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Factors Influencing Nurses' Willingness to Recommend Reiki for Their Oncology Patients' Pain

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Walden University
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Abstract

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MS, California University of Pennsylvania, 2015

BS, California University of Pennsylvania, 2011

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

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Abstract

Hospitalized, adult, oncology patients experience intractable pain that does not always respond to pharmacological therapies. Reiki is a complementary and alternative method used to reduce pain and increase the effectiveness of pharmacological treatments, but nurses may not possess knowledge about Reiki or have the self-efficacy to educate patients about Reiki. The purpose of this study, guided by Bandura's social cognitive theory, was to identify the relationship between nurses' knowledge, level of self-efficacy in educating their patients, beliefs about Reiki's effectiveness, years practicing as a nurse, and willingness to recommend Reiki for their oncology patients' pain. The Knowledge of Nurses' Questionnaire and the Self-Efficacy Questionnaire were administered to 86 participants who were oncology nurses. Data were analyzed using ordinal logistic regression revealing a significant relationship between nurses' beliefs in Reiki's effectiveness (*OR* = 27.174, 95% CI [2.356, 4.220]) and their willingness to recommend Reiki for their oncology patients' pain. Future research could include investigating perspectives about Reiki from other members of the health care team, such as physicians, advanced practice providers, physical therapists, occupational therapists, and nursing assistants, which would provide insights into their willingness to recommend Reiki for oncology patients' pain. Increasing nurses' beliefs in Reiki's effectiveness will increase their willingness to recommend Reiki for their patients, which contributes to positive social change by increasing the usage of Reiki that may help oncology patients control pain.

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Dedication

I would like to dedicate my dissertation to my Reiki Master Rebecca Hoelsken. Without her expert guidance, I would have never been introduced to Reiki and all of the positive benefits of the treatment. Rebecca is the leader of the Reiki program within the health system where I work. She trains practitioners who want to learn. She guides the group in providing this service to patients and staff members. Everyone truly appreciates the option of Reiki to patients' pain management regimens. The gift of Reiki has truly been an awakening and changed my life forever. I am forever grateful.

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Over the past five years I have received support and encouragement from a great number of individuals. Thank you to my husband Brian, who always supported and encouraged me. I would like to thank my first dissertation chair Dr. Cynthia Fletcher for the tremendous support and guidance with my proposal. I would also like to thank my second dissertation chair Dr. Leslie Hussey for the expertise and insight for helping me finish my dissertation. Thank you to Dr. Kelly Fisher for support over the past three years as I moved from an idea to a completed study. In addition, Dr. Zin Htway provided valuable statistical advice always in terms I could understand. I am forever grateful for the guidance and assistance throughout my dissertation journey.

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Chapter 1: Introduction to the Study

Hospitalized, adult, oncology patients experience a decreased quality of life due to intractable pain (Cormican & Dowling, 2017). The pain that oncology patients experience is complicated and does not always respond to pharmacological therapies (Rao et al., 2016). This places a burden on the health care practitioners to ensure adequate pain control among oncology patients. An average of 43% of oncology patients receive inappropriate care for their pain (Deandrea et al., 2008). Health care practitioners need to explore additional options for providing pain relief.

To manage oncology patients' pain, nurses must use pharmacological and nonpharmacological methods (Rao et al., 2016). Nurses are accustomed to pharmacological treatments, but nurses are less knowledgeable about a nonpharmacological complementary and alternative medicine (CAM) treatment, such as Reiki (Bjerså et al., 2012). Reiki is a holistic approach to balancing and restoring energy within the body (Doğan, 2018) and is reported to relieve pain for oncology patients (Zins et al., 2019). Nurses with a high level of knowledge of CAM treatments, such as Reiki, will be able to inform their patients about options to achieve better pain management.

The purpose of this quantitative descriptive study was to determine the relationship between nurses' knowledge, level of self-efficacy about their ability to educate their patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki for their oncology patients. This study had the potential for positive social change because the use of more Reiki among oncology patients has the possibility

to decrease the oncology patients' pain and increase their quality of life. In this chapter, I provide the background, problem statement, purpose of the study, research questions and hypotheses, theoretical framework, nature of the study, and significance.

Background

Pain felt by oncology patients is often extreme and debilitating. This pain is usually related to multiple facets of cancer and may not always respond to pharmacological therapies alone (Rao et al., 2016). Health care practitioners are tasked with finding alternative measures to ensure adequate pain relief in oncology patients. Approximately 43% of oncology patients receive inadequate care for their pain (Deandrea et al., 2008). Health care practitioners are responsible for discovering additional options for providing pain relief in oncology patients.

Some oncology patients use CAM in conjunction with conventional medicine for treatment. CAM are considered health care practices and products that have not been accepted as part of conventional medicine (Mullaaziz et al., 2019). One component of CAM reported to relieve pain for oncology patients is Reiki (Doğan, 2018). Participation in a Reiki session helps oncology patients decrease the duration and intensity of their pain and improve their quality of life (Alarcão & Fonseca, 2016; Buyukbayram & Saritas, 2020; Doğan, 2018; Rosenbaum & Van de Velde, 2016). Approximately 3% of multiple sclerosis patients report using Reiki to relieve their pain (Basak et al., 2014). Although Reiki is found to be effective, its use is low among patients; therefore, increasing patients' awareness of Reiki and its effectiveness in decreasing the duration and intensity

of pain may help to improve oncology patients' pain experience and overall quality of life (Rao et al., 2016; Stomski et al., 2018).

Nurses are the patients' primary contacts among health care professionals. Nurses have an integral role in managing pain among oncology patients (Rao et al., 2016). To manage oncology patients' pain, nurses use pharmacological and nonpharmacological methods (Rao et al., 2016). Nurses are accustomed to pharmacological treatments but are less knowledgeable about Reiki as a nonpharmacological, CAM treatment (Bjerså et al., 2012). Nurses working in surgical departments reported limited perceived knowledge about CAM (Shorofi & Arbon, 2017). Nurses who are knowledgeable about CAM will be better able to communicate more effectively with patients about this alternative mode of therapy.

Nurses' lack of knowledge about CAM, including Reiki, may contribute to poor communication about Reiki with patients (Bjerså et al., 2012). There is limited information in the literature about nurses' knowledge, understanding, and use of Reiki. Previous studies reported that 62% of nurses were knowledgeable about CAM, 66% of nurses had a positive attitude about CAM (Balouchi et al., 2018), and 38% of nurses responded correctly about Reiki's therapeutic effects (Trail-Mahan et al., 2013). However, nurses were shown to have insufficient knowledge of CAM as evidenced by 81.3% not having received any training on the subject (Görücü & Sayılan, 2021). Although 50% reported using CAM, only 11% were using either Qigong, Reiki, therapeutic touch, and/or magnets (Shorofi & Arbon, 2010). In addition, of the 66% of

nurses who reported using CAM (Balouchi et al., 2018), but only 3.2% were using healing touch and Reiki for their patients (Bjerså et al., 2012). Research about Reiki and the use of Reiki is limited. Those that are aware of Reiki as a nonpharmacological treatment were mostly practicing in areas other than oncology (Bjerså et al., 2012; Lipinski & Van De Velde, 2020).

Perceived self-efficacy is an individual's ability to perform based on their capability to implement tasks in order to achieve selected performances (Holloway & Watson, 2002). Nurses who have doubts about their perceived self-efficacy in educating their patients about CAM treatments, such as Reiki, may be hesitant to discuss this treatment option (Axboe et al., 2016). Nurses with a higher level of self-efficacy may feel more confident with their ability to educate patients about the benefits of CAM treatments, including Reiki (Coombs et al., 2016).

Previous researchers that investigated nurses' knowledge, understanding, and use of Reiki identified the need for further research to investigate factors that may account for nurses' willingness to recommend Reiki to their patients (see Zucchetti et al., 2019). The willingness to recommend Reiki to patients is impacted by nurses' lack of training and knowledge (Balouchi et al., 2018). This study addressed those gaps. Exploring these gaps had the potential to guide the development of programs that will increase nurses' ability to communicate competently with oncology patients to improve the nurses' use of Reiki.

Problem Statement

Oncology patients experience pain that is challenging and not always responsive to traditional pharmacologic measures. Health care practitioners have the responsibility of finding additional options for relieving pain among oncology patients. CAM is an alternative method of nonconventional treatments that is used in conjunction with conventional treatments to treat oncology pain (Mullaaziz et al., 2019). Reiki is a component of CAM that reduces pain and increases the effectiveness of traditional pharmacological treatments (Doğan, 2018; Rosenbaum & Van de Velde, 2016). Reiki use among patients is limited but increasing the use among patients will improve pain management among oncology patients.

Nurses are the primary contacts for their patients in the health care field. They establish relationships with their patients and are in the position to educate them about alternative options to decrease pain (Bjerså et al., 2012; Lipinski & Van De Velde, 2020). There is limited literature on nurses' knowledge of Reiki. Nurses need to be knowledgeable about Reiki to educate their patients about it, and nurses' communication with patients about Reiki may be impacted by their lack of knowledge (Bjerså et al., 2012).

Nurses need to have self-efficacy to educate their patients about Reiki. Their level of self-efficacy in educating their patients about Reiki will impact their willingness to recommend Reiki for oncology-related pain. Nurses with a higher level of self-efficacy may feel more confident with their ability to educate patients about the benefits of Reiki

(Coombs et al., 2016). Without the nurses' endorsement, patients will not be knowledgeable about Reiki and its effectiveness, which will impact oncology patients' ability to achieve relief from pain that traditional methods may not provide.

More studies are needed to determine additional factors that impact nurses' limited knowledge and willingness to recommend Reiki for their patients. More information is needed to determine whether nurses with limited training and education about Reiki are willing to recommend Reiki for their patients (Balouchi et al., 2018).

Purpose of the Study

The purpose of this quantitative descriptive study was to determine the relationship between nurses' knowledge, level of self-efficacy about their ability to educate their patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki for their oncology patients. I planned to use a quantitative regression analysis methodology to identify the extent to which these factors account for the nurses' willingness to recommend Reiki for their patients.

Research Questions and Hypotheses

The research questions and corresponding hypotheses for this study were:

RQ1: What is the relationship between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients?

$H_0$1: There is no relationship between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's

effectiveness, and willingness to recommend Reiki to manage pain in oncology patients.

H_a1: There is a relationship between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients.

RQ2: What is the relationship between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients based on years working as a nurse?

$H_0 2$: There is no relationship between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients based on years working as a nurse.

$H_a 2$: There is a relationship between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients based on years working as a nurse.

