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UNIVERSITY OF SAN DIEGO
Hahn School of Nursing and Health Science
DOCTOR OF PHILOSOPHY IN NURSING

ONCOLOGY NURSES' CULTURAL COMPETENCE, KNOWLEDGE, AND
ATTITUDES TOWARD CANCER PAIN

by

Ayman Alnems, RN, MSN

A dissertation presented to the
FACULTY OF THE HAHN SCHOOL OF NURSING AND HEALTH SCIENCE
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requirements for the degree
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Dissertation Committee

Mary Jo Clark, PhD, RN, Chairperson

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Abstract

Effective pain management requires appropriate knowledge, attitudes, and assessment skills. The purposes of this study were to obtain information about the knowledge and attitudes of oncology nurses related to cancer pain and its management, to evaluate oncology nurses' cultural competence, and to investigate relationships between oncology nurses' cultural competence and their pain management knowledge and attitudes.

Ferrell and McCaffery's (2008) Nurses' Knowledge and Attitude Survey Regarding Pain (NKASRP), the Cultural Competence Assessment Survey (CCA) (Doorenbos, Schim, Benkert, & Borse, 2005; Schim, Doorenbos, Miller, & Benkert, 2003), and a demographic questionnaire were used to measure oncology registered nurses' cultural competence and their pain management knowledge and attitudes. E-mail invitations to participate in the study were sent to 4,000 randomly selected members of the Oncology Nursing Society.

A total of 320 nurses provided at least partially complete responses, for a response rate of 8%. Two hundred twenty five nurses completed all portions of the survey, including demographic information. Only 21% ($n = 47$) believed they were very effective in managing cancer pain. The results suggest deficiencies in the knowledge and attitudes of the nurses regarding cancer pain and pain management. More than 50% of the nurses identified inadequate pain medication orders and lack knowledge by healthcare providers, patients, and their families as the most prevalent barriers to effective pain management. While 85% of the participants reported that had they participated in prior cultural

diversity training, only 63% ($n = 150$) felt competent working with people from different cultures.

There was a positive correlation between scores on the NKAS and the CAS subscale scores indicating that nurses who were more culturally aware and sensitive had more positive attitudes toward and adequate knowledge of cancer pain management. The results of this study suggest that oncology nurses' knowledge and attitudes toward cancer pain management may be linked to some of the key components of cultural competence; thus oncology nurses should be aware of the cultural differences in reports of cancer pain and the effects of culture on their pain management behaviors.

Major knowledge deficits and flawed beliefs still exist among oncology nurses, impeding cancer pain management. Findings from this study could be employed by the ONS to design nursing courses on cancer pain management and cultural competence to augment the OCN and the AOCN curricula. The findings can also serve as a foundation for developing an ONS Cancer Pain CNS program.

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Dedication

I dedicate this study to the improved treatment of oncology patients
and to the hard-working nurses who are devoted to this life's work.

Acknowledgments

I would like to give my heartfelt gratitude and appreciation to Dr. Mary Jo Clark, my dissertation chair, for the endless hours of support, encouragement, and enriching ideas. Special recognition also goes out to the committee members, Dr. Jane Georges and Dr. Donna Agan for everything they did to make this work possible.

My family's support also motivated me to achieve this high level of academic success. I'm grateful for my loving wife, Rasha, and my beautiful daughter, Lamis, who provided me with unending hopefulness. I also wish to acknowledge my parents, Issa and Halima Alnems, for giving me the love for learning.

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Chapter 1

Introduction

Cancer was acknowledged as a major chronic health issue in the United States with the passage of the National Cancer Act in 1971. This acknowledgment was a key factor in formally establishing the specialty of oncology nursing (Mick, 2008). Cancer is the second most common cause of death in the United States, only surpassed by deaths from acute heart diseases (Beckstrand, Moore, Callister, & Bond, 2009). Cancer is often seen as fatal, usually involving a protracted and painful death, and associated with distressing images of treatments, suffering, and loss. No other disease is more universally feared than cancer, which may result from unknown exposure and may occur at any time.

