____ %**
Of these in question 1, what percentage did you actually refer to the palliative care team?	**Type in the percentage amount** **(0 – 100): _____ %**
As related to question 2, why did you refer or not refer? ***Please do not respond with your name or any other identifying information.***	**Type your response:** **__________________**

Palliative Care Referral Case Study Survey

Case Study # 1

Mary is a 62-year-old African American female who has a past medical history of Alzheimer's Dementia, hypertension, congestive heart failure (Class II/B), hypothyroidism, and arthritis. She resides with her spouse of 38 years in their home and has mild to moderate confusion on most days. One day, Mary started experiencing some mild leg swelling and severe shortness of breath and was transported to the local emergency room. Mary was admitted to the hospital under the care of the hospital medicine team with the diagnoses of exacerbation of her existing congestive heart failure and new onset renal failure. Nephrology was consulted. It was deemed that Mary had stage IV/V end stage renal disease and needed to start hemodialysis treatments. The nephrologist declared that Mary will need to remain on hemodialysis treatments for the rest of her life. The hospital medicine team and the nephrologist had a long discussion with Mary and her spouse about the risks and benefits of hemodialysis treatments. Mary and her spouse agreed that she would initiate hemodialysis treatments. A hemodialysis catheter was due to be placed in the patient on the next day to allow her to begin hemodialysis treatments. To begin hospital discharge planning, a hospital case manager worker would be meeting with Mary and her spouse later on that day to assist in arranging Mary's outpatient hemodialysis treatments.

Will you refer this patient to the palliative care consultation team?	**Select one choice: 0 – NO 1 - YES**
Why or why not? ***Please do not respond with your name or any other identifying information.***	**Type your response:** __________________

Case Study # 2

John, a 42-year-old salesman with a wife and two children, was just diagnosed with Parkinson's disease about six months ago. He has regular appointments with his outpatient neurologist. He presented to the hospital's emergency room two days ago with cough, body aches, fever, and low appetite. His emergency room work-up was negative for influenza but positive for pneumonia (via chest X-Ray). John was admitted to the hospital under the care of the hospital medicine team in order to receive a few days of intravenous antibiotics. His hospital plan of care was hopefully to be discharged home, but he had two days of just not eating. Although the pneumonia treatment regimen is going as planned, the hospital medicine team would like for the John to show some signs of improvement in his appetite before he is discharged home.

Will you refer this patient to the palliative care consultation team?	**Select one choice: 0 – NO 1 - YES**
Why or why not? ***Please do not respond with your name or any other identifying information.***	**Type your response: _____________**

Case Study # 3

Samantha is a 36-year-old female who resides with her parents. She does not work due to her health. She does not have children. Samantha has multiple sclerosis (wheelchair bound), hypertension, and stage III colon cancer (receiving non-curative chemotherapy). Her next chemotherapy treatment is scheduled for tomorrow at the cancer infusion center. She presented to the local emergency room secondary to severe pain in her abdomen that could not be relieved with her home pain medications. Samantha was admitted to the hospital under the care of the hospital medicine team for abdominal pain. Oncology will be consulted to assist the hospital medicine team in making sure her pain is not related to her cancer and to evaluate whether or not she can continue her cancer treatments while hospitalized. Samantha stated that she was aware that it is almost time to consider hospice care, and that she has discussed this with her oncologist. She would also like for her code status to remain that of FULL code until she elects hospice care in the near future.

Will you refer this patient to the palliative care consultation team?	**Select one choice: 0 – NO 1 - YES**
Why or why not? ***Please do not respond with your name or any other identifying information.***	**Type your response: __________________**

Facilitators and Barriers to Palliative Care Referral Survey

The following items explore your views about referral of patients with serious illness to a palliative care specialist. Please indicate your level of agreement with each of these statements. Choose by placing an "X" in one box for each statement.

	1 - Strongly Agree	***2 - Agree***	***3 - Disagree***	***4 - Strongly Disagree***
a) I *hesitate* to refer because I expect that the patient will then be less likely to receive disease-modifying treatments for serious illnesses.				
b) I am *inclined* to refer because a palliative care specialist will have more time to discuss complex issues with the patient and family.				
c) I am *inclined* to refer because a palliative care specialist can be helpful in managing patients' physical symptoms.				

d) I *hesitate* to refer because patients and families are often alarmed by mention of palliative care.				
e) I *hesitate* to refer because the role of the primary attending healthcare team then becomes less important.				
f) I don't need to refer because I am able to address patients' palliative needs on my own.				
g) I am *inclined* to refer because palliative care consultation can help decrease length of stay in the hospital.				
h) I *hesitate* to refer unless death is imminent.				

i) I am *inclined* to refer because a palliative care specialist can be helpful in establishing appropriate goals of care.				
j) I *hesitate* to refer because most patients do not want to discuss prognoses related to serious illness.				
k) I am *inclined* to refer because a palliative care specialist can help address patients' spiritual concerns.				
l) I am *inclined* to refer because a palliative care specialist can help manage patients' emotional symptoms.				
m) I *hesitate* to refer because there is so much uncertainty about a patient's prognosis.				

n) I *hesitate* to refer because palliative care services are not routinely available when I need them.				
o) I am *inclined* to refer because a palliative care specialist can be helpful in managing analgesic side effects.				
p) I am most *inclined* to refer patient with serious illnesses and/or poor prognoses.				
q) I *hesitate* to refer if I have not discussed with the collaborating/supervising physician.				

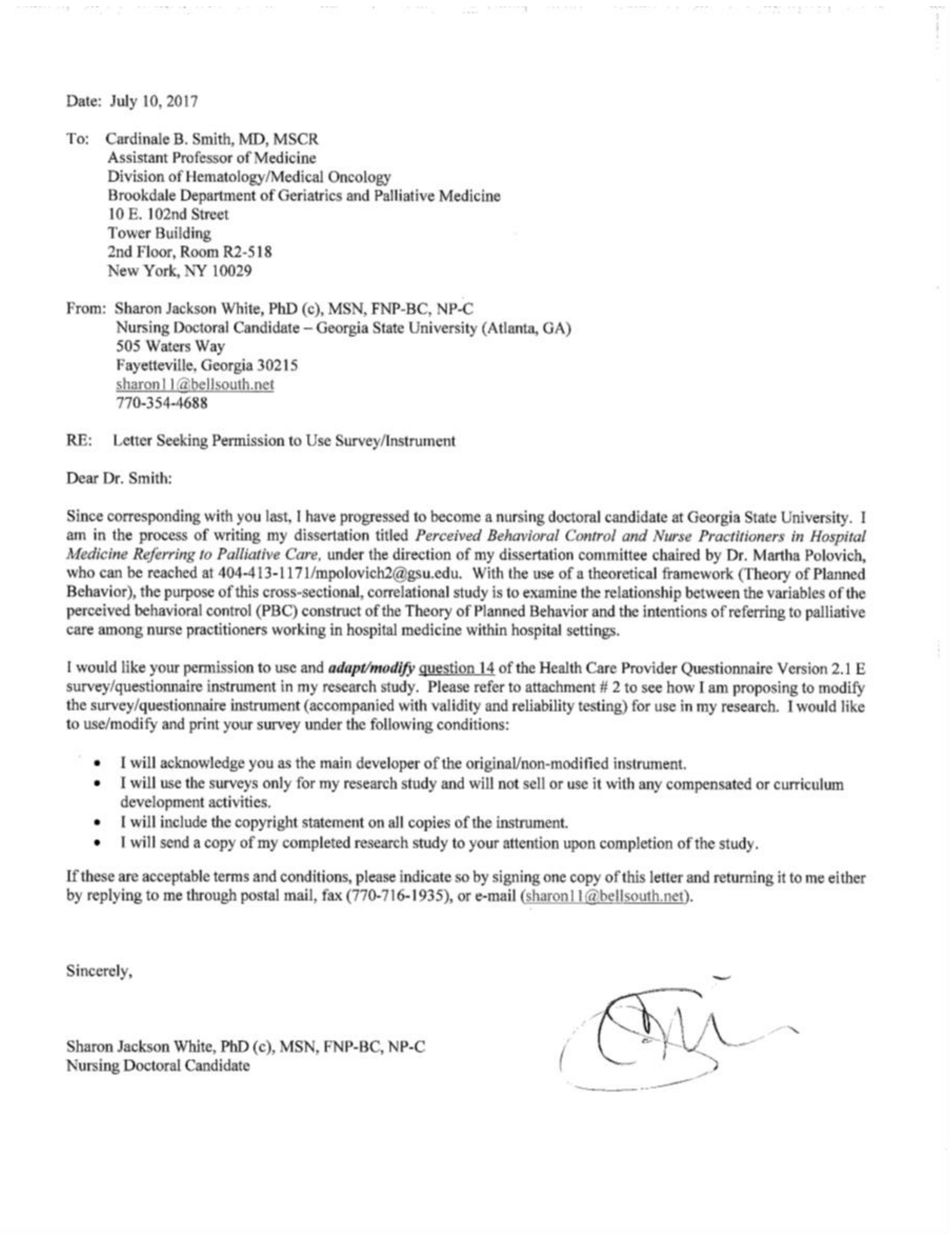
Self – Assessment with End – Of – Life Discussions

Please rank your degree of confidence with the following patient-family interactions using the following scale. Choose by placing an "X" in one box for each statement.				
	1 – Not at all confident	***2 – Slightly confident***	***3 – Moderately confident***	***4 – Very confident***
1. Conducting a family conference to discuss important end-of-life decisions				
2. Giving bad news to a patient or family member				
3. Discussing do not resuscitate (DNR) orders				

4. Discussing palliative care referral				
5. Discussing a shift in treatment approach from curative to comfort care				
6. Discussing treatment withdrawal (i.e., antibiotics, hydration, non-oral feeding)				
7. Discussing advance care planning				

Appendix D

Permissions Granted for Use of Instruments



Date: July 10, 2017

To: Cardinale B. Smith, MD, MSCR
Assistant Professor of Medicine
Division of Hematology/Medical Oncology
Brookdale Department of Geriatrics and Palliative Medicine
10 E. 102nd Street
Tower Building
2nd Floor, Room R2-518
New York, NY 10029

From: Sharon Jackson White, PhD (c), MSN, FNP-BC, NP-C
Nursing Doctoral Candidate – Georgia State University (Atlanta, GA)
505 Waters Way
Fayetteville, Georgia 30215
sharon11@bellsouth.net
770-354-4688

RE: Letter Seeking Permission to Use Survey/Instrument

Dear Dr. Smith:

Since corresponding with you last, I have progressed to become a nursing doctoral candidate at Georgia State University. I am in the process of writing my dissertation titled *Perceived Behavioral Control and Nurse Practitioners in Hospital Medicine Referring to Palliative Care,* under the direction of my dissertation committee chaired by Dr. Martha Polovich, who can be reached at 404-413-1171/mpolovich2@gsu.edu. With the use of a theoretical framework (Theory of Planned Behavior), the purpose of this cross-sectional, correlational study is to examine the relationship between the variables of the perceived behavioral control (PBC) construct of the Theory of Planned Behavior and the intentions of referring to palliative care among nurse practitioners working in hospital medicine within hospital settings.