Theoretical Framework for the Study

The theoretical base for this study was Bandura's social cognitive theory. Bandura's (2004) social learning theory was originally created in 1963 and further

developed in 1977 to explain how an individual's beliefs regarding their own abilities or confidence has an impact on their ability to perform tasks (Qiao et al., 2014). The social learning theory is now known as the social cognitive theory (Alligood, 2014). In research, this theory has been used to determine the link between task performance, motivation, and self-efficacy (Iroegbu, 2015). In this study, I examined the extent to which the nurses' knowledge of Reiki, beliefs of Reiki's effectiveness, and self-efficacy to educate patients about Reiki influenced their task performance, which is their ability to recommend Reiki for their patients.

In the social cognitive theory, Bandura (2004) indicated that self-efficacy drives a person's ability to perform a task or reach a goal. Nurses who have high levels of self-efficacy identify with positive outcomes and those with low levels of self-efficacy experience difficulties in succeeding (Bandura, 2004). The level of nurses' self-efficacy about their ability to educate their patients about Reiki impacts the extent to which their knowledge and beliefs influences their willingness to recommend Reiki for their patients. Nurses may have the knowledge about Reiki and may believe that Reiki is effective, but unless they have belief in their ability to educate their patients about Reiki, they may not be willing to recommend Reiki for their patients. Nurses who are knowledgeable about Reiki are expected to have high efficacy expectations to accurately inform their patient about the benefits of Reiki.

Bandura's (2004) social cognitive theory provided a framework to explain the extent to which nurses' level of self-efficacy will influence the extent to which their

knowledge and beliefs about Reiki's effectiveness determine their willingness to educate patients about Reiki and recommend Reiki treatments to manage pain in oncology patients. More detail on Bandura's social cognitive theory will be presented in Chapter 2.

Nature of the Study

I used a quantitative regression design to determine if there was a linear equation that predicted the predictor variables (PVs) and the outcome variable (OV; see Sheposh, 2018). I used this design to investigate whether there is an association between nurses' knowledge of Reiki (PV), self-efficacy in educating patients about Reiki (PV), and beliefs about the efficacy of Reiki (PV) and their willingness to recommend Reiki to manage pain in oncology patients (OV). Using a regression design helped me discover how nurses' knowledge of Reiki and their self-efficacy in educating patients about Reiki impacts their willingness to recommend Reiki to their patients. The multiple regression design was appropriate to identify the linear relationship between the PVs and OV.

I collected data from surveys mailed to oncology nurses that are members of a professional society of oncology nurses. Nurses followed a link that directed them to a Survey Monkey questionnaire. I used Statistical Package for Social Sciences (SPSS) to analyze the results of the study.

Definitions

CAM: Nontraditional health care practices outside conventional medicine (Cooke et al., 2012). The American National Centre for Complementary and Alternative Medicine believes that CAM encompasses the following characteristics: (a) mind-body

interventions (i.e., meditation), (b) biologically based interventions (i.e., vitamins, minerals, herbal medicines, and nutritional supplements), (c) body-based interventions (i.e., massage), (d) energy-based interventions (i.e., Reiki), and (e) alternative medical systems (i.e., Chinese medicine; Cooke et al., 2012).

Reiki: A practice of balance and energy replacement within the body through emplacement of hands (Bessa, 2017). This holistic approach to health and wellness contributes to the production of deep relaxation, energy release, and harmonization within.

Self-efficacy: The ability and confidence to perform a task (Iroegbu, 2015).

Assumptions

I based this study on the assumption that the participating nurses would have some experience working as a registered nurse with oncology patients. Another assumption was that the nurses responding to the survey would answer truthfully. I also assumed that participants would understand their identity would be kept anonymous and they would not fear repercussions or shame from their answers. My final assumption was that the questionnaires would measure the variables that it reported to measure.

Scope and Delimitations

I selected a quantitative regression design to determine if there was a linear equation that predicted the PVs and the OV (see Sheposh, 2018). An experimental design was not considered because it was not necessary to control the variables to accompany this study. Nurses were the only members of the health care field that participated in the

survey. A delimitation of the study is that the nurses must have some experience caring for oncology patients. Nurses taking care of patients in other populations (e.g., pediatrics and obstetrics) were not included.

I chose to use Bandura's social cognitive theory to guide this study. The social cognitive theory correlates successful actions with having self-efficacy (Bandura, 2004). I incorporated this theory to determine whether self-efficacy impacts nurses' willingness to recommend Reiki. Another theory I considered using was the health belief model. This model is associated with a person's view of a health problem as a threat and the accompanying appraisal of a recommended behavior for preventing or managing a problem (McEwen & Wills, 2014). This model was not a suitable fit for this study because it focuses on individuals acting out of fear, while the social cognitive theory stems from the view that people perform based on their beliefs. Considering the variables in the current study, Bandura's social cognitive theory was more appropriate.

I used a regression analysis to explain how the PVs influence variation in the value of the OV. I investigated the extent to which factors such as nurses' knowledge, level of self-efficacy about their ability to educate their patients about Reiki, and beliefs about Reiki's effectiveness will affect their willingness to recommend Reiki for their oncology patients. The results of the study also indicated if the nurses' years of practice as a nurse is a factor in their willingness to recommend Reiki for their oncology patients.

Limitations

There were both internal and external limitations associated with this study. I used a purposive sample to select participants; therefore, only nurses that were members of the professional society of oncology nurses were selected for inclusion in this study. This purposive sample limits the generalization of the findings. In this study, I used a descriptive, correlational design to identify factors that predict nurses' willingness to recommend Reiki for their oncology patients. One limitation of this design is that it does not determine a cause-and-effect relationship between the variables (Grove et al., 2013). There is a lack of prior research that assesses nurses' knowledge and use of Reiki, and although this was a barrier, it provided the opportunity for further exploration.

As a Reiki practitioner, I have personally witnessed the positive effects it can have. My personal outlook had the potential to introduce bias into the study because of my passion to educate oncology nurses about Reiki. Another limitation was that anyone that had not heard of Reiki or CAM had the potential to inquire about these treatments before taking the survey. Including education materials in the recruitment flyer may have affected the internal validity of the study, so it was imperative to limit education about Reiki when mailing research subjects to reduce the chance the internal validity would be compromised.

Significance

Reiki is a holistic approach reported to relieve pain and increase comfort and quality of life for oncology patients (Alarcão & Fonseca, 2016; Doğan, 2018; Rosenbaum

& Van de Velde, 2016). Nurses are the primary caregivers for oncology patients, and they report limited self-efficacy with and knowledge of Reiki, leading to reluctance to recommend the practice to their patients (Hall et al., 2018). Therefore, increasing nurses' knowledge of complementary assistive therapies will allow them to provide their oncology patients with advice and knowledge of alternative treatment options (Klafke et al., 2016).

The results of this study have the potential for positive social change for patients and nurses and address the need for further education on Reiki for the treatment of oncology pain. Understanding the factors that affect nurses' knowledge about Reiki, their self-efficacy for educating patients about Reiki, and their beliefs about Reiki's effectiveness can guide the development of programs to increase nurses' ability and willingness to recommend Reiki for their oncology patients. Increasing nurses' willingness to recommend Reiki treatments for their patients with oncology pain will increase patients' knowledge about the availability of this alternative treatment so they are able to consider this treatment as an option to decrease their intractable pain and increase their quality of life.

Summary

Oncology patients experience intractable pain related to their diagnoses (Cormican & Dowling, 2017). Traditional treatments alone are ineffective in treating oncology-related pain (Rao et al., 2016). Reiki is a nontraditional therapy that is effective in managing pain among oncology patients (Zucchetti et al., 2019). Oncology nurses'

knowledge of Reiki is limited; therefore, patients are not receiving education and recommendations that could help with their pain, which has the potential to impact the frequency that patients are using Reiki.

In this study, I examined the extent to which nurses' knowledge, level of self-efficacy about their ability to educate their patients about Reiki, and beliefs about Reiki's effectiveness will affect their willingness to recommend Reiki for their oncology patients. I used Bandura's social cognitive theory as the theoretical framework in the study to determine the link between task performance, motivation, and self-efficacy in recommending Reiki for their patients. A quantitative regression design was used to determine the relationship among the variables. This study addressed the gap in the literature to guide educational programs to increase nurses' knowledge of Reiki.

Chapter 2 will contain the literature review and more information about the theoretical foundation of the study.

Chapter 2: Literature Review

The majority of oncology patients experience tremendous pain related to their disease process, and traditional pharmacologic measures alone may be ineffective in treating oncology pain alone. Oncology patients sometimes experience better pain relief with the use of nonpharmacologic treatments, such as Reiki (Doğan, 2018).

Nurses are the frontline contact for their patients in the health care field. They form trusting relationships with their patients and can provide education about nontraditional pain management, such as Reiki. Nurses have less knowledge about Reiki as a nonpharmacological treatment than they have about traditional treatments (Bjerså et al., 2012). Nurses need to possess the knowledge about CAM and Reiki to be able to educate their patients and recommend treatment. In addition to having adequate knowledge of Reiki, nurses need to have self-efficacy for educating their patients about Reiki. Their self-efficacy in educating their patients about Reiki will impact their willingness to recommend Reiki for oncology-related pain. Additional research was needed to investigate factors that may account for nurses' limited knowledge of and reluctance to recommend Reiki to their patients and to understand nurses' knowledge, attitude, and practice of using or recommending Reiki.

The purpose of this quantitative descriptive study was to determine the relationship between nurses' knowledge, level of self-efficacy about their ability to educate their patients about Reiki, beliefs about Reiki's effectiveness, and willingness to

recommend Reiki for their oncology patients. In this chapter, I provide an overview of the literature review, theoretical foundation, and key variables of the study.

Literature Search Strategy

To conduct this literature review, I used the Walden University Library and searched the nursing subject in the Cumulative Index to Nursing & Allied Health Literature, ProQuest, and MEDLINE databases. I located recent articles in multiple fields, including pediatrics, obstetrics, cardiovascular, family health, and integrative medicine. The keywords I used for these searches were: (a) *Reiki,* (b) *pain,* (c) *oncology,* (d) *nurses' knowledge about complementary and alternative medicine,* (e) *nurses' knowledge about Reiki,* (f) *self-efficacy and nursing,* (g) *barriers and complementary and alternative medicine or CAM,* (h) *Reiki use,* (i) *frequency,* and (j) *Bandura self-efficacy.* I also used Google Scholar, again accessed through the Walden University Library, to search for recent, peer-reviewed articles. For this database, I searched the following keywords: (a) *Reiki,* (b) *pain,* (c) *oncology,* (d) *nurses knowledge about complementary and alternative medicine,* (e) *role of self-efficacy and behavior change,* (f) *nurses' knowledge about Reiki,* (g) *self-efficacy and nursing,* (h) *nurses' knowledge about complementary and alternative medicine or CAM,* (i) *nurses are more comfortable utilizing traditional methods to reduce pain,* (j) *barriers and complementary and alternative medicine or CAM,* (k) *Reiki use,* (l) *frequency,* and (m) *Bandura self-efficacy.*

In this peer-reviewed literature review, I included articles published in multiple different date ranges. The term *nurses' knowledge of Reiki* was searched for the

publication years of 2004-2022. The rest of the search terms were used for sources published between the years of 2014-2022. In recent years, Reiki research has been limited; therefore, I searched for older articles and articles that focused on CAM. In articles about Reiki as a type of CAM, Reiki was grouped with other treatments, such as massage and Qigong, which limited the ability to study Reiki alone. The seminal literature review covered a large date range to capture the information needed for the study. I searched for studies using Bandura's self-efficacy theory that were published during the date ranges of 2016-2022. I searched self-efficacy and behavior change for the period of 1990-2022.