Cancer holds predominantly negative connotations for both healthcare professionals and the public. Nurses are members of a society that regards cancer with fear and dread. Thus, nurses may also hold negative attitudes towards cancer. Such negative attitudes pose a threat to the lives of their patients and affect the quality of care provided (Bernardi, Catania, Lambert, Tridello, & Luzzani, 2007). That care is influenced by several factors, including nurses' skills and knowledge, available resources, organizational support, relevant policies, and the personal beliefs and attitudes of the nurse (Khader, Jarrah, & Alasad, 2010).

Pain intensely affects every aspect of quality of life and becomes the major source of cancer patients' suffering. The severity and prevalence of cancer pain and its various debilitating physiological and psychological consequences permeate cancer patients' experiences (Tu & Chiou, 2007), yet pain remains poorly assessed and treated by nurses. It is estimated that 50% of patients with non-cancer-related pain and 90% of patients with cancer-related pain receive inadequate pain management (Haugen, Hjermstad, Hagen, Caraceni, & Kaasa, 2010).

Oncology nurses spend more time with patients than other healthcare professionals. They witness painful occurrences, suffering, loss and grief experienced by the majority of patients with cancer regardless of their culture, socioeconomic status, race or ethnicity (Surbone, 2010). Several issues have been identified specific to the area of oncology nursing, including constant and intense loss, the nature of cancer, the complexity of treatments, nurses' feelings of futility and failure, connecting with patients and their families, ethical dilemmas in cancer management, and end-of-life issues (Najjar, Davis, Beck-Coon, & Carney Doebbeling, 2009).

Nurses have a key role in the management of all aspects of patient care. Nursing care relies heavily on nurses' knowledge, which is, in turn, considered a crucial moderator of care of cancer patients suffering from pain (Yildirim, Cicek, & Uyar, 2008). When the nurse completes a thorough assessment, implements appropriate intervention, and accurately evaluates pain relief measures, better outcomes are anticipated (Plaisance & Logan, 2006).

Unfortunately, many nurses are not prepared to assume this critical role, and pain among oncology patients may remain significantly undertreated (Yildirim et al., 2008).

Knowledge deficits, as well as individual attitudes toward pain, can interfere with nurses' abilities to effectively manage their patients' pain. Studies have continued to reveal areas of deficit in nurses' knowledge and attitudes related to pain management (Patiraki et al., 2006). Negative nursing attitudes create barriers to effective cancer pain management.

Throughout the world, lack of pain management knowledge by healthcare professionals has been identified as one of the most significant problems in effective pain management (Bernardi et al., 2007). Nurses lack knowledge about cancer pain assessment, and their assessment focuses on patients' behaviors rather than pain intensity and other descriptive characteristics of pain. Nurses may also hold excessive concerns about respiratory depression as a consequence of pain medications.

Nurses' preexisting attitudes or knowledge deficits related to pain management can directly affect the level of pain experienced by a hospitalized patient (Yildirim et al., 2008). Nurses must recognize they are pivotal members of the patient pain management team, with direct responsibilities related to pain assessment and tailoring of opioid analgesic regimens to the client's situation. Although staff nurses are not responsible for prescribing pain medicine, they are often responsible for the decision to administer or withhold pain medication.

Another influence on pain perception might be associated with nurses' and patients' cultures. According to the U. S. Census Bureau, the majority of the U. S. population may consist of ethnic, nonwhite groups by 2050. As a result, the extent of health disparities related to social as well as financial factors will increase. Currently, 20% of people living in the United States speak languages other than English at home (Narayan, 2010). Providing culturally competent patient-centered care is one of the new

requirements by the Joint Commission for hospital accreditation. The new standard is to help hospitals better address patient-centered care, cultural competence, and effective communication (Schyve, 2007).

While culture is now emerging as a key factor in health disparities, the concept of culture and its relation to cancer pain management remain inadequately understood. Syme (2008) reported that ethnic minority populations have higher morbidity and mortality rates and that slight improvement has been seen in the last 40 years in reducing preventable forms of suffering and death among ethnic minority populations. Factors including age, education level, family structure, income, gender, insurance and immigration status, and/or previous experience of discrimination may affect patients' health status and health practices. Even after adjusting for these factors, patients from ethnic minorities still experience health disparities (Patten & Kammer, 2006).