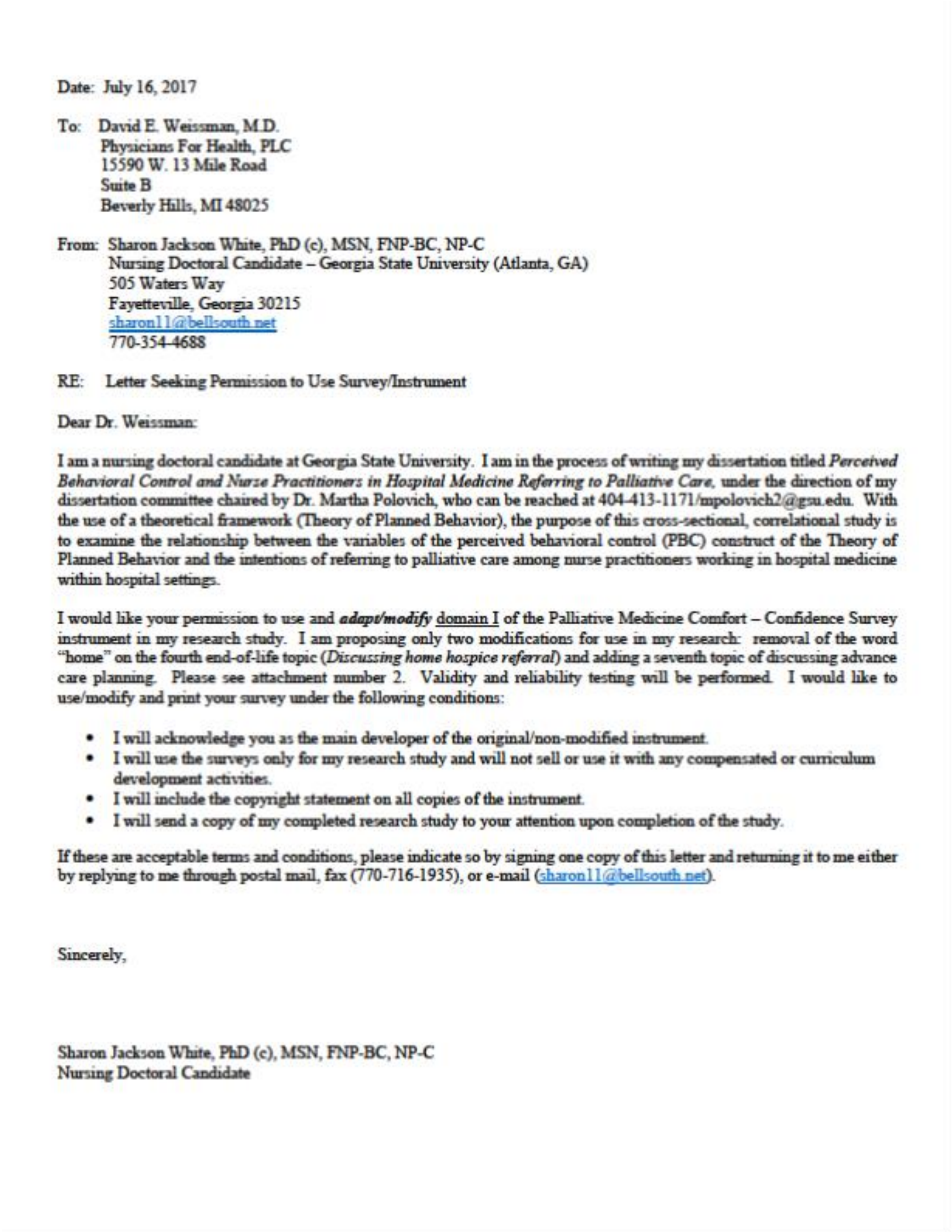
I would like your permission to use and ***adapt/modify*** question 14 of the Health Care Provider Questionnaire Version 2.1 E survey/questionnaire instrument in my research study. Please refer to attachment # 2 to see how I am proposing to modify the survey/questionnaire instrument (accompanied with validity and reliability testing) for use in my research. I would like to use/modify and print your survey under the following conditions:

- I will acknowledge you as the main developer of the original/non-modified instrument.
- I will use the surveys only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.
- I will send a copy of my completed research study to your attention upon completion of the study.

If these are acceptable terms and conditions, please indicate so by signing one copy of this letter and returning it to me either by replying to me through postal mail, fax (770-716-1935), or e-mail (sharon11@bellsouth.net).

Sincerely,

Sharon Jackson White, PhD (c), MSN, FNP-BC, NP-C
Nursing Doctoral Candidate



Date: July 16, 2017

To: David E. Weissman, M.D.
Physicians For Health, PLC
15590 W. 13 Mile Road
Suite B
Beverly Hills, MI 48025

From: Sharon Jackson White, PhD (c), MSN, FNP-BC, NP-C
Nursing Doctoral Candidate – Georgia State University (Atlanta, GA)
505 Waters Way
Fayetteville, Georgia 30215
sharon11@bellsouth.net
770-354-4688

RE: Letter Seeking Permission to Use Survey/Instrument

Dear Dr. Weissman:

I am a nursing doctoral candidate at Georgia State University. I am in the process of writing my dissertation titled *Perceived Behavioral Control and Nurse Practitioners in Hospital Medicine Referring to Palliative Care*, under the direction of my dissertation committee chaired by Dr. Martha Polovich, who can be reached at 404-413-1171/mpolovich2@gsu.edu. With the use of a theoretical framework (Theory of Planned Behavior), the purpose of this cross-sectional, correlational study is to examine the relationship between the variables of the perceived behavioral control (PBC) construct of the Theory of Planned Behavior and the intentions of referring to palliative care among nurse practitioners working in hospital medicine within hospital settings.

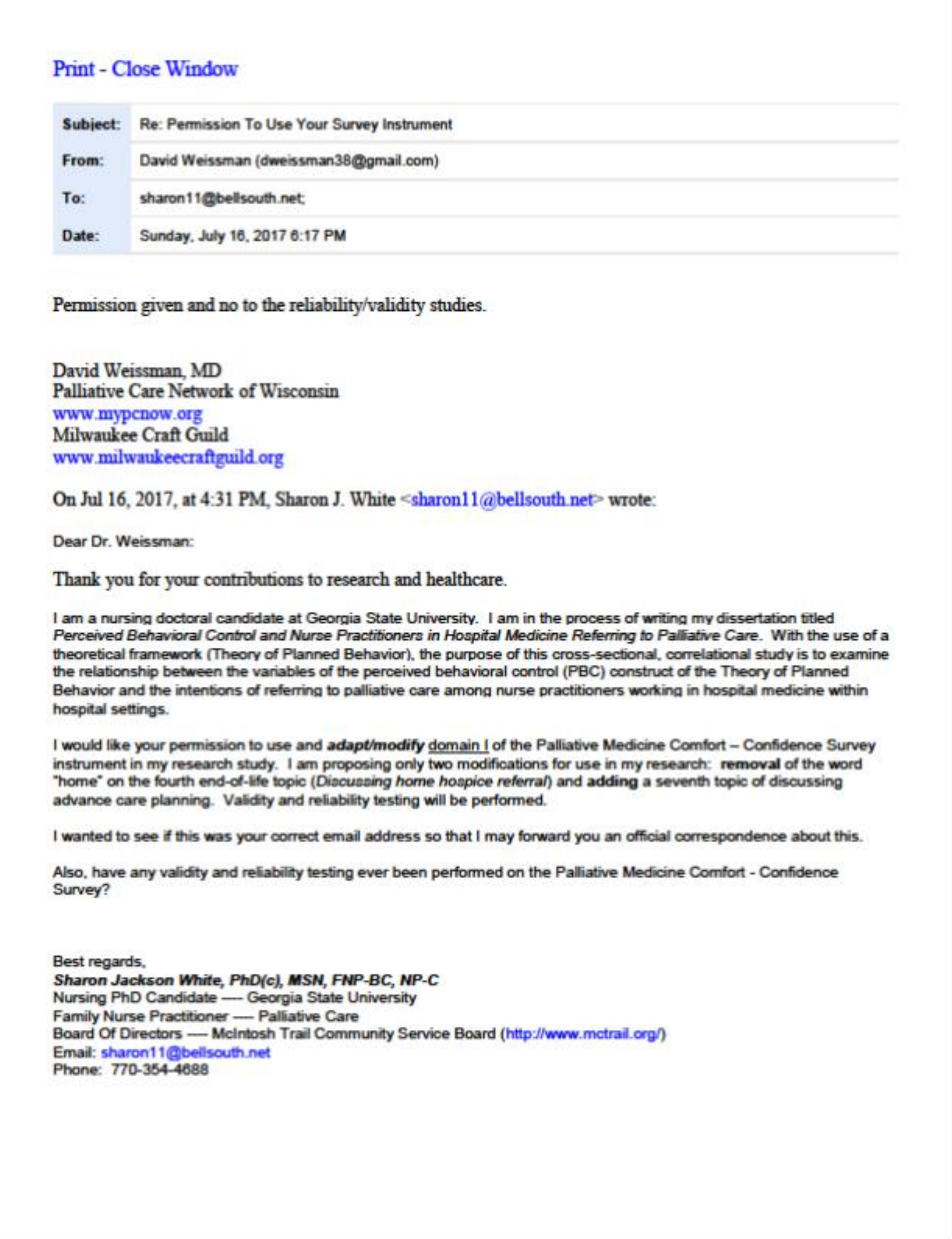
I would like your permission to use and ***adapt/modify*** domain I of the Palliative Medicine Comfort – Confidence Survey instrument in my research study. I am proposing only two modifications for use in my research: removal of the word "home" on the fourth end-of-life topic (*Discussing home hospice referral*) and adding a seventh topic of discussing advance care planning. Please see attachment number 2. Validity and reliability testing will be performed. I would like to use/modify and print your survey under the following conditions:

- I will acknowledge you as the main developer of the original/non-modified instrument.
- I will use the surveys only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.
- I will send a copy of my completed research study to your attention upon completion of the study.