The total articles obtained for all the search terms was 19,103. I excluded articles that included children, pediatrics, and human immunodeficiency virus. Of the total number of articles, 48 related to an understanding of the concepts in this study.

Theoretical Foundation

Bandura's social cognitive theory was the theoretical base for this study. Bandura's (2004) social cognitive theory was originally known as the social learning theory. Bandura's social cognitive theory was created in 1963 and further developed in 1977 to explain how an individual's beliefs regarding their own abilities or confidence impacts their ability to perform tasks (Qiao et al., 2014). The social cognitive theory includes the idea that in order to have a behavior change, cognitive processes are required (Alligood, 2014). The social cognitive theory was based on knowledge, perceived self-efficacy, and outcome expectations (Bandura, 2004). Nurses with high levels of self-

efficacy identify with positive outcomes and those with low levels of self-efficacy experience difficulties in succeeding (Bandura, 2004). Nurses may be knowledgeable about Reiki and may believe that Reiki is effective, but unless they have belief in their ability to educate their patients about Reiki, they may not be willing to recommend Reiki for their patients. Nurses that have a high level of knowledge about Reiki are expected to have high self-efficacy to accurately inform their patients about the benefits of Reiki.

The social cognitive theory has been used in current research to determine whether self-efficacy plays a role in mediating outcomes. For example, Young et al. (2016) conducted a study of overweight and obese adult males using self-efficacy, and Como (2018) conducted a study to determine whether health literacy, self-efficacy, and medication adherence can predict the variance in health outcomes in persons with chronic heart failure. Significant associations between health literacy and self-efficacy and between health literacy and perceived mental health status were found (Como, 2018). Heart failure patients with greater self-efficacy have improved health statuses.

Masoompour et al. (2017) conducted a study to investigate the relationship between health literacy, self-efficacy, and self-care behaviors in diabetic patients. The results showed a significant relationship between health literacy and self-efficacy, and with health literacy and self-care behaviors. Nurses are recommended to develop and implement simple educational interventions to increase self-efficacy and health literacy, which will promote self-care behaviors.

Farkas and Jang (2019) studied eighth grade students to increase participants' reading comprehension and reading motivation. They found that utilization of the social constructivism and social cognitive theories in the curriculum improved participants' reading comprehension and reading motivation.

Jeihooni et al. (2016) investigated use of the health belief model and social cognitive theory for osteoporosis preventive nutritional behaviors in women. They distributed a questionnaire that focused on the health belief model as well as the concepts of self-regulation and social support from the social cognitive theory to measure nutrition performance. The experimental group partook in 10 educational sessions, group discussion, and question-and-answer sessions as well as viewed educational posters and pamphlets, film screenings, and PowerPoint presentations. The experimental group showed a significant increase in the health belief model constructs; self-regulation, social support, and nutritional performance; and a corresponding increase in the bone density to prevent osteoporosis.

I selected the social cognitive theory for use in this study because of the assumption that self-efficacy would influence the extent to which an individual will perform a task. Bandura's self-efficacy theory provided a framework with which to explain the extent to which nurses' level of self-efficacy will influence the extent to which their knowledge and beliefs about the Reiki's effectiveness determine their willingness to educate patients about Reiki and recommend Reiki treatments to manage pain in oncology patients. I designed the research questions and hypotheses to determine

the extent to which self-efficacy impacts nurses' willingness to educate and recommend Reiki for their oncology patients' pain.

Literature Review Related to Key Variables and/or Concepts

In this study, I determined the extent to which nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, and their beliefs about the efficacy of Reiki impact their willingness to recommend Reiki for pain to oncology patients. This section of the literature review focuses on Reiki as well as nurses' knowledge of Reiki, self-efficacy with Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki. These topics were relevant because they provided recent scholarly information for answering the research questions.

Oncology Patients

Oncology patients are classified as any patient who has been diagnosed with any type of cancer. In 2019, there were an estimated 1,762,450 new cancer diagnoses and 606,880 cancer deaths in the United States (American Cancer Society, 2019). This is a slight decrease from the 1,735,350 new cases and 609,640 deaths in 2018 (National Cancer Institute, 2018). This unique group of patients require increased care and consideration. With such a large portion of the U.S. population being diagnosed with cancer, special attention and resources should be allotted to this group of patients.

Oncology patients frequently experience pain related to their disease process that may decrease their quality of life. Oncology pain may occur when tumor growth causes an organ to stretch; additional pain may occur when a tumor metastasizes to bone, the

spinal cord, or a nerve (Lawrence, 2018). Oncology patients undergoing surgery, radiation therapy, chemotherapy, a bone marrow transplant, or hormonal therapy can experience a variety of types and degrees of pain that may progress after a treatment is complete (Lawrence, 2018). Chemotherapy is a well-known treatment for cancer and its common side effects include fatigue, myalgia, nausea, diarrhea, peripheral neuropathy, and neutropenia (Johnsson et al., 2019).

Management of Pain in Oncology Patients

The pain that oncology patients experience is multifaceted and does not always respond to pharmacological therapies (Rao et al., 2016). This places a burden on the health care practitioners to ensure adequate pain control among oncology patients. Each oncology patient needs to have individualized plans for managing the symptoms related to their cancer and its treatment. For some patients, pharmacological (i.e., traditional) treatment is sufficient in treating pain, while other patients need the help of nonpharmacological (i.e., nontraditional) treatments (Mahfudh, 2011). An average of 43% of oncology patients receive inappropriate care for their pain because traditional treatment alone is not effective (Deandrea et al., 2008). Health care practitioners need to explore additional options such as CAM for providing pain relief.

CAM

Traditional medicine is the type of medical treatments and treatment plans that are prescribed by physicians. These are the types of treatments that the general public is accustomed to using. Nontraditional medicine is the type of medicine or treatments that

are outside of traditional medicine. CAM is a method of treatment that is considered nontraditional. CAM is multifaceted with five different categories: (a) whole medical systems, (b) mind-body therapies, (c) biologically based therapies, (d) manipulative and body-based therapies, and (e) energy healing therapies (Kim et al., 2018). Patients using CAM reported a higher quality of life than non-CAM users (Kim et al., 2018). Patients use CAM for treatment of various illnesses in conjunction with traditional treatments (Mbizo et al., 2016; Stromski et al., 2018; Wode et al., 2019). Some of the patient groups using CAM are patients with cancer, hemodialysis, arthritis, human immunodeficiency virus, musculoskeletal disorders, cesarean section, and a high body mass index (Mbizo et al., 2016; Stromski et al., 2018; Wode et al., 2019).

Use of CAM is limited among oncology patients. The Centers for Disease Control and Prevention reported that in the past year, 35% of people with a cancer diagnosis have used CAM (Clarke, 2018). Twenty-eight percent of oncology patients reported using CAM (Kim et al., 2016). Sárváry and Sárváry (2019) reported that 53% of 135 women with breast cancer used CAM before diagnosis and 84% used CAM during therapy, while Alfano et al. (2014) found that 50% of women with metastatic breast cancer reported using CAM to treat cancer and/or its symptoms. Better communication among oncology patients and their health care team will improve CAM use and its perception of efficacy (Cooke et al., 2012; Kim et al., 2016).

Reiki

Reiki is a type of CAM that uses energy healing to promote well-being and decrease pain among oncology patients (Doğan, 2018). Reiki treatments are performed by a practitioner who redirects energy from the universe to balance the energy flow in an individual, encouraging the body to heal itself (Baldwin et al., 2017; Buyukbayram & Saritas, 2020; Doğan, 2018). There are three levels of Reiki practitioners: (a) first level Reiki practitioners are able to balance their own energy, (b) second level can send Reiki energy to other people, and (c) the third or mastery level can teach new practitioners (Doğan, 2018).

Energy healing therapies such as Reiki have statistically significant outcomes in reducing oncology pain (Baldwin et al., 2017; Cormican & Dowling, 2017; Meissner & Koch, 2015; Midilli & Gunduzoglu, 2016; Notte et al., 2016; Rao et al., 2016; Selfridge, 2015; Zins et al., 2019; Zucchetti et al., 2019;). A synthesis review of 13 studies investigating the use of Reiki by patients with pain indicated that eight studies showed Reiki was more effective than the placebo, four studies found no difference, and one study posited that Reiki provided no benefit (McManus, 2017). The differences between these studies may be attributed to including four randomized, single-blind studies; seven randomized, double-blind studies with human participants, and two studies using rats (McManus, 2017).

Patients have reported feeling an overall sense of well-being after Reiki treatments (Bessa et al., 2016). In a study of 135 patients with breast cancer, 0.7% of

patients were using Reiki 12 months before diagnosis, and 3% were using Reiki during chemotherapy and radiation (Sárváry & Sárváry, 2019). However, oncology patients using Reiki reported significantly less pain and overall better quality of life (Alarcao & Fonseca, 2015; Doğan, 2018; Rosenbaum & Van de Velde, 2016). Although there is limited use of Reiki, oncology patients using Reiki report significantly less pain.

Nurses' Knowledge About Reiki. In the health care field, many people rely on nurses' knowledge and their ability to perform within their role. Competent nurses are knowledgeable about patients' conditions, medications, treatments, and a plan for their patients' recoveries (Franklinet al., 2020). A literature review of 15 different studies was conducted to determine nurses' knowledge and attitudes about CAM in clinical practice which showed that 66% of nurses had positive attitudes, 77% did not understand the risks and benefits, and 47-68% reported feeling uncomfortable discussing CAM with their patients (Chang & Chang, 2015). Sixty percent of 270 nurses claimed to have knowledge of CAM but only 18% replied that they would like more education about Reiki (Zanini et al., 2008). Ninety-eight percent of 181 nurses did not know about Reiki (Tercan & Saritas, 2017).