Improving the quality of life for patients with cancer and reducing cancer mortality and incidence rates are goals identified by the American Cancer Society (ACS) for achievement by 2015. Elimination of the growing disparities in cancer care for patients from different racial and ethnic backgrounds is required to achieve these goals (Smith, Smith, Hurria, Hortobagyi, & Buchholz, 2009).

The 2009 "Policy Statement on Disparities in Cancer Care" by the American Society of Clinical Oncology identified providing culturally sensitive cancer care as one way to in reduce health disparities and to encourage patients' involvement in their care and enrollment in clinical trials (Goss et al., 2009). Culture plays a crucial role in healthcare professionals' and institutional attitudes to patients with cancer from different racial and ethnic backgrounds (Al-Atiyyat, 2009). Culture may influence patients'

understanding of cancer risk, confidence in receiving quality care, and their perceptions of standard and investigational cancer therapies. Lack of medical interpreters, the complex U. S. healthcare system, and patients' limited medical knowledge and familiarity with the healthcare system are among the barriers that may affect minority patients' and their families' abilities to access cancer preventive, screening, and early detection services and pain management therapies (Flores et al., 2008; Green, Ndao-Brumblay, West, & Washington, 2005; Jacobs, Shepard, Suaya, & Stone, 2004).

The majority of people from cultural minorities in the United States live in medically underserved areas, which impedes their ability to access prescribed treatment and measures needed to control chemotherapy-related side effects or toxicities (Gaskin, Briesacher, Limcangco, & Briganti, 2006). Higher levels of dissatisfaction and noncompliance with prescribed treatment regimens have been reported among minority patients who experienced prejudiced care or discrimination by oncology health professionals (Burgess, Ding, Hargreaves, van Ryn, & Phelan, 2008; Dovidio et al., 2008).

Unequal and deficient treatment of cancer patients from different ethnic minorities in the United States has been reported in several recent studies (Goss et al., 2009; Surbone, 2010). It has been noted that minority patients are not receiving adequate pain management when compared to nonminority patients, which could be related to providers' inability to accurately assess and manage patients' pain (Green et al., 2003; Narayan, 2010). In order to provide cancer patients with culturally acceptable pain management, nurses must be aware of their own cultural beliefs, values, and behaviors

and those of their patients that may influence the response to pain. Nurses should not assume that all the patients possess the dominant culture's pain pattern (Narayan, 2010).

Patients' cultures may influence the meaning of pain, beliefs about what should be done about pain, and what pain treatments are considered appropriate. Responses to pain may differ from one patient to another and from what nurses expect. This variation may arise as a result of patients' cultural patterns, different languages, and/or the use of different words to describe pain, all of which may lead to poor pain management (Davidhizar & Giger, 2004; Narayan, 2010).

Culture, race, and ethnicity may affect cancer pain management. Patients may speak languages other than English, and nonEnglish-speaking patients in one study had suboptimal pain control compared to those who spoke English. Speaking a different language and lack of a competent interpreter may negatively affect pain assessment and pain management (Narayan, 2010). Nurses also use nonverbal communication (body posture, activity level, and/or facial expression) in their assessment of patients' pain; however, nonverbal cues may vary depending on patients' cultures and, therefore, may lead to inappropriate pain assessment.

Some patients may believe a good patient should not complain of pain; other patients may be reluctant to report their pain because the use of opioids may be culturally prohibited (Lovering, 2006). Another possible reason for inadequate treatment for pain may arise from providers' negative judgments or prejudicial stereotype-based bias associating certain minority patients with drug-seeking or drug-abusing behaviors (Burgess, van Ryn, Crowley-Matoka, & Malat, 2006). Healthcare professionals should avoid stereotyping and need to have cultural knowledge about religion, beliefs, disease

incidence and prevalence rates, and the social and historical context when they provide care in a highly multiethnic and multicultural society such as the United States (Betancourt, 2003).