If these are acceptable terms and conditions, please indicate so by signing one copy of this letter and returning it to me either by replying to me through postal mail, fax (770-716-1935), or e-mail (sharon11@bellsouth.net).

Sincerely,

Sharon Jackson White, PhD (c), MSN, FNP-BC, NP-C
Nursing Doctoral Candidate



Print - Close Window

Subject:	Re: Permission To Use Your Survey Instrument
From:	David Weissman (dweissman38@gmail.com)
To:	sharon11@bellsouth.net;
Date:	Sunday, July 16, 2017 6:17 PM

Permission given and no to the reliability/validity studies.

David Weissman, MD
Palliative Care Network of Wisconsin
www.mypcnow.org
Milwaukee Craft Guild
www.milwaukeecraftguild.org

On Jul 16, 2017, at 4:31 PM, Sharon J. White <sharon11@bellsouth.net> wrote:

Dear Dr. Weissman:

Thank you for your contributions to research and healthcare.

I am a nursing doctoral candidate at Georgia State University. I am in the process of writing my dissertation titled *Perceived Behavioral Control and Nurse Practitioners in Hospital Medicine Referring to Palliative Care*. With the use of a theoretical framework (Theory of Planned Behavior), the purpose of this cross-sectional, correlational study is to examine the relationship between the variables of the perceived behavioral control (PBC) construct of the Theory of Planned Behavior and the intentions of referring to palliative care among nurse practitioners working in hospital medicine within hospital settings.

I would like your permission to use and ***adapt/modify*** domain I of the Palliative Medicine Comfort – Confidence Survey instrument in my research study. I am proposing only two modifications for use in my research: **removal** of the word "home" on the fourth end-of-life topic (*Discussing home hospice referral*) and **adding** a seventh topic of discussing advance care planning. Validity and reliability testing will be performed.

I wanted to see if this was your correct email address so that I may forward you an official correspondence about this.

Also, have any validity and reliability testing ever been performed on the Palliative Medicine Comfort - Confidence Survey?

Best regards,
Sharon Jackson White, PhD(c), MSN, FNP-BC, NP-C
Nursing PhD Candidate —– Georgia State University
Family Nurse Practitioner —– Palliative Care
Board Of Directors —– McIntosh Trail Community Service Board (http://www.mctrail.org/)
Email: sharon11@bellsouth.net
Phone: 770-354-4688

David Weissman <dweissman38@gmail.com> Mar 31 at 10:44 PM

To Sharon Jackson White

The change is fine.

David Weissman, MD
Milwaukee Craft Guild
www.milwaukeecraftguild.org

On Mar 31, 2018, at 6:37 PM, Sharon Jackson White <sharon11@bellsouth.net> wrote:

Dr. Weissman:

Thank you again for granting me permission to use your survey instrument in my dissertation research. I have received feedback from my dissertation committee, and the following additional modifications request are needed to domain I of your original instrument for adaptation to my study: a) changing the word from "*competent*" to "*confidence*" in the response item scale (i.e., *confident* to perform independently), and b) **removal** of the words “home hospice” on the fourth end-of-life topic (*Discussing home hospice referral*) and replacing with the words "palliative care" (*Discussing palliative care referral*).

Please let me know if you are supportive of this.

I will still acknowledge you as the main developer of the original/non-modified instrument. I will use the survey only for my research and will not sell or use it with any compensated or curriculum development activities. I will include the copyright statement on all copies of the instrument. I will send a copy of my completed research to your attention upon completion of the study.

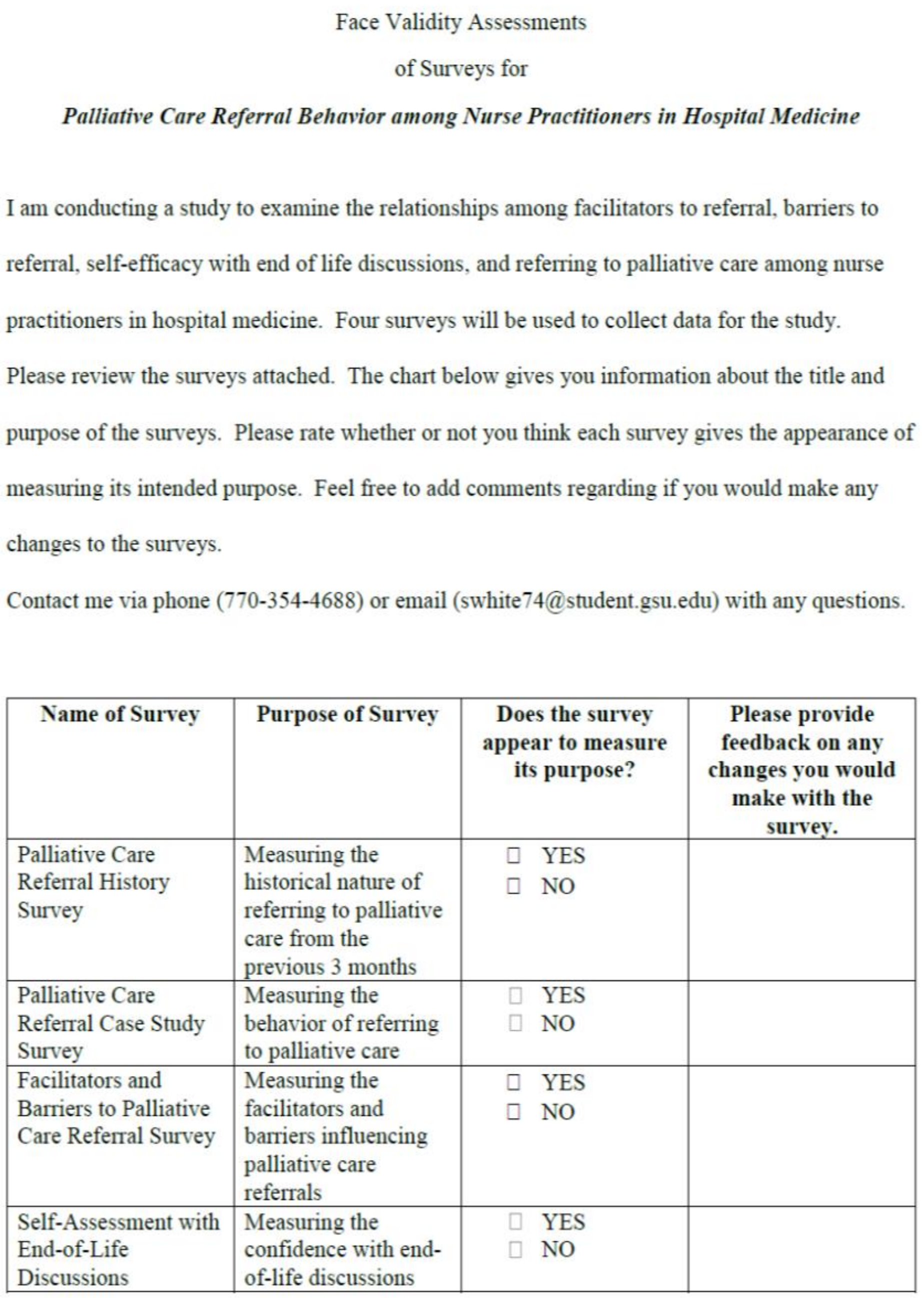
Thank you.

Sincerely,

Sharon Jackson White, PhD(c), MSN, FNP-BC, NP-C
Nursing PhD Candidate ---- Georgia State University
Family Nurse Practitioner ---- Palliative Care
Board Of Directors ---- McIntosh Trail Community Service Board
(http://www.mctrail.org/)
Palliative Care Committee Member ---- Georgia Hospice & Palliative Care Organization
Palliative Care Work Group Member ---- Georgia Cancer Consortium Committee
Email: sharon11@bellsouth.net
Phone: 770-354-4688

Appendix E

Face Validity Assessments



Face Validity Assessments
of Surveys for
Palliative Care Referral Behavior among Nurse Practitioners in Hospital Medicine

I am conducting a study to examine the relationships among facilitators to referral, barriers to referral, self-efficacy with end of life discussions, and referring to palliative care among nurse practitioners in hospital medicine. Four surveys will be used to collect data for the study. Please review the surveys attached. The chart below gives you information about the title and purpose of the surveys. Please rate whether or not you think each survey gives the appearance of measuring its intended purpose. Feel free to add comments regarding if you would make any changes to the surveys.

Contact me via phone (770-354-4688) or email (swhite74@student.gsu.edu) with any questions.