Nurses' knowledge of Reiki is studied much less than CAM in general. In studies investigating nurses' knowledge about Reiki, 38% of nurses responded correctly about Reiki's therapeutic effects (Trail-Mahan et al., 2013) and 42% reported not having any knowledge of Reiki (Shorofi & Arbon, 2010). Furthermore, Out of 300 nurses, zero nurses claim to have knowledge and used Reiki (Görücü, & Sayılan, 2021). Knowledge

of Reiki is necessary for the nurses to be competent in incorporating Reiki into their plan of care. This may limit the nurses' ability to incorporate Reiki into the plan of care for their oncology patients. What nurses believe about treatments such as Reiki depends on their knowledge and experiences with such treatments.

Nurses' Beliefs About Reiki. Although nurses operate by nurse practice models, they still think independently and have their own individualized preferences and beliefs. Nurses need to believe that Reiki is an effective treatment in order to recommend it for their patients. Nurses that have tried Reiki report feeling calmer (Vitale, 2009). When nurses were taught Reiki for self-care, they had a positive change in the perceptions of their own caring behaviors (Simons, 2017). Nurses receiving Reiki therapy reported experiencing a better quality of life based on having a better balance of physical, mental, emotional, and spiritual states (Freitag et al., 2018). Nurses with more knowledge and experience with Reiki may be more willing to recommend Reiki for their patients (Lipinski & Van De Velde, 2020). Nurses that believe that Reiki is effective for their own care may be able to properly endorse the treatment for their patients.

Nurses' Self-Efficacy in Educating Patients About Reiki. Self-efficacy is essential when performing any task successfully (Iroegbu, 2015) which a person to visualize the ability to achieve their goals. Bandura (1997) as cited in Iroegbu (2015) believed that the level of self-efficacy a person has depends on their own judgement of their ability to achieve or accomplish an action and supports the importance of a determinant for behavioral performance. People with higher levels of self-efficacy are

much more likely to believe that they can achieve their goals (Masoompour et al., 2017).

Self-efficacy is an important determinant of whether a person is going to have the confidence to carry out a task (Holloway & Watson, 2002). The higher the nurses' self-efficacy, the more confident the nurse will feel in educating their patients about Reiki. Having a high level of self-efficacy and knowledge about Reiki will empower nurses to communicate with their patients about Reiki and may make them willing to recommend Reiki for their patients. Believing that they have the self-efficacy to educate their patients is an important requisite; however, this must be accompanied with the knowledge about Reiki to effectively communicate with their patients about the therapy (Hall et al., 2018).

Summary and Conclusions

A literature search was completed using various databases and keywords that produced information about the concepts of interest to the study. There is a high number of people in the United States diagnosed with cancer each year. People with cancer experience a high level of pain related to their disease process and treatments. The intractable pain oncology patients face is not always effectively treated by traditional treatments. A nontraditional treatment such as Reiki is an effective method for treating oncology related pain in addition to traditional medicine. Although Reiki is effective, its use is low among oncology patients. Nurses are the patients' primary contact in the health care field. The literature shows that nurses' knowledge of Reiki is limited. Nurses having better knowledge of Reiki will enable them to provide their patients with more

information about Reiki. Nurses need to believe that Reiki is effective to validate the treatment as being vital to decreasing pain.

I used Bandura's social cognitive theory as the foundation for the study. The social cognitive theory is based on knowledge, perceived self-efficacy, and outcome expectations (Bandura, 2004). A person's ability to perform a task is based on their self-efficacy. Nurses having a high level of self-efficacy may have the potential to feel confident to accurately inform their patients about the benefits of Reiki and be willing to recommend Reiki treatments. Nurses who are empowered to communicate with their patients about the use of Reiki to manage their pain have the potential to decrease pain in the oncology population.

Chapter 3 will include information about the research design and methodology of my study.

Chapter 3: Research Method

The purpose of this quantitative descriptive study was to determine the relationship between nurses' knowledge, level of self-efficacy about their ability to educate their patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki for their oncology patients. In Chapter 3, I describe how the research design, methodology, and data analysis process relate to the study's purpose. The threats to the validity of the study are also discussed.

Research Design and Rationale

I used a descriptive, correlational, nonexperimental design. This design was appropriate because variables were not being manipulated (see Grove et al., 2013). The quantitative approach was appropriate because the participants were surveyed using a Likert-type scale. The independent variables were nurses' knowledge of Reiki, self-efficacy in educating their patients about Reiki, and beliefs in Reiki's effectiveness. The dependent variable was nurses' willingness to recommend Reiki for their oncology patients with a covariance of years practicing as a nurse. The research questions address whether a relationship exists between the variables.

In this research design, I used two questionnaires to measure the variables in the study. The information for this study was best gathered using a survey method because it allowed for data collection among the population studied. I collected survey data to determine whether a relationship exists between variables. Additional data were collected to determine whether years practicing as a nurse is an associated factor. The willingness

of nurses to recommend Reiki to patients is impacted by nurses' lack of training and knowledge of the topic (Balouchi et al., 2018). The results of this study add knowledge to the discipline by determining whether there is an association between the variables and the need for further education for nurses about CAM treatments such as Reiki.

Methodology

Population

The population of the study was oncology nurses (N = 86). Oncology nurses have experience caring for oncology patients either in the hospital or in outpatient settings. Nurses of all experience levels were included in the study if they had any experience working in oncology. I received permission from a professional society of oncology nurses to use a list of their members. Postcards were sent to the members of a professional society of oncology nurses with a recruitment flyer containing an explanation of the purpose of the study, qualification criteria, and what they are expected to do by participating. If a nurse chose to participate, there was a QR code on the postcard to scan to access the survey on Survey Monkey. There was an information page in Survey Monkey that informed the participants about the purpose of the study and served as a consent form. The information page included an explanation that by going to the next page, they would be giving their consent to participate in the study. In addition, I asked the oncology nurses to forward the postcard to fellow oncology nurses in their workplaces and other professional organizations of oncology nurses.

Sampling and Sampling Procedures

I used a nonprobability sampling approach for this study. Nonprobability is an appropriate approach for gaining a consensus of how a particular group of people view an idea (Ungvarsky, 2019). Nonprobability sampling is also less expensive than other methods (Ungvarsky, 2019). Other sampling methods, such as probability sampling, would have required me to randomize the list and only send a selection of people the postcard. This would have limited the number of participants who would be available to respond to the survey, therefore limiting the number of respondents.

Inclusion criteria for the study were nurses with at least 1 year of experience working with oncology patients in either outpatient or inpatient settings in the United States. Participants were excluded if they were retired.

I used G*Power analysis to determine the minimum sample size of 85 based on a medium 0.15 effect, the significance level of $\alpha = 0.05$, and power of 0.80 (see Faul et al., 2007).

Procedures of Recruitment

I sent my recruitment flyer to each member of the professional society of oncology nurses on the list after receiving permission from the director. The postcard contained a recruitment flyer that explained the study and included a QR code to Survey Monkey to participate in the study. Those who were interested in learning more about the study accessed the QR code. The instructions for the survey included a request that prospective participants share the recruitment flyer and/or the QR code to Survey

Monkey with peers. In the demographic portion of the survey, I asked participants to identify their: (a) gender, (b) education level, (c) years of practice in oncology, (d) years of practice as a nurse, and (e) whether they are working in an inpatient or outpatient setting.

Participation/Data Collection

Nurses who were interested in learning more about the study accessed the QR code to Survey Monkey. Survey Monkey contained an introduction page that identified me as the researcher and provided a description of the study, the criteria for participating in the study, what the participants would be expected to do, an explanation of the benefits and risks of participation, and that their participation was voluntary. This introduction page was available for participants' review before they began the survey. Individuals who met the criteria for participation were able to access the consent form. Individuals who did not meet the inclusion criteria were thanked for their interest in the study but were not given access to the consent form and the surveys.

The consent form informed the participant that moving forward to the next page implied their consent to participate in the study. There was a link on Survey Monkey for participants who wish to download a PDF file of the consent form. The informed consent form also stated that the participant may withdraw from the study at any time prior to submitting the survey. They were also given permission to share the Survey Monkey link with any of their colleagues who they believed met the criteria to participate in the study.

Surveys were conducted using the Survey Monkey platform. The data were obtained anonymously to ensure privacy. Participants were able to access the survey at any time that was convenient for them. The survey remained open until the desired number of responses were collected. Survey participants were free to opt out of the survey by exiting the survey before completion and selecting the final submission button at the end of the survey. My name, email address, and telephone number appeared on the final page after submission for participants who wanted to follow up on the results of the study or had concerns. The data collected for the study will be available for 5 years following my graduation as per the requirements of the Walden University Institutional Review Board (IRB). This data will be kept secure on my password-protected computer in my personal residence. I am the only one that knows the password.

Instrumentation and Operationalization of Constructs

The five variables in my study were: (a) nurses' knowledge of Reiki, (b) nurses' beliefs in Reiki's effectiveness, (c) nurses' self-efficacy in educating their patients about Reiki, (d) nurses' willingness to recommend Reiki for their patients, and (e) years working as a nurse.

The Reiki as Complementary Therapy: Knowledge of Nurses' Questionnaire

This Reiki tool was developed by Cunha and Martins in 2016 as part of a master's thesis (Cunha et al., 2017). The tool was designed to evaluate the knowledge that nurses have about Reiki and to identify determining factors in this knowledge (Martins et al., 2017). Martins et al. (2017) found that out of 49 nurses working in health institutions in

the central region of Portugal, 59% had reasonable knowledge, 39% had high knowledge, and 2% had low knowledge of Reiki.

I used this Reiki tool to measure nurses' knowledge of Reiki in this study. There are two parts to the tool. Part 1 is the demographic that was not included in the current study, and Part 2 is a 44-question, dichotomous questionnaire that measures nurses' knowledge of Reiki that is broken up into four sections: concept and history, Reiki practice, training in Reiki, and Reiki in the professional context. Participants either answer true or false for each question. All items are of equal value. The tool was originally developed and used to measure Portuguese nurses' knowledge. Many of the questions are culturally significant to nurses practicing in Portugal and are not relevant to nurses practicing in the United States. The concept and history section has relevance for nurses practicing in the United States; therefore, the other sections were not included in the current study. I translated the questionnaire from Portuguese into English using Google Translator. A post-hoc translation validation was also completed (see Appendix D). A copy of the translated tool used in the current study is in Appendix A. I obtained written permission from Martins to use the tool as needed and to make changes (see Appendix B.

The Reiki as Complementary Therapy: Knowledge of Nurses' Questionnaire has established reliability and validity. Cunha and Martins (2016) conducted a pretest of a small sample of the study population to verify that the questions were appropriate. The Kolmogorov-Smirnov normality test was performed to establish reliability estimates and

confirmed normality of the sample with a value < 0.05 (see Cunha & Martins, 2016). Construct validity was verified by Dr. Rosa Martins and by the Reiki Master, Victor Rodrigues of the Surya Association of Reiki and Alternative Therapies (Cunha & Martins, 2016). Validity was established when the use of the tool identified high knowledge, reasonable knowledge, and low knowledge about Reiki among nurses (Cunha & Martins, 2016). Statistically significant differences were also found between nurses' knowledge of Reiki and age groups, educational qualifications, professional category, and length of service for nurses to practice (Cunha & Martins, 2016).