Purpose of the Study

The increasing number of newly-diagnosed patients with cancer who continue to report moderate-to-severe pain, and the unequal treatment of cancer pain reported by minority patients when compared to nonminority patients indicate a gap in the area of cancer pain management research. The purposes of this study are to:

1. Examine pain management knowledge and attitudes among oncology nurses.
2. Determine oncology nurses' level of cultural competence.
3. Investigate relationships between oncology nurses' cultural competence and their knowledge of and attitudes toward cancer pain management.
4. Determine if educational factors and staff characteristics are related to nurses' knowledge of and attitudes toward cancer pain management.
5. Determine whether cultural competence among oncology nurses is related to staff educational factors and characteristics.

Significance of the Study

Investigating cultural competence among oncology nurses may help promote better care for oncology patients. Untreated or inadequately treated cancer pain creates suffering, and there is agreement in the literature that pain may remain significantly undertreated. Nurses' lack of knowledge and negative attitudes toward cancer and management of its associated pain may exacerbate patient suffering (Ferrell, 2005). The challenge for nurses is to be culturally responsive to patients' pain and integrate current

pain management techniques in an effort to decrease the discomfort of hospitalized cancer patients.

The purpose of this study is to investigate the relationship of oncology nurses' cultural competence to their knowledge and attitudes toward cancer pain. Such information would assist oncology nurses to be more sensitive to their patients' cultures, to their own cultures, and to potential discrepancies and prepare them to care for patients and families from diverse backgrounds, thereby improving cancer patient outcomes, including pain management. Consequently, it is important to examine these phenomena because of their remarkable impact on nurse-patient interaction, which eventually affects clinical outcomes.

Definition of Terms

The key terms used throughout this study are conceptually and operationally defined as follows:

Oncology nurse. An oncology nurse is conceptually defined as a person who is skilled or trained in “treating human responses of patients and families with cancer diagnoses or who are at risk for developing cancer” (Boyle, Brant, Oncology Nursing Society, & American Nurses Association, 2004, p. 7). For this study, an oncology nurse is operationally defined as a registered nurse (RN) who (a) is a licensed RN in the United States, (b) is a member of the Oncology Nursing Society (ONS), (c) resides in the United States, (d) reports a primary position other than researcher/principal investigator or academic educator, (e) has a primary functional area in patient care, (f) is employed in a full- or part-time position providing care to adult patients with cancer, and (g) permits ONS to release his/her email address.

Attitudes toward cancer pain management. Attitudes are defined as personal positive or negative evaluations of an object (e.g., oneself, other people, issues, etc.) or feelings associated with performing a specific behavior (Ajzen, 2001). Attitudes are made up of beliefs that people accumulate over their lifetimes, and these evaluations of objects are captured in such attribute dimensions as likable-dislikable, good-bad, pleasant-unpleasant, harmful-beneficial, and so on. Attitudes of oncology nurses regarding cancer pain management will be measured using the Nurses' Knowledge and Attitude Survey Regarding Pain (NKASRP) (Ferrell & McCaffery, 2008) (Appendix A).

Nurses' knowledge of cancer pain management. Nurses' knowledge of cancer pain management will be assessed using the NKASRP. The survey includes questions about nurses' knowledge of (a) analgesic uses and actions, (b) side effects of analgesics, (c) pain assessment, (d) nonpharmacological pain relief interventions, and (e) analgesic scheduling regimens (Ferrell & McCaffery, 2008).

Culture. Culture is defined as the organizing structure of life and is designed to ensure the wellbeing and survival of a group of people. Culture consists of knowledge, values, beliefs, life styles, and behaviors of a given community and its members (Kagawa-Singer, Dadia, Yu, & Surbone, 2010). Factors such as socioeconomic status, educational level, spoken language, geographical area, urban versus rural context, religion, gender, sexual orientation, occupation, and disability define culture as well (Betancourt, 2003).