Name of Survey	**Purpose of Survey**	**Does the survey appear to measure its purpose?**	**Please provide feedback on any changes you would make with the survey.**
Palliative Care Referral History Survey	Measuring the historical nature of referring to palliative care from the previous 3 months	☐ YES ☐ NO	
Palliative Care Referral Case Study Survey	Measuring the behavior of referring to palliative care	☐ YES ☐ NO	
Facilitators and Barriers to Palliative Care Referral Survey	Measuring the facilitators and barriers influencing palliative care referrals	☐ YES ☐ NO	
Self-Assessment with End-of-Life Discussions	Measuring the confidence with end-of-life discussions	☐ YES ☐ NO	

Appendix F

Content Validity Assessments

Content Validity Assessment: Palliative Care Referral History Survey

Instructions for the Content Experts

Thank you for agreeing to review and evaluate the scale I have developed for my dissertation study, Palliative Care Referral Behavior among Nurse Practitioners in Hospital Medicine. You were selected for this task because of your knowledge in this area of study and/or expertise in the development of scales for measuring in research.

At this time, I need your assistance in assessing the content validity of my new scale to measure the history of referring to palliative care among nurse practitioners in hospital medicine. This task involves rating the relevancy and clarity of each item to the concept of intention.

The following information is included:

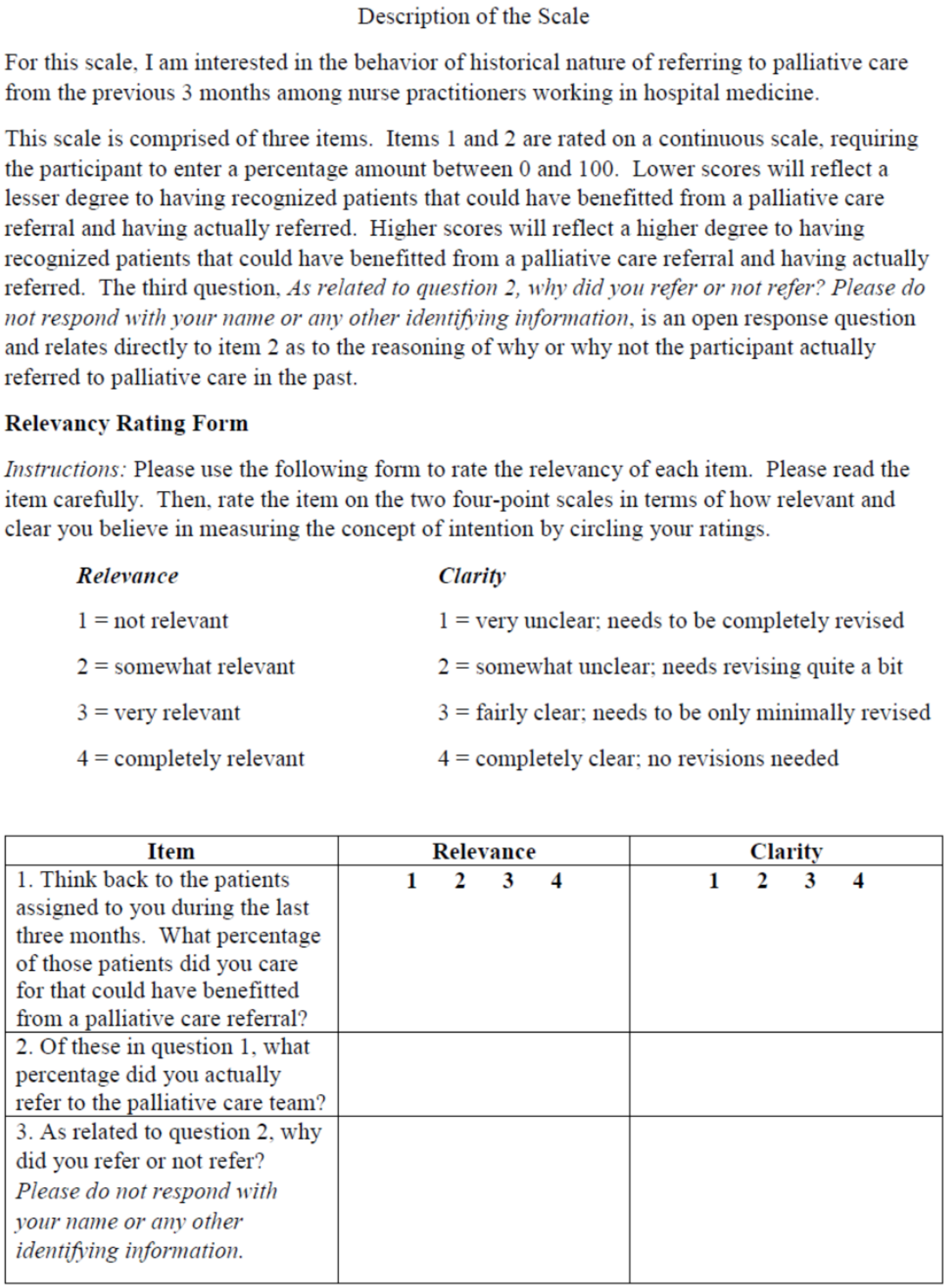
1. Description of the conceptual framework for scale development
2. Description of the scale
3. Form for rating item-relevancy
4. Form for rating clarity of each item

The procedure for the task is the following:

1. Read the description of the theoretical basis of scale development.
2. Using the rating form, rate each item as to its degree of relevance in measuring the concept of outcome expectations.
3. Note whether items are appropriate to measure intention to refer.
4. Make any suggestions you may have for the addition or deletion of items or for changes in the wording of items on the form itself.
5. Evaluate the instructions for the scale.
6. Evaluate the format of the scale.

Conceptual Framework for Scale Development

The Perceived Behavioral Control (PBC) construct of the Theory of Planned Behavior (TPB) formed the theoretical basis for the development of the instrument to measure the history of referring to palliative care. Ajzen (1991) defines perceived behavioral control as being the perceived ease or difficulty in performing the behavior and the self-efficacy of performing the behavior. Ajzen also notes that perceived behavioral control is expected to have both a direct impact on behavior and an *indirect* impact on behavior through its influence on behavioral intention. Perceived behavioral control, together with behavioral intention, directly predict behavioral achievement. For desirable behaviors, greater perceived behavioral control lead to stronger intentions and behavior performance. The TPB implies that intentions and perceptions of behavioral control interact in the prediction of behavior.



Description of the Scale

For this scale, I am interested in the behavior of historical nature of referring to palliative care from the previous 3 months among nurse practitioners working in hospital medicine.

This scale is comprised of three items. Items 1 and 2 are rated on a continuous scale, requiring the participant to enter a percentage amount between 0 and 100. Lower scores will reflect a lesser degree to having recognized patients that could have benefitted from a palliative care referral and having actually referred. Higher scores will reflect a higher degree to having recognized patients that could have benefitted from a palliative care referral and having actually referred. The third question, *As related to question 2, why did you refer or not refer? Please do not respond with your name or any other identifying information*, is an open response question and relates directly to item 2 as to the reasoning of why or why not the participant actually referred to palliative care in the past.

Relevancy Rating Form

Instructions: Please use the following form to rate the relevancy of each item. Please read the item carefully. Then, rate the item on the two four-point scales in terms of how relevant and clear you believe in measuring the concept of intention by circling your ratings.

Relevance	***Clarity***
1 = not relevant	1 = very unclear; needs to be completely revised
2 = somewhat relevant	2 = somewhat unclear; needs revising quite a bit
3 = very relevant	3 = fairly clear; needs to be only minimally revised
4 = completely relevant	4 = completely clear; no revisions needed

Item	**Relevance**	**Clarity**
1. Think back to the patients assigned to you during the last three months. What percentage of those patients did you care for that could have benefitted from a palliative care referral?	**1 2 3 4**	**1 2 3 4**
2. Of these in question 1, what percentage did you actually refer to the palliative care team?		
3. As related to question 2, why did you refer or not refer? *Please do not respond with your name or any other identifying information.*		

Content Validity Assessment: Palliative Care Referral Case Study Survey

Instructions for the Content Experts

Thank you for agreeing to review and evaluate the scale I have developed for my dissertation study, Palliative Care Referral Behavior among Nurse Practitioners in Hospital Medicine. You were selected for this task because of your knowledge in this area of study and/or expertise in the development of scales for measuring in research.

At this time, I need your assistance in assessing the content validity of my new scale to measure the behavior of referring to palliative care among nurse practitioners in hospital medicine. This task involves rating the relevancy and clarity of each item to the concept of intention.