The Self-Efficacy Questionnaire (SE-12)

I used the SE-12 to measure nurses' self-efficacy in educating their patients about Reiki. The SE-12 was developed by Axboe et al. (2016) to document the skills used in patient-centered conversations performed by members of the health care team. The questionnaire has 23 ten-point Likert-type questions that are divided into three sections (i.e., communication with the patient, in your daily work with patients/relatives, and background data). I used the communication with the patient section. The communication scale was used to evaluate the nurses' confidence in successfully interacting with their patients about their care. The other parts were not used in the current study.

The SE-12 has established reliability and validity. A Cronbach's alpha of 0.95 and a Loevinger's H coefficient of 0.71 were calculated to provide evidence of statistical reliability and scalability (see Axboe et al., 2016). A test-retest reliability was acceptable for the entire SE-12, with an intra-class correlation coefficient agreement of 0.71 (0.66-

0.76; Axboe et al., 2016). Validity was confirmed by a representative set of diverse professional backgrounds, gender, and age for relevance, coverage, and understandability of the content in the questionnaire (Axboe et al., 2016).

Data Analysis Plan

I completed the data analysis using the IBM SPSS, Version 25 software to examine the strength of the relationship between the variables of the study (see IBM Corporation, 2017). The data from Survey Monkey were entered into SPSS. Each variable was named, typed as numeric, had width and decimal places set, labeled, had responses set, had missing values coded as -999, had column size set, and had type of variable set (i.e., scale, ordinal, or nominal).

The demographic data were analyzed using descriptive statistics. The demographic data included the following data about participants: (a) gender (nominal), (b) education level (nominal), (c) years of practice in oncology (ratio), (d) years of practice as a nurse (ratio), and (e) whether they were working in an inpatient or outpatient setting (nominal). The Reiki as Complementary Therapy: Knowledge of Nurses' Questionnaire allowed me to gather data about nurses' knowledge of Reiki (nominal), while the SE-12 Questionnaire allowed me to gather data about nurses' self-efficacy in educating their patients about Reiki (ratio).

I used multiple linear regression to assess the relationship between multiple predictor variables and one dependent variable (see Fagerland & Hosmer, 2017). I also conducted a Chi-squared test ($X2$) to test how likely it was that there any observed

difference between the variables (see Fagerland & Hosmer, 2017). This quantitative analysis was aligned with the following two research questions and corresponding hypotheses:

RQ1: What is the relationship between a nurse's knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients?

$H_0$1: There is no relationship between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients.

H_a1: There is a relationship between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients.

RQ2: Is there a relationship between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients based on years working as a nurse?

$H_0$2: There is no relationship between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's

effectiveness, and willingness to recommend Reiki to manage pain in oncology patients based on years working as a nurse.

H_a2: There is a relationship between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients based on years working as a nurse.

Threats to Validity

Researchers need to ensure validity in their studies to ensure their study measures what it intends to measure (Frankfort-Nachmias & Leon-Guerrero, 2015). Reliability is achieved when a measurement produces consistent results each time it is used (Frankfort-Nachmias & Leon-Guerrero, 2015).

External Validity

External validity in a study corresponds with the likelihood that the study will be generalizable (Sidelock, 2020). Threats to the external validity of a study compromises the ability to generalize the findings to other situations (Sidelock, 2020). There is one potential threat to the external validity of my study. This threat is due to the sampling procedures in the study. Because I used convenience and snowball sampling methods, the sample is nonrandom and therefore does not represent the entire population of oncology nurses (see Sidelock, 2020). I purchased 4,000 addresses from the professional society of oncology nurses. To capture the sample size needed, I reached out to the largest number

of participants possible. Limiting the sample to perform probability sampling would have limited the number of individuals I was able to contact to recruit.

Internal Validity

To ensure internal validity in a study, researchers need to ensure that their research tools are valid and reliable (Sidelock, 2020). Valid research tools measure what they are intending to measure, and reliable tools will measure the same way each time (Sidelock, 2020). One threat to the internal validity of my study is the need to revise the Reiki as Complementary Therapy: Knowledge of Nurses' Questionnaire. Many questions in this questionnaire are not relevant due to cultural differences between practicing nursing in Portugal where the instrument was developed and the United States. This threat was addressed by only using the section concept and history because the other sections are not relevant to nurses practicing in the United States.

Construct Validity

Construct validity refers to how well a test measures what it claims to measure (Sidelock, 2020). Construct validity was previously established by the authors of the Reiki as Complementary Therapy: Knowledge of Nurses' Questionnaire and the SE-12 Questionnaire. The threats of construct validity in my study are related to the fact that the Reiki as Complementary Therapy: Knowledge of Nurses' Questionnaire was written and developed in Portuguese. All the supporting documents are also in Portuguese. There is the potential for some of the information in these documents to be lost in the translation to English.

Ethical Procedures

Ethical concerns for my study are identified. This study was submitted for approval to the Walden University IRB for approval. The approval number for this study is: 10-13-20-0471236. Approval of the IRB justified the protection of human subjects. No vulnerable populations are included in this study. No data was collected until after approval by the IRB.

Information was obtained from the professional society of oncology nurses to rent a list of their members to recruit participants. These participants were mailed a postcard with a QR code to Survey Monkey. Each participant chose whether they participated in the study. An informed consent form explained the purpose of the research study, the benefits of participation, the level of risk for participating, measures taken to maintain anonymity, the participant's ability to withdraw from the study at any time prior to survey submission, and how to contact me for any issues or questions related to the study. I will ensure that the participants remain anonymous.

Summary

In this chapter, I explained the design, methodology, and data analysis methods of my study. I used a descriptive correlational, nonexperimental design to study nurses' knowledge of Reiki, beliefs about Reiki's effectiveness, self-efficacy in educating their patients about Reiki, years practicing as a nurse, and willingness to recommend Reiki for their patients. The Reiki as Complementary Therapy, Knowledge of Nurses' Questionnaire, the SE-12 instrument, and a demographic questionnaire was used to

measure the variables in my study. Nurses from a professional society of oncology nurses were mailed a postcard with a recruitment flyer and a QR code to Survey Monkey with the request to forward the postcard to other nurses who qualify to participate. Convenience and snowball sampling was used to capture as many individuals as possible. I used SPSS to organize and compute a multiple regression analysis of the variables. I computed a multiple linear regression to provide statistical evidence of whether the relationship between the variables will accept or reject the null hypothesis. In Chapter 4, the data will be analyzed and presented.

Chapter 4: Results

The purpose of this quantitative descriptive study was to determine the relationship between nurses' knowledge, level of self-efficacy about their ability to educate their patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki for their oncology patients. The following research questions and hypotheses guided this study:

RQ1: Is there an association between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients?

$H_0$1: There is no association between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients.

H_a1: There is an association between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients.

RQ2: Is there an association between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients based on years working as a nurse?

$H_0$2: There is no association between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients based on years working as a nurse.

H_a2: There is an association between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki to manage pain in oncology patients based on years working as a nurse.

In Chapter 4, I describe the data collection process, statistical assumptions, research question and hypothesis testing, and data analyses. The chapter concludes with a summary of the study findings.

Data Collection

I collected data for this study by mailing my recruitment flyer as a postcard via the U.S. Postal Service to members of a professional society of oncology nurses. This recruitment flyer had a QR code that linked the participants to a survey on Survey Monkey. To maintain anonymity, I commissioned the third-party marketing company that is contracted by the professional society of oncology nurses to print and mail my recruitment flyers. Data collection began on November 16, 2020 and concluded on March 23, 2021. There were two sets of surveys mailed to the members of a professional society of oncology nurses. The invoice for the first set of recruitment flyer post cards was paid on October 20, 2020. They were subsequently processed, printed, and mailed to 2,000

members of the professional society of oncology nurses. The first participant completed the survey on November 16, 2020, and the last participant took the survey on December 19, 2020. A total of 41 nurses took the survey and 35 completed all the questions. Another 2,000 surveys were mailed to members of the professional society of oncology nurses after the invoice was paid on January 12, 2021. The first survey was taken February 17, 2021 following processing, printing, and mailing. An additional 57 nurses took the survey and 50 completed all the questions. The final participant completed the survey on March 23, 2021.

A total of 86 out of 4,000 participants completed the survey, which is a 2% completion rate. The 12 surveys that were not completed were not included in the data analysis. There were not any discrepancies in data collection from the plan presented in Chapter 3.

I drew a sample of 4,000 nurses from the 35,000 members of the professional society of oncology nurses by randomly selecting their addresses. However, this sample does not represent the entire population of oncology nurses (see Sidelock, 2020).

Results

Descriptive Statistics

Data were collected from 86 nurses who were currently working and had at least 1 year of experience working in oncology. Participants were excluded if they had less than a year of experience working in oncology and were not currently working as a nurse. The sample comprised 74 females, nine males, and three nurses who preferred not to answer

their gender. The sample size met the minimum sample size power analysis calculation. The demographic data also consisted of nurses' education level, years of practice in oncology, years of practice as a nurse, and whether they worked in an inpatient or outpatient setting (see Table 1).

Table 1

Participant Demographics

Demographic	*N*	%
Gender		
Male	9	10.5%
Female	74	86%
Prefer not to answer	3	3.5%
Education level		
Diploma	3	3.3%
Associates	16	17.8%
Bachelor	62	68.9%
Master's	9	10%
Years of practice in oncology		
1-5	38	42.2%
6-10	21	23.3%
11-15	14	15.6%
16-20	9	10%
21+	8	8.9%
Years of practice as a nurse		
1-5	29	32.2%
6-10	20	22.2%
11-15	11	12.2%
16-20	13	14.4%
21+	17	18.9%
Whether they are working in an inpatient or outpatient setting		
Inpatient	54	60%
Outpatient	36	40%

Statistical Assumptions for Multiple Linear Regression

I evaluated the data obtained from SPSS to ensure that the results of the study conform with the statistical assumptions for multiple linear regression. The validity and accuracy of research is dependent upon whether all the assumptions of data and statistical techniques used in the analysis being met (Verma & Abdel-Salam, 2019). Multiple linear regression uses eight assumptions to ensure the results of the equation are valid.

Dependent Variable

The dependent variable of a multiple linear regression equation should be measured on a continuous scale (Laerd Statistics, 2018a). The dependent variable in this study was the willingness to recommend Reiki for oncology patients' pain and was measured using a Likert-style scale; therefore, this assumption was not met because the level of measurement for a Likert-style scale is ordinal (see Sullivan & Artino, 2013).