Cultural competence. Cultural competence is defined as the knowledge, attitudes, and skills needed to provide culturally effective care to patients with cancer and their families from different ethnic backgrounds. It is an ongoing process of respecting

and accepting the differences of minority patients (Patten & Kammer, 2006; Surbone, 2010). Cultural competence of oncology nurses will be measured using the Cultural Competence Assessment Survey (Schim, Doorenbos, & Borse, 2006b) (Appendix B).

Limitations

The limitations of the study include the following:

1. Response bias is one of the reported disadvantages when using survey methodology for data collection (Dillman & Smyth, 2007). Responses of the nurses who complete the survey may be different from those who do not. In addition, respondents may provide socially desirable answers to the survey questions and may respond in a way that may not represent their actual attitudes or perceptions.
2. The sample of the oncology nurses recruited from ONS membership may not represent all oncology nurses nationwide.

Summary

Effective pain management requires accurate knowledge, attitudes, and assessment skills. Major knowledge deficits and inaccurate beliefs among nurses may impede the management of cancer pain. The increasing number of newly-diagnosed patients with cancer who continue to report moderate-to-severe pain and the unequal treatment of cancer pain reported by minority patients when compared to nonminority patients indicate a gap in the area of cancer pain management research.

Chapter 2

Literature Review

The following literature review will address the research and theoretical background for this study. An extensive literature search of published works (CINAHL, Medline, and PubMed.) was conducted with medical subject heading search terms, such as “nurses’ knowledge”, “nurses’ attitudes”, “oncology nurses”, and “cultural competence.”

The literature review covers the findings of relevant studies. First, the organizing theoretical framework of the proposed research is described. Next, a review of literature pertaining to cultural competence among nurses is discussed. Finally, knowledge and attitudes related to cancer pain management are addressed.

Theoretical Framework

Greipp’s Model of Ethical Decision Making (1992) was the theoretical framework that guided the study. The model was developed from a sociological perspective based on general systems theory, focusing on the decision-making process and the variables that influence the interaction between nurse and client within an ethical framework. According to this model, decision making is a complex process subject to both situational (patient, nurse) and environmental influences. The nurse acts as a decision maker

regarding a patient's pain. Within the context of their attitudes toward cancer pain and their knowledge of pain management, nurses strive to provide relief for patients' pain (see Figure 1).

Figure 1. Greipp's Model of Ethical Decision Making (Greipp, 1992)

The model progresses from left to right, with the nurse appearing on the far left. The learned potential inhibitors (LPIs) or variables are defined as the psychosociocultural variables related to the nurse and the client that may enhance or inhibit nurse-client interactions and potentially affect the quality of care. LPIs consist of the nurse's belief system, culture, personal and professional experiences, and education. Greipp documents the importance of the nurse's and client's cultures as they influence the outcome (decision) of the interaction.

The ethical frame work consists of the professional knowledge, objective data, and the situation the nurse is exposed to in the center, surrounded by accountability and responsibility for competence moderated by four general principles inherent in the Nursing Code of Ethics (autonomy, beneficence and non-maleficence, and justice). The nurse's understanding of the ethical frame work guides the nursing care plan and the decision making process. Education is described as anything learned or taught that affects behavior.

Undertreatment of pain might be understood as a moral issue, in which action is determined more by clinicians' attitudes toward pain, value for providing comfort, and institutional and political impediments to moral agency than by a good understanding of the patient's experience of pain (Greipp, 1992). A study by McCaffery, Ferrell, and Pasero (2000) found that nurses' personal opinions about a patient, rather than recorded assessments, influenced their decisions about pain treatment. Similarly, Slomka et al. (2000) indicated that clinicians' values influenced their use of clinical practice guidelines for administration of sedation.

Cultural Competence among Nurses

The way people react to pain is shaped by their total life experiences, beliefs, values, and customs, which they refer to as their own culture. Unequal and deficient treatment of cancer patients from different ethnic minorities in the United States has been reported in many recent studies (Goss et al., 2009; Surbone, 2010). It has also been noted that minority patients do not receive adequate pain management when compared to nonminority patients, which could be related to providers' inability to accurately assess and manage their patients' pain (Green et al., 2003; Narayan, 2010).