The following information is included:

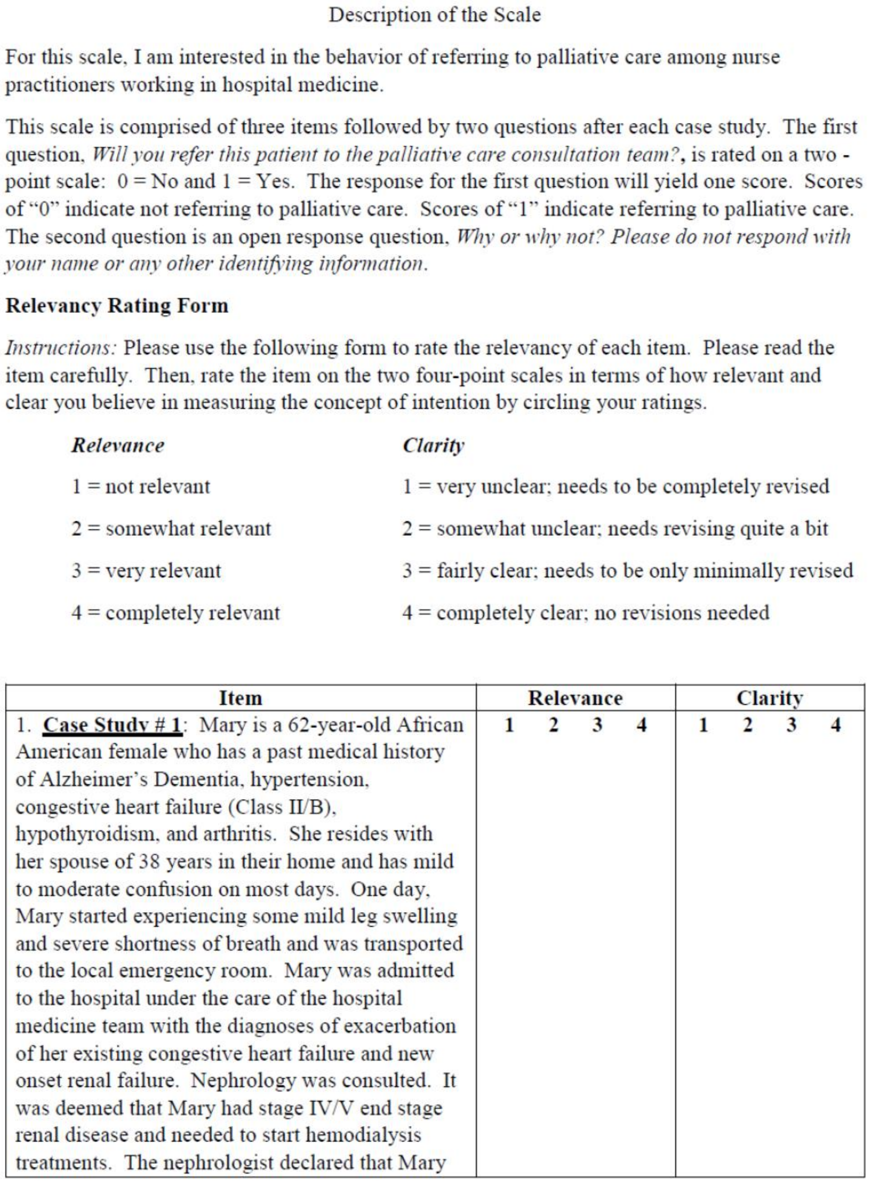
1. Description of the conceptual framework for scale development
2. Description of the scale
3. Form for rating item-relevancy
4. Form for rating clarity of each item

The procedure for the task is the following:

1. Read the description of the theoretical basis of scale development.
2. Using the rating form, rate each item as to its degree of relevance in measuring the concept of outcome expectations.
3. Note whether items are appropriate to measure intention to refer.
4. Make any suggestions you may have for the addition or deletion of items or for changes in the wording of items on the form itself.
5. Evaluate the instructions for the scale.
6. Evaluate the format of the scale.

Conceptual Framework for Scale Development

The Perceived Behavioral Control (PBC) construct of the Theory of Planned Behavior (TPB) formed the theoretical basis for the development of the instrument to measure the behavior of referring to palliative care. Ajzen (1991) defines perceived behavioral control as being the perceived ease or difficulty in performing the behavior and the self-efficacy of performing the behavior. Ajzen also notes that perceived behavioral control is expected to have both a direct impact on behavior and an *indirect* impact on behavior through its influence on behavioral intention. Perceived behavioral control, together with behavioral intention, directly predict behavioral achievement. For desirable behaviors, greater perceived behavioral control lead to stronger intentions and behavior performance. The TPB implies that intentions and perceptions of behavioral control interact in the prediction of behavior.



Description of the Scale

For this scale, I am interested in the behavior of referring to palliative care among nurse practitioners working in hospital medicine.

This scale is comprised of three items followed by two questions after each case study. The first question, *Will you refer this patient to the palliative care consultation team?*, is rated on a two - point scale: 0 = No and 1 = Yes. The response for the first question will yield one score. Scores of "0" indicate not referring to palliative care. Scores of "1" indicate referring to palliative care. The second question is an open response question, *Why or why not? Please do not respond with your name or any other identifying information.*

Relevancy Rating Form

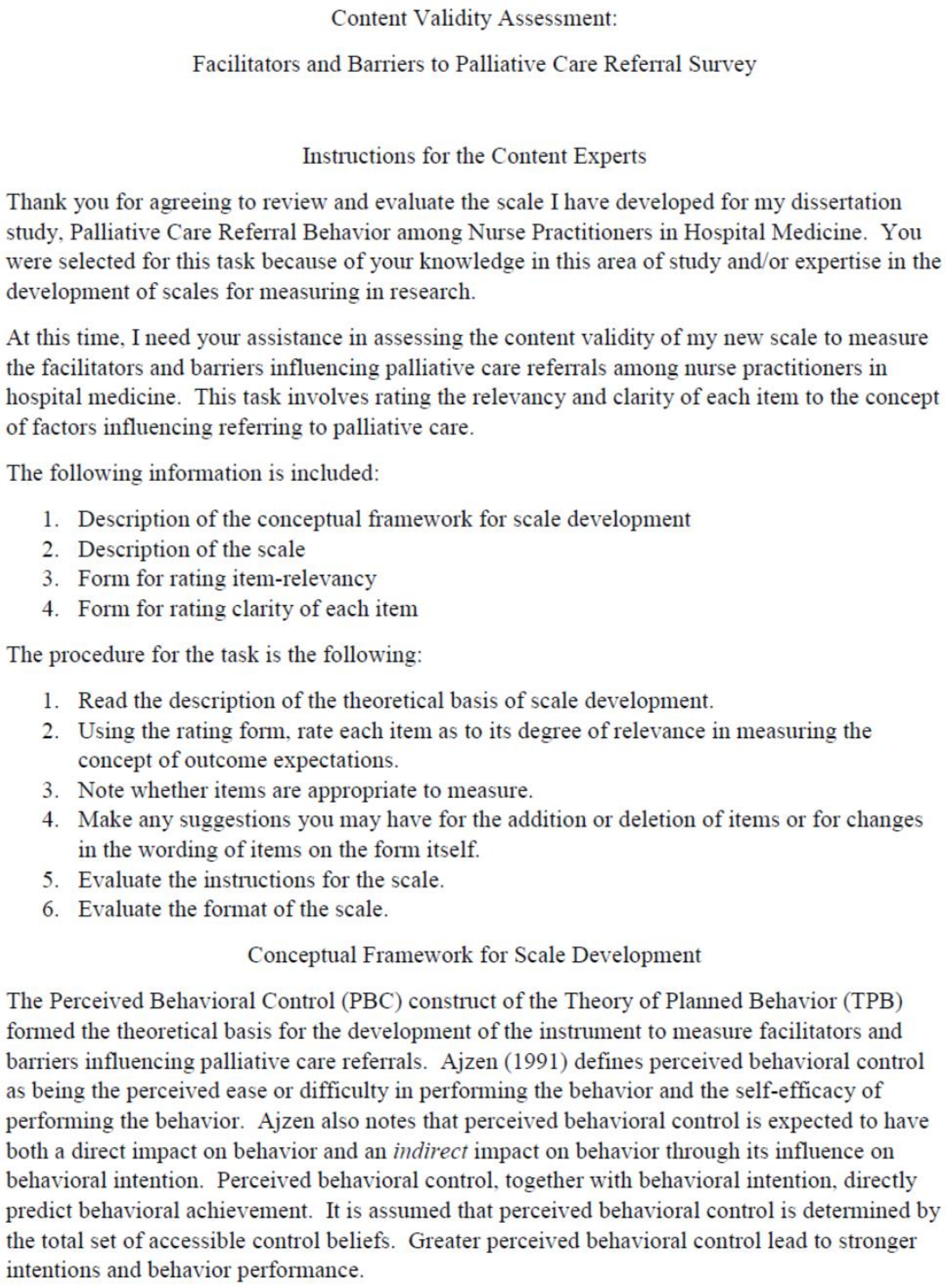
Instructions: Please use the following form to rate the relevancy of each item. Please read the item carefully. Then, rate the item on the two four-point scales in terms of how relevant and clear you believe in measuring the concept of intention by circling your ratings.

Relevance	***Clarity***
1 = not relevant	1 = very unclear; needs to be completely revised
2 = somewhat relevant	2 = somewhat unclear; needs revising quite a bit
3 = very relevant	3 = fairly clear; needs to be only minimally revised
4 = completely relevant	4 = completely clear; no revisions needed

Item	**Relevance**	**Clarity**
1. **Case Study # 1**: Mary is a 62-year-old African American female who has a past medical history of Alzheimer's Dementia, hypertension, congestive heart failure (Class II/B), hypothyroidism, and arthritis. She resides with her spouse of 38 years in their home and has mild to moderate confusion on most days. One day, Mary started experiencing some mild leg swelling and severe shortness of breath and was transported to the local emergency room. Mary was admitted to the hospital under the care of the hospital medicine team with the diagnoses of exacerbation of her existing congestive heart failure and new onset renal failure. Nephrology was consulted. It was deemed that Mary had stage IV/V end stage renal disease and needed to start hemodialysis treatments. The nephrologist declared that Mary	**1 2 3 4**	**1 2 3 4**

will need to remain on hemodialysis treatments for the rest of her life. The hospital medicine team and the nephrologist had a long discussion with Mary and her spouse about the risks and benefits of hemodialysis treatments. Mary and her spouse agreed that she would initiate hemodialysis treatments. A hemodialysis catheter was due to be placed in the patient on the next day to allow her to begin hemodialysis treatments. To begin hospital discharge planning, a hospital case manager worker would be meeting with Mary and her spouse later on that day to assist in arranging Mary's outpatient hemodialysis treatments.		
2. **Case Study # 2:** John, a 42-year-old salesman with a wife and two children, was just diagnosed with Parkinson's disease about six months ago. He has regular appointments with his outpatient neurologist. He presented to the hospital's emergency room two days ago with cough, body aches, fever, and low appetite. His emergency room work-up was negative for influenza but positive for pneumonia (via chest X-Ray). John was admitted to the hospital under the care of the hospital medicine team in order to receive a few days of intravenous antibiotics. His hospital plan of care was hopefully to be discharged home, but he had two days of just not eating. Although the pneumonia treatment regimen is going as planned, the hospital medicine team would like for the John to show some signs of improvement in his appetite before he is discharged home.	**1 2 3 4**	**1 2 3 4**
3. **Case Study # 3:** Samantha is a 36-year-old female who resides with her parents. She does not work due to her health. She does not have children. Samantha has multiple sclerosis (wheelchair bound), hypertension, and stage III colon cancer (receiving non-curative chemotherapy). Her next chemotherapy treatment is scheduled for tomorrow at the cancer infusion center. She presented to the local emergency room secondary to severe pain in her abdomen that could not be relieved with her home pain medications. Samantha was admitted to the	**1 2 3 4**	**1 2 3 4**

hospital under the care of the hospital medicine team for abdominal pain. Oncology will be consulted to assist the hospital medicine team in making sure her pain is not related to her cancer and to evaluate whether or not she can continue her cancer treatments while hospitalized. Samantha stated that she was aware that it is almost time to consider hospice care, and that she has discussed this with her oncologist. She would also like for her code status to remain that of FULL code until she elects hospice care in the near future.		