Two or More Independent Variables

The current study met this assumption by including three independent variables: (a) nurses' knowledge of Reiki, (b) nurses' beliefs in Reiki's effectiveness, and (c) nurses' self-efficacy in educating their patients about Reiki.

Independence of Observations

I calculated a Durbin-Watson statistic using SPSS. For Research Question 1, the Durbin-Watson result was 1.784. A Durbin-Watson statistic of less than 2 indicates a positive result, which means that the variables are independent of each other (Verma & Abdel-Salam, 2019). For Research 2, the Durbin-Watson statistic was 1.8. This indicated

another positive result and that the variables are independent of each other. Therefore, this assumption was met.

Linear Relationship

There needs to be a linear relationship between the dependent variable and each of the independent variables, and the dependent variable and the independent variables collectively. R^2 measures the proportion of total variation of the dependent variable that is explained by the regression line and the independent variables and ranges from 0-1.0 (Frankfort-Nachmias & Leon-Guerrero, 2015). This assumption was met because all variables showed a positive linear relationship in relation to willingness to recommend Reiki to patients for oncology pain (see Table 2).

Table 2

Linear Relationship

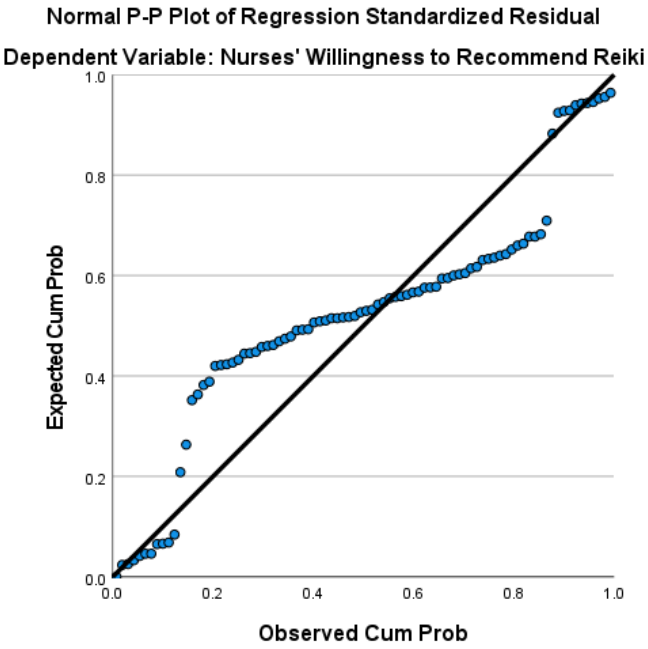
Independent Variable	R^2
Nurses' knowledge of Reiki	0.048
Nurses' self-efficacy in educating their patients about Reiki	0.049
Nurses' beliefs about Reiki's effectiveness	0.661
Years practicing as a nurse	0.006
RQ1	0.626
RQ2	0.628

Homoscedasticity

To show homoscedasticity, data needs to show that variances along the line of best fit remain similar (Laerd Statistics, 2018a). The plots follow the same pattern; therefore, this assumption is met (see Figure 1).

Figure 1

Homoscedasticity



No Multicollinearity

Multicollinearity occurs when there are two or more independent variables that are highly correlated with each other (Laerd Statistics, 2018a). The VIF values are all very low, signifying that this assumption was met (see Table 3).

Table 3

Multicollinearity

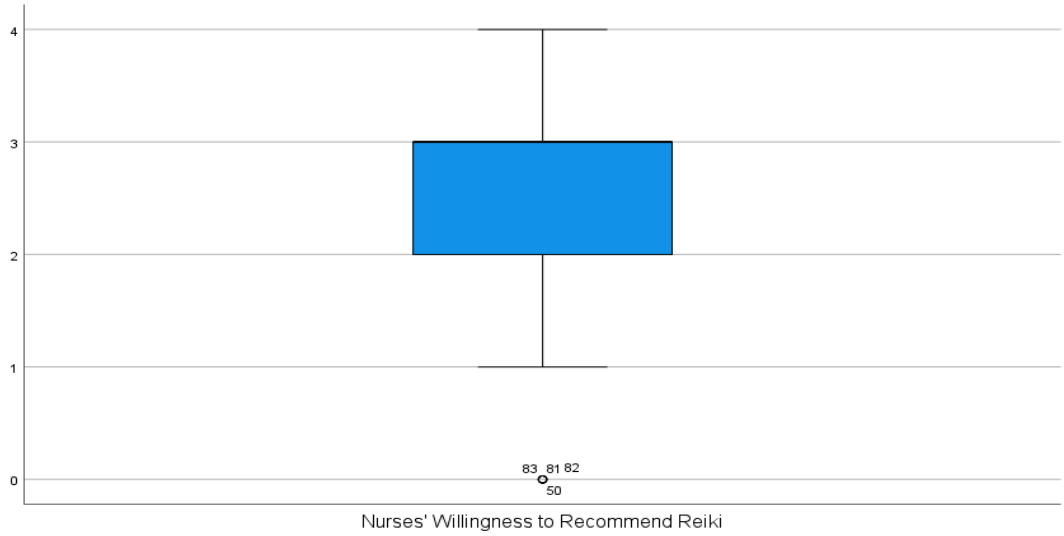
Independent Variable	VIF
Nurses' knowledge of Reiki	1.123
Nurses' self-efficacy in educating their patients about Reiki	1.139
Nurses' beliefs about Reiki's effectiveness	1.238
Years practicing as a nurse	1.023

No Significant Outliers, High Leverage Points, or Highly Influential Points

The dependent variable in the study, willingness to recommend Reiki, did not have any outliers (see Figure 2).

Figure 2

Willingness to Recommend Reiki



Residuals

The residuals need to be approximately normally distributed (see Figures 3, 4, and 5). The data are approximately normally distributed; therefore, this assumption was met.

Figure 3

Nurses' Knowledge of Reiki

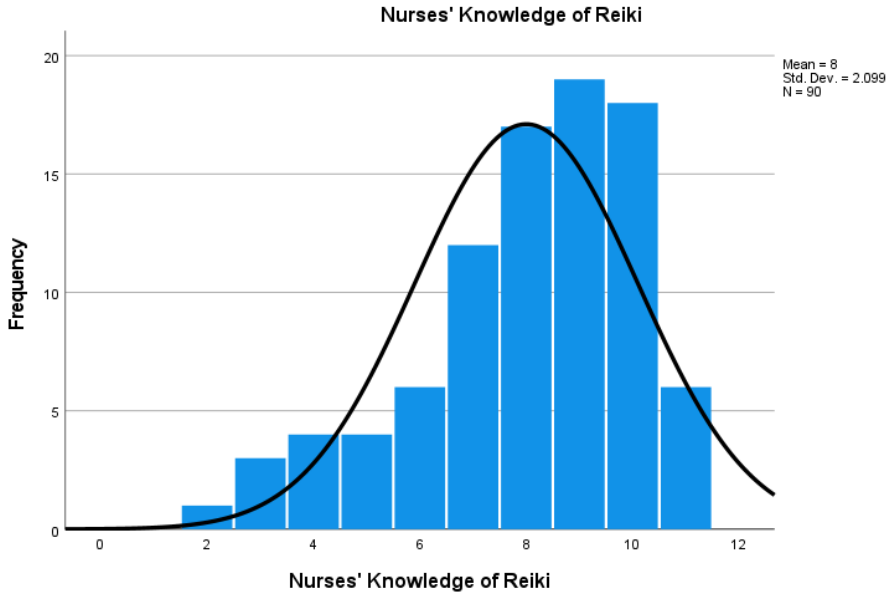


Figure 4

Nurses' Self-Efficacy in Educating Their Patients About Reiki

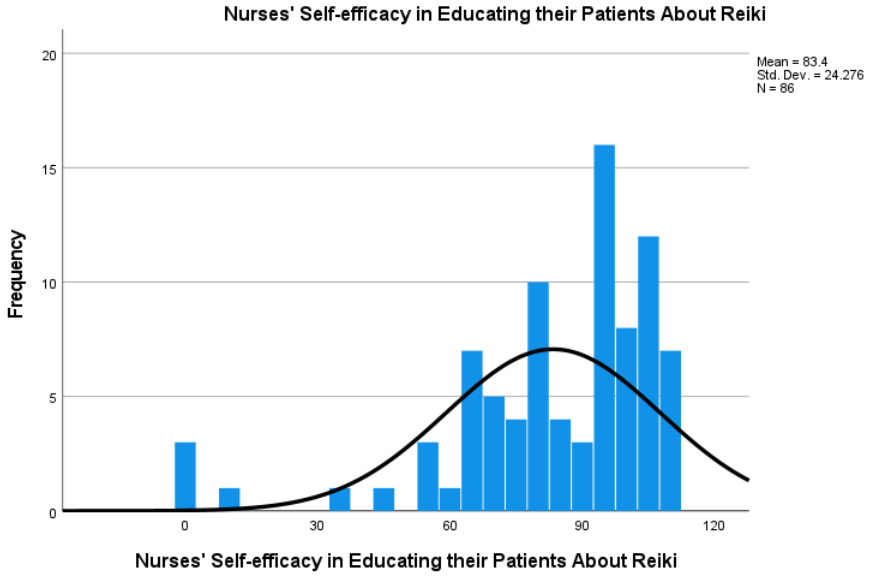
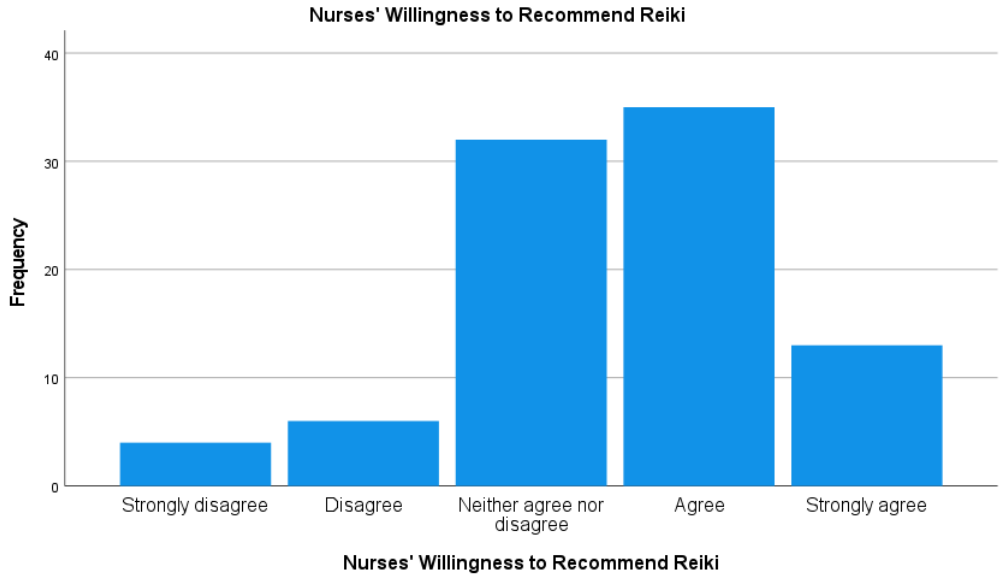


Figure 5

Nurses' Willingness to Recommend Reiki



Since the statistical assumption for the multiple linear regression assumption for a continuous dependent variable was not met, I used an ordinal logistic regression to identify factors influencing nurses' willingness to recommend Reiki for their oncology patients' pain.