Nurses' perceptions, as well as activities to control of pain, are shaped by their culture, which may in turn influence stereotyping of patients and interfere with interpersonal communication patterns (Al-Atiyyat, 2009). Patients with cancer pain need to be cared for by oncology nurses who are culturally competent and who avoid stereotyping while providing holistic care. Only a few studies have addressed cultural factors related to pain among patients with cancer.

In a year-long cohort study, Rabow and Dibble (2005) explored ethnic and country-of-origin differences in pain among 90 patients with terminal cancer and end-stage chronic illness in an academic medical center. Disparities in pain reports and pain management were evaluated at study entry, at 6 months, and after 12 months, using the analgesics prescribed and the patients' report of pain on the Brief Pain Inventory as outcome measures. Although both patients born in the United States and immigrants reported inadequate treatment for their pain, patients from ethnic minority groups reported higher levels of pain compared to Caucasian patients. African American cancer patients reported more pain than Caucasian patients, but no significant ethnic group differences in pain were found among Black, Asian, and Latino patients (Rabow & Dibble, 2005).

Similar results were reported by Vallerand, Hasenau, Templin, and Collins-Bohler (2005), who conducted a cross-sectional/descriptive study to investigate pain disparities between Black and White cancer patients in a large urban cancer center ($n = 281$) and the effect of one's *perception of control over pain*. The investigators found that Black patients reported significantly higher pain intensity than White patients. They emphasized

that one's perception of control over pain is an important factor to consider in understanding responses to pain.

Healthcare professionals have not always been successful in adapting their approaches to meet the physical, psychosocial, and emotional needs of culturally diverse patients (Taylor, 2005). Providers' prejudices or biases and lack of understanding of cultural diversity, compounded by limited access to communication and language services, were identified as barriers to providing culturally competent care and contributed to the healthcare disparities experienced by minority groups when compared to Caucasian populations. These disparities, in turn, resulted in mistrust, low patient satisfaction, lower quality of care, and treatment barriers (Burgess et al., 2008; Dovidio et al., 2008; Taylor, 2005).

A limited number of studies addressed cultural competence among healthcare professionals. Polacek and Martinez (2009) conducted a study to assess staff cultural competence in one hospital system located in a metropolitan region in the southwestern United States where more than half (58%) of the population served were Hispanic/Latino.

The researchers developed a 17-item survey to assess five dimensions of cultural competence (awareness of other cultures, communication skills, language skills, knowledge of other cultures, and relationships). The instrument was administered to the employees of the hospital system; only 156 staff members completed and returned the survey (a response rate of 22%). The majority of the participants in the survey were females (78%), over half (55%) were Hispanic, 14% were Euro-American, and 13% were African-American. Of the participants, 30% were clinical employees; 25% held clerical

positions; 17% worked in technical positions; 12% held management positions, and 4% were physicians.

Almost half (45%) of the participants self-reported high levels of awareness of other cultures; 52% reported high levels of communication skill with patients from different cultures; 39% reported higher levels of language skills compared to 35% who reported low levels of skill in a language other than English. Only about 15% of the surveyed employees self-reported having high levels of knowledge of other cultures.

The researchers also conducted five focus groups with patients, (with group sizes ranging from five to eight informants), and one focus group with five physicians. Most of the patients in the focus groups mentioned that physicians were well-informed and respectful of the Hispanic culture and that most of the employees knew Spanish. On the other hand, the lack of interpreter services was acknowledged as a problem. Patients and physicians also cited further issues with access, including lack of transportation for the patients, the complex appointment making process, and poor communication between the hospital and the patients.

The researchers concluded that literacy issues, poverty, access to services, and staff cultural competency were the main challenges encountered in this hospital. They recommended cross-cultural training and education for all healthcare professionals to achieve cultural competence (Polacek & Martinez, 2009).