Content Validity Assessment:

Facilitators and Barriers to Palliative Care Referral Survey

Instructions for the Content Experts

Thank you for agreeing to review and evaluate the scale I have developed for my dissertation study, Palliative Care Referral Behavior among Nurse Practitioners in Hospital Medicine. You were selected for this task because of your knowledge in this area of study and/or expertise in the development of scales for measuring in research.

At this time, I need your assistance in assessing the content validity of my new scale to measure the facilitators and barriers influencing palliative care referrals among nurse practitioners in hospital medicine. This task involves rating the relevancy and clarity of each item to the concept of factors influencing referring to palliative care.

The following information is included:

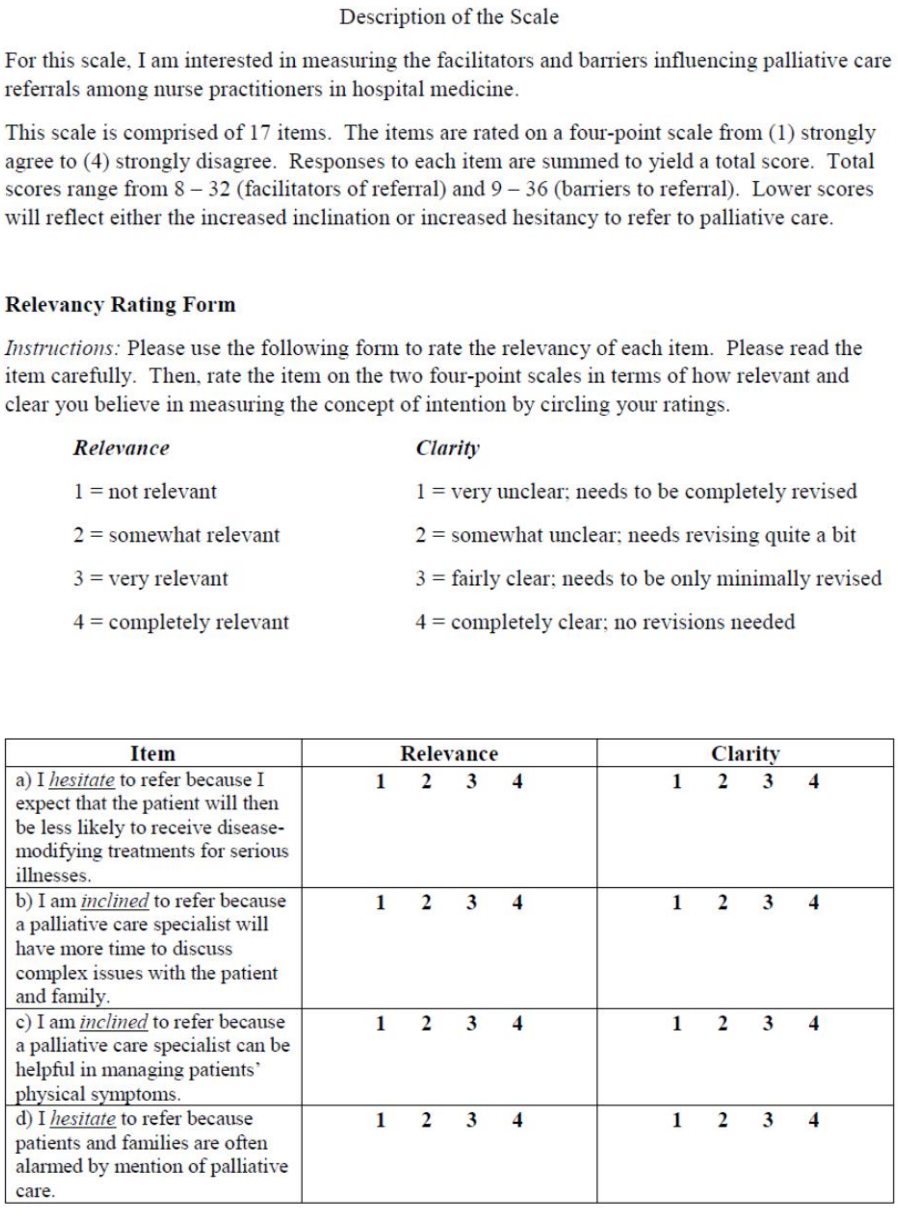
1. Description of the conceptual framework for scale development
2. Description of the scale
3. Form for rating item-relevancy
4. Form for rating clarity of each item

The procedure for the task is the following:

1. Read the description of the theoretical basis of scale development.
2. Using the rating form, rate each item as to its degree of relevance in measuring the concept of outcome expectations.
3. Note whether items are appropriate to measure.
4. Make any suggestions you may have for the addition or deletion of items or for changes in the wording of items on the form itself.
5. Evaluate the instructions for the scale.
6. Evaluate the format of the scale.

Conceptual Framework for Scale Development

The Perceived Behavioral Control (PBC) construct of the Theory of Planned Behavior (TPB) formed the theoretical basis for the development of the instrument to measure facilitators and barriers influencing palliative care referrals. Ajzen (1991) defines perceived behavioral control as being the perceived ease or difficulty in performing the behavior and the self-efficacy of performing the behavior. Ajzen also notes that perceived behavioral control is expected to have both a direct impact on behavior and an *indirect* impact on behavior through its influence on behavioral intention. Perceived behavioral control, together with behavioral intention, directly predict behavioral achievement. It is assumed that perceived behavioral control is determined by the total set of accessible control beliefs. Greater perceived behavioral control lead to stronger intentions and behavior performance.



Description of the Scale

For this scale, I am interested in measuring the facilitators and barriers influencing palliative care referrals among nurse practitioners in hospital medicine.

This scale is comprised of 17 items. The items are rated on a four-point scale from (1) strongly agree to (4) strongly disagree. Responses to each item are summed to yield a total score. Total scores range from 8 – 32 (facilitators of referral) and 9 – 36 (barriers to referral). Lower scores will reflect either the increased inclination or increased hesitancy to refer to palliative care.

Relevancy Rating Form

Instructions: Please use the following form to rate the relevancy of each item. Please read the item carefully. Then, rate the item on the two four-point scales in terms of how relevant and clear you believe in measuring the concept of intention by circling your ratings.

Relevance	***Clarity***
1 = not relevant	1 = very unclear; needs to be completely revised
2 = somewhat relevant	2 = somewhat unclear; needs revising quite a bit
3 = very relevant	3 = fairly clear; needs to be only minimally revised
4 = completely relevant	4 = completely clear; no revisions needed

Item	**Relevance**	**Clarity**
a) I *hesitate* to refer because I expect that the patient will then be less likely to receive disease-modifying treatments for serious illnesses.	**1 2 3 4**	**1 2 3 4**
b) I am *inclined* to refer because a palliative care specialist will have more time to discuss complex issues with the patient and family.	**1 2 3 4**	**1 2 3 4**
c) I am *inclined* to refer because a palliative care specialist can be helpful in managing patients' physical symptoms.	**1 2 3 4**	**1 2 3 4**
d) I *hesitate* to refer because patients and families are often alarmed by mention of palliative care.	**1 2 3 4**	**1 2 3 4**

e) I *hesitate* to refer because the role of the primary attending healthcare team then becomes less important.	**1 2 3 4**	**1 2 3 4**
f) I don't need to refer because I am able to address patients' palliative needs on my own.	**1 2 3 4**	**1 2 3 4**
g) I am *inclined* to refer because palliative care consultation can help decrease length of stay in the hospital.	**1 2 3 4**	**1 2 3 4**
h) I *hesitate* to refer unless death is imminent.	**1 2 3 4**	**1 2 3 4**
i) I am *inclined* to refer because a palliative care specialist can be helpful in establishing appropriate goals of care.	**1 2 3 4**	**1 2 3 4**
j) I *hesitate* to refer because most patients do not want to discuss prognoses related to serious illness.	**1 2 3 4**	**1 2 3 4**
k) I am *inclined* to refer because a palliative care specialist can help address patients' spiritual concerns.	**1 2 3 4**	**1 2 3 4**
l) I am *inclined* to refer because a palliative care specialist can help manage patients' emotional symptoms.	**1 2 3 4**	**1 2 3 4**
m) I *hesitate* to refer because there is so much uncertainty about a patient's prognosis.	**1 2 3 4**	**1 2 3 4**
n) I *hesitate* to refer because palliative care services are not routinely available when I need them.	**1 2 3 4**	**1 2 3 4**
o) I am *inclined* to refer because a palliative care specialist can be helpful in managing analgesic side effects.	**1 2 3 4**	**1 2 3 4**
p) I am most *inclined* to refer patient with serious illnesses and/or poor prognoses.	**1 2 3 4**	**1 2 3 4**
q) I *hesitate* to refer if I have not discussed with the collaborating/supervising physician.	**1 2 3 4**	**1 2 3 4**

Content Validity Assessment:

Self – Assessment of Confidence with End – Of – Life Discussions

Instructions for the Content Experts

Thank you for agreeing to review and evaluate the scale I have developed for my dissertation study, Palliative Care Referral Behavior among Nurse Practitioners in Hospital Medicine. You were selected for this task because of your knowledge in this area of study and/or expertise in the development of scales for measuring in research.