Ordinal Logistic Regression

Ordinal logistic regression is used to model the relationship between an ordinal dependent variable and one or more independent variables (Laerd, 2018b). The following assumptions were met for ordinal logistic regression.

Dependent variable at the ordinal level

My dependent variable was measured using a Likert-style scale (*strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree*) therefore this assumption was met.

One or more independent variables that are continuous, ordinal, or categorical

My independent variables met this assumption. Nurses' knowledge was measured using a categorical (true/false) questionnaire. Nurses' self-efficacy in educating their patients about Reiki was measured using a 10-point Likert-style scale. Nurses' beliefs in Reiki's effectiveness were measured using a 5-point Likert-style scale (*strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree*). Nurses' years practicing as a nurse was measured by years of experience which is ordinal level data (1-5 years, 6-10 years, 11-15 years, 16-20 years, or 21+ years).

Multicollinearity

Multicollinearity occurs when there are two or more independent variables that are highly correlated with each other (Laerd Statistics, 2018b). The VIF values are all very low, signifying that this assumption was met (see Table 3).

Proportional odds

The test of parallel lines reveals that the slope coefficients are the same across response categories, therefore this assumption is met.

Statistical Analysis Findings by Research Question

To calculate my research questions, an ordinal logistic regression analysis was conducted to evaluate the prediction of nurses' willingness to recommend Reiki from nurses' knowledge of Reiki, self-efficacy in educating their patients about Reiki, and beliefs about Reiki's effectiveness.

Research Question 1

The results of the ordinal logistic regression analysis revealed that nurses' beliefs about Reiki's effectiveness increased nurses' willingness to recommend Reiki for their patients. The ordinal logistic regression analysis also revealed nurses' knowledge about Reiki and self-efficacy in educating their patients about Reiki not to be statistically significant predictors to the model. The predictor variables were tested a priori to verify there was no violation of the assumption of no multicollinearity. The model fit revealed a significance level of $p < 0.001$.

The predictor variable, nurses' beliefs about Reiki's effectiveness, in the ordinal logistic regression analysis was found to contribute to the model. The [ordered log-odds (Estimate)] = [3.302], *SE* = [.479], *Wald* = [47.620], $p < .0001$. The estimated odds ratio favored a positive relationship of nearly [n] fold [*Exp (Estimate)* = [27.174], 95% CI (2.364, 4.240)] for every one unit increase of nurses' beliefs about Reiki's effectiveness. The predictor variable, nurses' self-efficacy in educating their patients about Reiki, in the ordinal logistic regression analysis was found to contribute to the model. The [ordered log-odds (Estimate)] = [-.006], *SE* = [.010], *Wald* = [.317], $p = .574$. The estimated odds

ratio favored an inverse relationship of nearly [n] fold [*Exp (Estimate)* = [.994], 95% CI (-.026, .015)] compared to the reference variable: nurses' beliefs in Reiki's effectiveness. The predictor variable, nurses' knowledge of Reiki, in the ordinal logistic regression analysis was found to contribute to the model. The [ordered log-odds (Estimate)] = [.078], *SE* = [.120], *Wald* = [.424], p = .515. The estimated odds ratio favored an inverse relationship of nearly [n] fold [*Exp (Estimate)* = [.1.081], 95% CI (-.157, .313)] compared to the reference variable: nurses' beliefs in Reiki's effectiveness.

The confidence interval associated with the regression analysis does not contain 0, which means the null hypothesis, there is no association between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, and beliefs about Reiki's effectiveness, and their willingness to recommend Reiki to manage pain in oncology patients, is rejected.

Research Question 2

The predictor variable, nurses' beliefs about Reiki's effectiveness, in the ordinal logistic regression analysis was found to contribute to the model. The [ordered log-odds (Estimate)] = [3.288], *SE* = [.475], *Wald* = [47.802], $p < .0001$. The estimated odds ratio was a positive relationship of nearly [n] fold [*Exp (Estimate)* = [27.174], 95% CI 2.356, 4.220)] for every one unit increase of nurses' beliefs about Reiki's effectiveness. The predictor variable, nurses' self-efficacy in educating their patients about Reiki, in the ordinal logistic regression analysis was found to contribute to the model ([ordered log-odds (Estimate)] = [-.005], *SE* = [.010], *Wald* = [.270], p = .603). The estimated odds

ratio favored an inverse relationship of nearly [n] fold [*Exp (Estimate)* = [.994], 95% CI (-.026, .015] compared to the reference variable: nurses' beliefs in Reiki's effectiveness. The predictor variable, nurses' knowledge of Reiki, in the ordinal logistic regression analysis was found to contribute to the model. The [ordered log-odds (Estimate)] = [.071], *SE* = [.120], *Wald* = [.353], $p = .553$. The estimated odds ratio favored an inverse relationship of nearly [n] fold [*Exp (Estimate)* = [.1.081], 95% CI (-.164, .307)] compared to the reference variable: nurses' beliefs in Reiki's effectiveness. The predictor variable, years practicing as a nurse, in the ordinal logistic regression analysis was found to contribute to the model. The [ordered log-odds (Estimate)] = [.298], *SE* = [.505], *Wald* = [.270], $p = .603$. The estimated odds ratio favored an inverse relationship of nearly [n] fold, 95% CI (-.691, 1.287)] compared to the reference variable: nurses' beliefs in Reiki's effectiveness.

The results of the ordinal logistic regression analysis (see Table 4) revealed that nurses' knowledge about Reiki, self-efficacy in educating their patients about Reiki, and years working as a nurse were not statistically significant predictors to the model ($p > .05$). However, the results of the ordinal logistic regression analysis revealed a statistically significant association between nurses' beliefs in Reiki's effectiveness. The significance level was $p < .0001$, therefore indicating a statistically significant relationship. The analysis suggests that with each additional increase in the Likert response for beliefs about Reiki's effectiveness, the Likert response for willingness to recommend Reiki increases. The confidence interval associated with the regression

analysis does not contain 0, which means the null hypothesis, there is no association between a nurses' knowledge of Reiki, self-efficacy in educating patients about Reiki, and beliefs about Reiki's effectiveness, and their willingness to recommend Reiki to manage pain in oncology patients based on years working as a nurse is rejected (see Table 5).

Table 4

Ordinal Logistic Regression

Model	Estimate	Std. Error	Wald	*df*	*Sig.*
1					
Nurses' knowledge of Reiki	.078	.120	.424	1	.515
Nurses' self-efficacy in educating their patients about Reiki	-.006	.010	.017	1	.574
Nurses' beliefs about Reiki's effectiveness	3.302	.479	47.620	1	.000
2					
Nurses' knowledge of Reiki	.071	.120	.353	1	.553
Nurses' self-efficacy in educating their patients about Reiki	.005	.010	.270	1	.603
Nurses' beliefs about Reiki's effectiveness	3.288	.475	47.802	1	.000
Years practicing as a nurse	.298	.505	.348	1	.555

Table 5

Confidence Intervals

Research Question		Lower Bound	Upper Bound
1			
	Nurses' knowledge of Reiki	-.157	.313
	Nurses' self-efficacy in educating their patients about Reiki	-.026	.015
	Nurses' beliefs about Reiki's effectiveness	2.364	4.240
2			
	Nurses' knowledge of Reiki	-.164	.307
	Nurses' self-efficacy in educating their patients about Reiki	-.026	.015
	Nurses' beliefs about Reiki's effectiveness	2.356	4.220
	Years practicing as a nurse	-.691	1.287

Cronbach's Alpha

I conducted a Cronbach's alpha for the Knowledge of Nurses' Questionnaire and the SE-12 Questionnaire. The minimum acceptable score for a reliability test is 0.70 (Johnson & Christensen (2012) see Susiyawati et al., 2021). The SE-12 Questionnaire met the minimum standards ($\alpha = .971$) however the Knowledge of Nurses Questionnaire tested below the minimum standards ($\alpha = .603$). In response to the Cronbach's Alpha level of 0.603 for the Knowledge of Nurses Questionnaire, I completed a post-hoc study among fellow Reiki practitioners. Three of the Reiki practitioners acknowledged that all the questions and answers were asked and measured appropriately however one practitioner attested to including two additional principles in addition to what is listed in question 19 of my questionnaire. This is difficult to reference as Reiki is not traditionally permitted in the written form. Please see Appendix C for letters from Reiki practitioners.

An additional post-hoc test was completed to ensure that the Google translation of the Knowledge of Nurses Questionnaire from Portuguese to English was accurate. An individual who speaks Portuguese and English reviewed the Google translation (see Appendix D).

Summary

From the data collected in this study, I found that there was not a statistically significant relationship between nurses' knowledge of Reiki, self-efficacy in educating their patients about Reiki, or years practicing as a nurse and their willingness to recommend Reiki for their oncology patients' pain. I did find a significant statistical relationship between nurses' beliefs in Reiki's effectiveness and their willingness to recommend Reiki for their oncology patients' pain.

In Chapter 5, I will analyze and interpret the findings, describe the limitations of the study, describe recommendations for further research, and implications for positive social change.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this quantitative descriptive study was to determine the relationship between nurses' knowledge, level of self-efficacy about their ability to educate their patients about Reiki, beliefs about Reiki's effectiveness, and willingness to recommend Reiki for their oncology patients. Another factor studied was whether years practicing as a nurse impacts nurses' willingness to recommend Reiki for their patients' oncology pain. Data were collected by mailing postcards with a recruitment flyer to members of a professional society of oncology nurses. There was a QR code on the flyer that directed participants to a Survey Monkey questionnaire.

I found a statistically significant relationship between nurses' beliefs in Reiki's effectiveness and their willingness to recommend Reiki for their oncology patients' pain.