Schim, Doorenbos, and Borse (2005) conducted a comparative study to assess demographic variables as they related to cultural competence among healthcare providers in Ontario and Michigan. The 145 participants completed the Cultural Competence Assessment (CCA) instrument and regression analysis was used to determine

associations. Healthcare providers who had higher levels of education and prior cultural diversity training scored significantly higher on the Cultural Awareness and Sensitivity (CAS) and the Cultural Competence Behavior (CCB) subscales of the CCA than those with less education or without exposure to cultural diversity training.

In another study by Schim, Doorenbos, and Borse (2006a) to identify variables associated with cultural competence among hospice nurses, a sample of 107 hospice nurses recruited from five different hospices completed the Cultural Competence Assessment instrument. A strong correlation was reported between the level of education and cultural awareness and sensitivity and between prior cultural diversity training and cultural competence. The findings of the study supported the need for further cultural training and education for hospice nurses in order to enhance their cultural competence.

There is a need to improve healthcare providers' cultural competence to promote competent care among culturally diverse patients. However, the training of culturally competent professionals is very challenging. Brathwaite (2005) conducted a study to evaluate the effectiveness of cultural competency courses on improving cultural competence in 66 public health nurses. After completing the course, a significant improvement was noted among the participants in scores on the Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Revised (IAPCC-R©). The findings support the need to provide ongoing cultural competency training and education for nurses and to integrate these courses into undergraduate and graduate nursing curricula. The study did not look at the influence of nurses' characteristics and other professional factors on the process of cultural competency development.

Cultural incompetence could lead to inaccurate understanding of patients' statements and verbal or nonverbal communications and may result in inappropriate assessment, diagnosis, and treatment behaviors (Al-Atiyyat, 2009). Thus, cultural competence is linked to improving the quality of pain management as part of the patient care provided.

Cultural considerations are vital in providing nursing care. When nurses generalize their own cultural stereotypes and beliefs without considering the cultural perceptions of their patients, patient care outcomes may be affected. Researchers have shown that nurses react differently to patients from diverse cultures, even when the patient's and nurse's personal response to the pain experience was similar (Edwards, Moric, Husfeldt, Buvanendran, & Ivankovich, 2005).

Nurses need to be sensitive to patients' cultures, to their own culture, and to potential differences. An understanding of cultural similarities and differences can help nurses prevent ambiguities in interpersonal communication that may lead to insufficient and inadequate control of pain (Beach, Saha, Cooper, 2006).

Nurses' Knowledge of Pain Management

Although oncology nurses are expected to have more knowledge regarding cancer pain management guidelines than nononcology nurses, few studies have examined oncology nurses knowledge and attitudes toward cancer pain management in the United States. Rushton, Eggett, and Sutherland (2003) conducted one such study and examined knowledge and attitudes of Utah registered nurses regarding cancer pain. A random sample of 303 state-licensed RNs and a purposive sample of 44 oncology nurses who

were members of the Intermountain Chapter of the Oncology Nursing Society participated in the study.

The Nurses' Knowledge and Attitude Survey Regarding Pain (NKASRP) and a demographic instrument were used for data collection. The NKASRP is a widely used instrument with established validity and reliability and an internal consistency alpha greater than 0.70. The mean age of participants was 45 years for the oncology nurses and 42 years for the nononcology nurses, with nearly equal time licensed as an RN (24 years and 25 years, respectively). The educational level of oncology nurses included 11% with diploma nursing preparation, 14 % with an associate degree, 48% with a bachelors degree, 23% with a masters degree, and 4% holding a doctoral degree. Among the nononcology nurses, 4% reported diploma preparation, 45% had an associate degree, 41% a bachelors degree, 9% a masters degree, and 1% held a doctoral degree (Rushton et al., 2003), but the levels of education between the two groups did not differ significantly.

Differences were noted in attitudes and knowledge levels regarding cancer pain management, with oncology nurses scoring better on the NKASRP questionnaire than nononcology nurses. All participating nurses' knowledge of pharmacological aspects of analgesia was inadequate. For example, 43% of the respondents did not realize that nonsteroidal anti-inflammatory drugs, including aspirin, can be used effectively to control bone pain related to cancer (Rushton et al., 2003).