At this time, I need your assistance in assessing the content validity of my new scale to measure the confidence with end of life discussions among nurse practitioners in hospital medicine. This task involves rating the relevancy and clarity of each item to the concept of self-efficacy.

The following information is included:

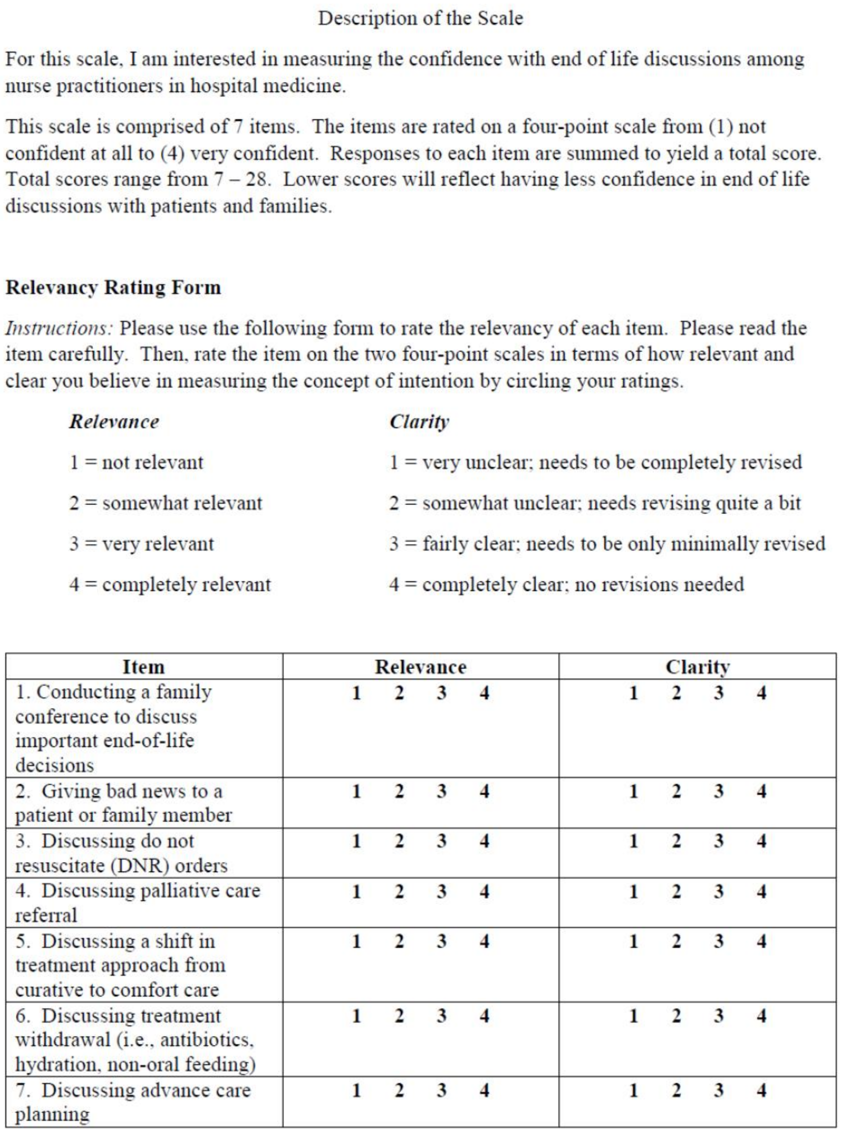
1. Description of the conceptual framework for scale development
2. Description of the scale
3. Form for rating item-relevancy
4. Form for rating clarity of each item

The procedure for the task is the following:

1. Read the description of the theoretical basis of scale development.
2. Using the rating form, rate each item as to its degree of relevance in measuring the concept of outcome expectations.
3. Note whether items are appropriate to measure comfort and confidence.
4. Make any suggestions you may have for the addition or deletion of items or for changes in the wording of items on the form itself.
5. Evaluate the instructions for the scale.
6. Evaluate the format of the scale.

Conceptual Framework for Scale Development

The Perceived Behavioral Control (PBC) construct of the Theory of Planned Behavior (TPB) formed the theoretical basis for the development of the instrument to measure comfort and confidence with end of life discussions. Ajzen (1991) defines perceived behavioral control as being the perceived ease or difficulty in performing the behavior and the self-efficacy of performing the behavior. Perceived behavioral control originates from the self-efficacy theory proposed by Bandura (from the social cognitive theory) (Bandura, 1977). According to Bandura, self-efficacy is the conviction that one can successfully execute the behavior required to produce outcomes. One's sense of self-efficacy can play a major role in how one approaches goals, tasks, and challenges.



Description of the Scale

For this scale, I am interested in measuring the confidence with end of life discussions among nurse practitioners in hospital medicine.

This scale is comprised of 7 items. The items are rated on a four-point scale from (1) not confident at all to (4) very confident. Responses to each item are summed to yield a total score. Total scores range from 7 – 28. Lower scores will reflect having less confidence in end of life discussions with patients and families.

Relevancy Rating Form

Instructions: Please use the following form to rate the relevancy of each item. Please read the item carefully. Then, rate the item on the two four-point scales in terms of how relevant and clear you believe in measuring the concept of intention by circling your ratings.

Relevance	***Clarity***
1 = not relevant	1 = very unclear; needs to be completely revised
2 = somewhat relevant	2 = somewhat unclear; needs revising quite a bit
3 = very relevant	3 = fairly clear; needs to be only minimally revised
4 = completely relevant	4 = completely clear; no revisions needed

Item	**Relevance**	**Clarity**
1. Conducting a family conference to discuss important end-of-life decisions	**1 2 3 4**	**1 2 3 4**
2. Giving bad news to a patient or family member	**1 2 3 4**	**1 2 3 4**
3. Discussing do not resuscitate (DNR) orders	**1 2 3 4**	**1 2 3 4**
4. Discussing palliative care referral	**1 2 3 4**	**1 2 3 4**
5. Discussing a shift in treatment approach from curative to comfort care	**1 2 3 4**	**1 2 3 4**
6. Discussing treatment withdrawal (i.e., antibiotics, hydration, non-oral feeding)	**1 2 3 4**	**1 2 3 4**
7. Discussing advance care planning	**1 2 3 4**	**1 2 3 4**

Appendix G

Demographics Information

Demographic Form

Study Title: Palliative Care Referral Behavior Among NPs in Hospital Medicine

Gender:

☐ Male ☐ Female

Race:

☐ African American/Black ☐ Caucasian/White ☐ Latino/Hispanic

☐ Asian/Pacific Islander ☐ Other

Age (in whole years): ____________________

Highest Level of Education:

☐ Masters ☐ Doctorate

Years in practice as a registered nurse: ______________________

Years in practice as a NP: ____________________

Type of NP: ☐ Pediatric ☐ Acute Care ☐ Family ☐ Adult - Gerontology

Years in practice as a *hospital medicine* NP: ____________________

Years employed at current hospital within hospital medicine: _____________

Location (state) of current employer in the United States: ____________

Type of Hospital Where Employed:

☐ Academic ☐ Non – Academic

Type of Patients You Typically Work With Where Employed:

☐ Children/Adolescents only ☐ Adults only ☐

Children/Adolescents/Adults

☐ Geriatrics only

Hospital Bed Size Where Employed:

☐ < 100 ☐ 100 - 199 ☐ 200 – 299 ☐ 300 – 399 ☐ 400 – 499

☐ 500 or more

Employment Status:

☐ Full Time ☐ Part Time

Have you ever worked in palliative care medicine?

☐ Yes ☐ No

<u>Have you had any formal palliative care training (curriculum or continuing education)?</u>

☐ Yes

☐ No

<u>Type of formal palliative care training?</u>

☐ N/A: No formal palliative care training

☐ Part of academic curriculum during NP program of study

☐ Continuing education (conference and/or independent study)

☐ Other: ________________________

<u>Length of formal palliative care training?</u>

☐ N/A: No formal palliative care training

☐ 1 Day Lecture: 1 topic w/past academic lecture

☐ 1 Academic Session: 1 academic course

☐ Academic track (in NP program or other)

☐ Less than 5 hours: >/= 1 separate continuing education sessions

<u>Have you had any previous employment at a hospital that had a palliative care consultation service?</u>

☐ Yes (***How long ago?* : __ < 1 year; __ 1 – 5 years; __ > 5 years**)

☐ No

<u>What was the length of time that has elapsed from previous employer with palliative care?</u>

☐ Less than 1 year

☐ 1 – 5 years

☐ Greater than 5 years

☐ N/A: Never worked with previous employer with palliative care

<u>What is the availability of the palliative care consultation team at your hospital?</u>

☐ 24/7 – in person

☐ 24/7 – hybrid of in person and by phone (after hours/weekends)

☐ M – F day shift only – in person

☐ Other

How many patients during an average work week do you refer to palliative care?

____

What/who helps you to refer patients to palliative care?

☐ Automatic Triggers/Pre-established criteria

☐ Self-Awareness that patient could benefit from referral

☐ Multidisciplinary team members, patients, and/or patients' families

What/who prevents from referring patients to palliative care?