Interpretation of the Findings

Nurses' Knowledge About Reiki

In this study, I identified a weak association between nurses' knowledge about Reiki and their willingness to recommend Reiki for their oncology patients. The participants scored 76% overall, indicating that their knowledge level was moderate but does not impact nurses' willingness to recommend Reiki. The participants in the current study scored significantly higher than the participants in Tercan and Saritas's (2017) study where 98% of 181 nurses did not know about Reiki. Shorofi and Arbon's (2010) findings also did not support my results with 42% of the respondents reporting not having any knowledge of Reiki. The results of the current study indicated that nurses have a

moderate level of knowledge of Reiki, but the nurses' level of knowledge did not impact their willingness to recommend Reiki for their patients' oncology pain.

Nurses' Beliefs About Reiki

The findings of this study support those of the existing literature that show nurses have positive experiences with using Reiki for and the nurses feel calmer (Vitale, 2009). The current study findings partially support Lipinski and Van De Velde's (2020) results which indicated that nurses with more knowledge and experience with Reiki may be more willing to recommend Reiki for their patients. The results of the current study did not show a significant relationship between nurses' knowledge and willingness to recommend Reiki.

Simmons (2017) found that nurses who use Reiki for self-care had a positive change in their perceptions of their own caring behaviors. In Freitag et al.'s (2018) study, Reiki therapy was shown to provide a better quality of life for nurses based on having a better balance of physical, mental, emotional, and spiritual states. The results of the current study support those of Freitag et al. because there was a positive correlation between nurses' beliefs in Reiki's effectiveness and their willingness to recommend Reiki for their oncology patients' pain.

Nurses' Self-Efficacy in Educating Patients About Reiki

The higher the level of self-efficacy a person has, the more likely they are to achieve their goals (Masoompour et al., 2017). The current study results demonstrated there was not a positive relationship between nurses' self-efficacy in educating their

patients about Reiki and their willingness to recommend Reiki for their oncology patients' pain; therefore, the study findings do not support the existing literature.

Limitations of the Study

I identified both internal and external limitations in this study. A convenience sample of members of a professional society of oncology nurses were the only participants included in this study, which limited the generalizability of the findings. I employed a descriptive, correlational design in this study, so cause and effect could not be determined (see Grove et al., 2013).

Another limitation of this study was the lack of previous research on nurses' knowledge and use of Reiki. This made it challenging to identify research tools to use in the current study. With permission from the author, I was able to modify the Nurses' Knowledge of Reiki Questionnaire. This tool was written in Portuguese, so I had to translate the entire research tool and the entire associated thesis from Portuguese to English using Google Translator (see Appendix A). I also needed to translate the communication I had with the author of the tool (Appendix B). The language barrier limited transferability.

Recommendations

Future research could include investigating the perspectives of Reiki of other members of the health care team, such as physicians, advanced practice providers, physical therapists, occupational therapists, and nursing assistants, which would provide insights into their willingness to recommend Reiki for oncology patients' pain.

Replicating this study to include these other members of the health care team would broaden the scope of individuals to recommend Reiki for oncology patients. Additionally, a study with a larger sample size of nurses would be more representative of the population of nurses caring for oncology patients.

Implications

Improving nurses' willingness to recommend Reiki for oncology patients' pain could result in a positive social change for this patient population. The use of Reiki among oncology patients decreases pain associated with their underlying disease (Zins et al., 2019). Oncology patients receiving Reiki in addition to traditional treatments experience less pain (Rao et al., 2016).

The results of the current study provide new information to increase awareness of the importance of nurses' beliefs in Reiki's effectiveness. Nurses need the opportunity to observe others benefiting from Reiki or experience a treatment themselves to increase their beliefs in Reiki's effectiveness (Lipinski & Van De Velde, 2020).

Conclusion

Oncology patients experiencing a high level of pain related to their disease can supplement traditional treatments for pain with alternative treatments such as Reiki. Without recommendations from their nurses, most patients would not be knowledgeable about Reiki. In this study, I explored associated factors that influence nurses' willingness to recommend Reiki for their oncology patients' pain. The findings show a statistically significant relationship between nurses' beliefs in Reiki's effectiveness (OR = 27.174,

95% CI [2.356, 4.220]) and their willingness to recommend Reiki for their patients. There was not a significant relationship between nurses' knowledge of Reiki, self-efficacy in educating their patients about Reiki, years practicing as a nurse, and their willingness to recommend Reiki for their oncology patients' pain. Nurses caring for oncology patients need to believe that Reiki is effective, so they are willing to recommend Reiki for their patients. Nurses also need to increase their awareness of Reiki by either seeing others benefit or experiencing their own treatments. Increasing nurses' beliefs in Reiki's effectiveness will increase their willingness to recommend Reiki for their patients, therefore decreasing pain among oncology patients and creating positive social change in this regard.

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Appendix A: The Reiki as Complementary Therapy: Knowledge of Nurses'

Questionnaire

Concept and History

Part 2: Knowledge about Reiki. Please read each of the following statements and mark an X in the column to the right of the statement that best represents what you know, do, or feel about Reiki.

		True	**False**
1.	Reiki was discovered in the 1920s in China.		
2.	Reiki is an invasive technique with harmful side effects for the body.		
3.	Reiki can be used on people, animals and inanimate objects.		
4.	Reiki is a Japanese word commonly translated by "Vital Energy of the Universe.		
5.	Reiki is not a recent energy.		
6.	The founder of the therapeutic system of Reiki was not Mikao Quest.		
7.	The word Reiki is divided into two parts: Rei + Ki. Each has its own meaning.		
8.	Rei means the Higher Intelligence that guides the creation and functioning of the Universe.		

9.	Ki means the wisdom that comes from God that is omniscient and that understands the need and the cause of all problems and difficulties, as well as how to deal with them.		
10.	Reiki has 3 principles that, together with Universal Vital Energy, promote physical and mental well-being.		
11.	The transmission of knowledge about Reiki in written form has always been allowed.		

Appendix B: Permission to Use The Reiki as Complementary Therapy: Knowledge of Nurses' Questionnaire

Rosa Martins <XXXXXXX>
3/25/2020 11:57 AM
To: Amy Nezzer

Olá utilize o questionário como precisar

esteja à vontade para fazer alterações que eu dou permissão

cumprimentos

Rosa martins

(Translation from Portuguese to English:

Hello, use the questionnaire as you need

feel free to make changes i give permission

greetings

Rosa martins)

Amy Nezzer < XXXXXXX> escreveu no dia quarta, 25/03/2020 à(s) 13:56:

Appendix C: Letters from Reiki Practitioners

Hoelsken, Rebecca Melanie
Tue 12/7/2021 5:31 PM

To: Nezzer, Amy E
Amy
Your questionnaire looks good. Please let me know your findings. I want to read your paper too. I am SO GLAD you will be back w/ us. Where will you work? I have occasional referrals for Reiki at PUH/MUH. If you are there, I would love to have you provide
b

Rebecca M. Hoelsken, CRNP
Nurse Practitioner & Reiki Master
Palliative and Supportive Care
XXXXXXXX

Hochberger, Kerri
Tue 12/7/2021 10:54 AM

To: Nezzer, Amy E
Hi Amy,

Thank you so much for remembering me and letting me be a part of validating these questions 😊

8 is OK but I use Rei is higher knowledge or spiritual consciousness
#9 I have Ki as life energy
#10 I have 5 Reiki Principles (not 3)

I hope this helps. I would be interested to hear more about what you are doing!

Kerri

From: Matthew Whisner <XXXXXXXX>
Sent: Wednesday, February 2, 2022, 7:42 PM
To: Amy Nezzer <XXXXXXXX >
Subject: Re: Reiki Research Consultation

Hi Amy,

Great to hear from you and honored you would think of me to review your questionnaire.

I have reviewed the questionnaire you have developed with consideration the purpose is to assess the knowledge of Reiki.

I would agree the accuracy of the content you outlined to be overly sufficient. The content assesses the knowledge of Reiki from an introductory perspective.

Look forward to reading more of what you have developed and hope to connect soon.

Regards, Matthew

XXXXXXXTo:XXXXXXXX
Sun, Feb 6 at 11:41 AM

Hi Amy:

I truly enjoy information of this nature. With the knowledge of Reiki that I have experienced for the past 25 years, the questions that you asked seemed correct.

Thank you,

Mary

Appendix D: Post-Hoc Translation Validation

Rodrigo Harrison <XXXXXXXX>
Fri 1/21/2022 9:22 PM
Hi Amy,

This is Rodrigo, Katie's husband.
I reviewed the questions and added a few changes marked in blue.

I also found the original file which contain the entire research in Portuguese and a total of 44 questions (page 112 on). I was not sure if you also needed the rest of the questions. I attached it to this email.

Please let me know if you have any questions.

Best Regards,
Rod Harrison

1. O Reiki foi descoberto nos anos 20 do século passado na China.

Reiki was discovered in the 1920s in China.

1. True
2. False

2. O Reiki é uma técnica invasiva e com efeitos secundários nefastos para o organismo.

Reiki is an invasive technique with harmful side effects for the body.

1. True
2. False

3. O Reiki pode ser utilizado em pessoas, em animais e em objetos inanimados

Reiki can be used on people, animals and inanimate objects.

1. True
2. False

4. Reiki é uma palavra japonesa habitualmente traduzida por “Energia Vital do Universo.

Reiki is a Japanese word commonly translated to “Vital Energy of the Universe.” *You can also use "**Universal Life Force Energy"** which is more comom in English*

1. True
2. False

5. O Reiki não é uma energia recente.

Reiki is not a new ~~recent~~ energy.

1. True
2. False

6. O fundador do sistema terapêutico do Reiki não foi Mikao Quest.

The founder of the therapeutic system of Reiki was not Mikao Quest.

1. True
2. False

7. A palavra Reiki divide-se em duas partes: Rei + Ki. Cada uma com um significado próprio.

The word Reiki is divided into two parts: Rei + Ki. Each has its own meaning.

1. True
2. False

8. Rei significa a Inteligência Superior que orienta a criação e o funcionamento do Universo.

Rei means the Higher Intelligence that guides the creation and functioning of the Universe.

1. True
2. False

9. Ki significa a sabedoria que vem de Deus que é omnisciente e que compreende a necessidade e a causa de todos os problemas e dificuldades, bem como a forma de os tratar.

Ki means the wisdom that comes from God who ~~that~~ is omniscient and ~~that~~ understands the need and the root ~~cause~~ of all problems ~~and difficulties~~, as well as how to resolve ~~deal with~~ them.

1. True

2. False

10. O Reiki tem 3 princípios que, juntamente com a Energia Vital Universal promovem o bem-estar físico e mental.

Reiki has 3 principles that, along with ~~together with Universal Vital Energy~~ ***"Universal Life Force Energy"***, promote physical and mental well-being.

1. True
2. False

11. Sempre foi permitida a transmissão de conhecimentos sobre o Reiki na forma escrita.

~~The transmission of knowledge about Reiki in written form has always been allowed~~. The knowledge of Reiki has always been allowed to be shared in written form.