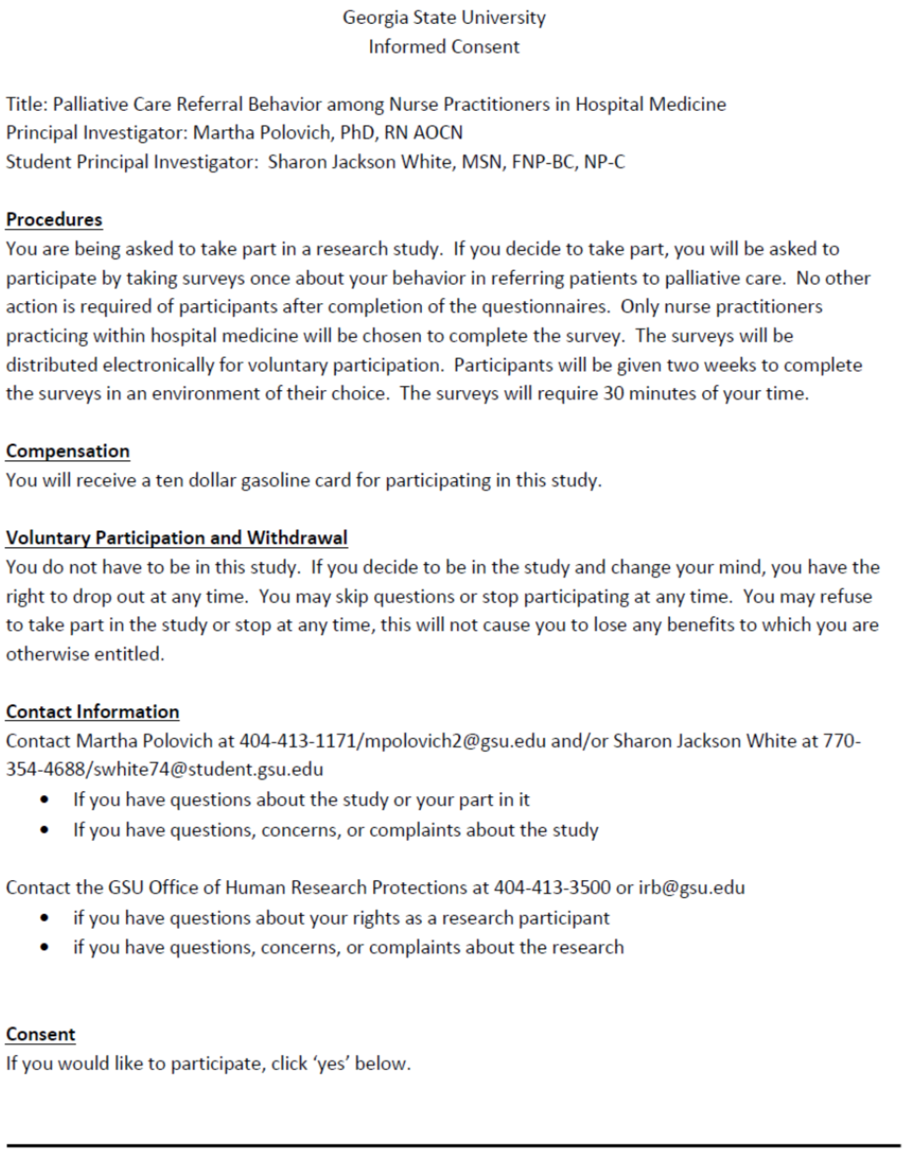
☐ Not aware of role of palliative care consultation teams

☐ Lack of availability of palliative care consultation team

☐ Multidisciplinary team members, patients, and/or patients' families

Appendix H

Informed Consent



Georgia State University
Informed Consent

Title: Palliative Care Referral Behavior among Nurse Practitioners in Hospital Medicine
Principal Investigator: Martha Polovich, PhD, RN AOCN
Student Principal Investigator: Sharon Jackson White, MSN, FNP-BC, NP-C

Procedures

You are being asked to take part in a research study. If you decide to take part, you will be asked to participate by taking surveys once about your behavior in referring patients to palliative care. No other action is required of participants after completion of the questionnaires. Only nurse practitioners practicing within hospital medicine will be chosen to complete the survey. The surveys will be distributed electronically for voluntary participation. Participants will be given two weeks to complete the surveys in an environment of their choice. The surveys will require 30 minutes of your time.

Compensation

You will receive a ten dollar gasoline card for participating in this study.

Voluntary Participation and Withdrawal

You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. You may refuse to take part in the study or stop at any time, this will not cause you to lose any benefits to which you are otherwise entitled.

Contact Information

Contact Martha Polovich at 404-413-1171/mpolovich2@gsu.edu and/or Sharon Jackson White at 770-354-4688/swhite74@student.gsu.edu

- If you have questions about the study or your part in it
- If you have questions, concerns, or complaints about the study

Contact the GSU Office of Human Research Protections at 404-413-3500 or irb@gsu.edu

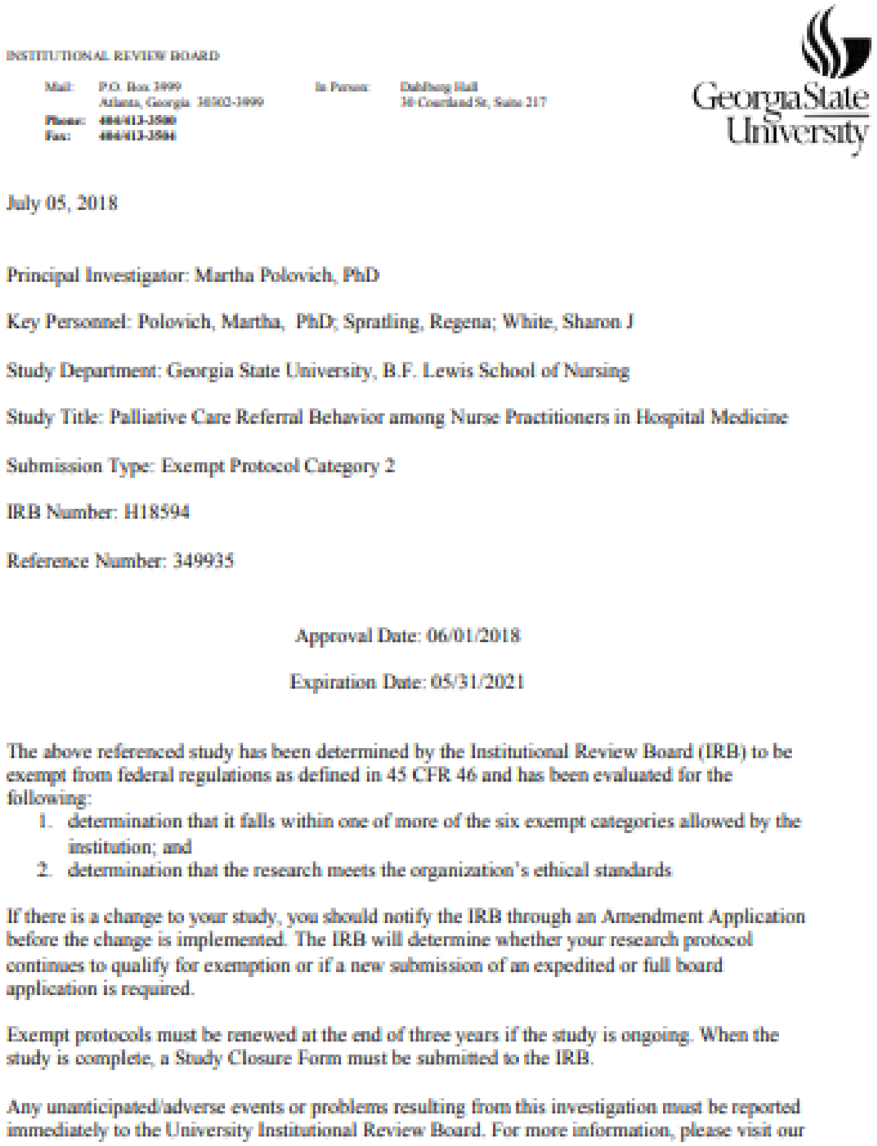
- if you have questions about your rights as a research participant
- if you have questions, concerns, or complaints about the research

Consent

If you would like to participate, click 'yes' below.

Appendix I

Institutional Review Board Approval



INSTITUTIONAL REVIEW BOARD

Mail: P.O. Box 3999
Atlanta, Georgia 30302-3999
Phone: **404/413-3500**
Fax: **404/413-3504**

In Person: Dahlberg Hall
30 Courtland St, Suite 217

July 05, 2018

Principal Investigator: Martha Polovich, PhD

Key Personnel: Polovich, Martha, PhD; Spratling, Regena; White, Sharon J

Study Department: Georgia State University, B.F. Lewis School of Nursing

Study Title: Palliative Care Referral Behavior among Nurse Practitioners in Hospital Medicine

Submission Type: Exempt Protocol Category 2

IRB Number: H18594

Reference Number: 349935

Approval Date: 06/01/2018

Expiration Date: 05/31/2021

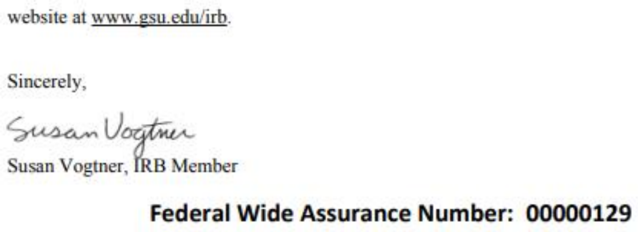
The above referenced study has been determined by the Institutional Review Board (IRB) to be exempt from federal regulations as defined in 45 CFR 46 and has been evaluated for the following:

1. determination that it falls within one of more of the six exempt categories allowed by the institution; and
2. determination that the research meets the organization's ethical standards

If there is a change to your study, you should notify the IRB through an Amendment Application before the change is implemented. The IRB will determine whether your research protocol continues to qualify for exemption or if a new submission of an expedited or full board application is required.

Exempt protocols must be renewed at the end of three years if the study is ongoing. When the study is complete, a Study Closure Form must be submitted to the IRB.

Any unanticipated/adverse events or problems resulting from this investigation must be reported immediately to the University Institutional Review Board. For more information, please visit our



website at www.gsu.edu/irb.

Sincerely,

Susan Vogtner

Susan Vogtner, IRB Member

Federal Wide Assurance Number: 00000129