Using a pre- and postintervention one-group design, Idell, Grant, and Kirk (2007) conducted a study to improve nurses' pain reassessment and documentation practices. The National Comprehensive Cancer Network (NCCN) clinical practice guidelines were implemented. Interventions included one-on-one feedback on pain rounds and

reassessment practices. A convenience sample of 42 oncology nurses who worked on either medical or surgical inpatient oncology units in a cancer hospital in the western United States participated in the study.

Four instruments were used for data collection: The Nurses' Knowledge and Attitude Survey Regarding Pain (NKASRP), the Pain Reassessment Data Instrument (PRDI), the Pain Competency Evaluation (PCE), and a demographic instrument. The NKASRP consists of 39 items that cover aspects of pain assessment or reassessment and pharmacologic and nonpharmacologic interventions. Of the 39 questions, four were devoted to reassessment; therefore, scores were reported as an overall total and separately for the reassessment questions (Idell et al., 2007).

The Pain Reassessment Data Instrument (PRDI) consists of 11 questions used to audit charts for documentation of pain reassessment. Five charts were selected for each nurse within a one-month time frame. The first 24 hours were excluded from reassessment to allow for stabilization. Scores were calculated as a percentage of reassessments documented. The Pain Competency Evaluation (PCE) consists of one item on pain reassessment and was part of an annual performance evaluation used for all nurses. Scores ranged from 1 (did not meet) to 4 (exceeds expectations) (Idell et al., 2007).

Most of the nurses (93%) included in the sample ($n = 39$) were female; the age of participants ranged from 20 to 60 years. Post intervention scores showed a statistically significant improvement in PCE scores ($p = 0.000$), in NKASRP scores ($p = 0.001$), and an improved percentage of reassessment charting ($p = 0.004$). Idell et al. (2007)

concluded that using pain reassessment practices with clinical pain guideline recommendations promoted better pain management and reassessment documentation.

Yildirim et al. (2008) used The Nurses' Knowledge and Attitude Survey Regarding Pain (NKASRP) and a demographic instrument to examine knowledge and attitudes regarding cancer pain management among 68 oncology nurses employed on oncology and hematology units in two Turkish university hospitals. The NKASRP was translated from English to Turkish by a team of four bilingual persons. Another translator then back translated the instrument into English. The Cronbach's alpha for the Turkish version was 0.74.

Sixty percent of the participants were unmarried and between the ages of 21 and 30 years; oncology work experience ranged from 1 to 5 years. The nurses scored as competent in areas of cultural considerations, around the clock scheduling, and perceptions of the patient as the most accurate judge of his or her pain. Nurses' knowledge scores positively correlated with years of oncology nursing experience ($r = 0.263$; $p < .05$). Knowledge deficits existed in areas of addiction and recommended routes for opioid administration for prolonged pain. One of the distressing findings of the study was nurses' perceptions that patients overreported pain. The majority of the participants (97%) incorrectly believed that patients with cancer overreport their pain, a belief that may result in poor pain management (Yildirim et al., 2008).

This study suggested that the knowledge level among these particular Turkish oncology nurses was less than optimal, particularly when compared to earlier research using the same instrument. With the small sample size, the findings cannot be generalized to all Turkish oncology nurses. The findings highlight the need for incorporating pain and

pain management practices in nursing education curricula and continuing education programs (Yildirim et al., 2008).

Hollen, Hollen, and Stolte (2000) conducted a comparative descriptive study in an urban county using the North Carolina Cancer Pain Initiative (NCCPI) survey and a demographic survey. No theoretical framework was cited for this study. The purpose of the study was to examine the strengths, weaknesses, and misperceptions of nurses' pain management practices. A convenience sample of 140 registered nurses (RNs) who worked in one of seven adult oncology units and 11 hospices was asked to complete the surveys. Only 30 hospice nurses and 34 hospital nurses completed and returned the surveys, resulting in a response rate of 46%.

The NCCPI survey consisted of 27 demographic questions, 31 items addressing knowledge, and five Likert-type scale items measuring liberality. The Cronbach's alpha coefficient for the knowledge test was 0.71. The attitudes subscale measuring liberality may lack sensitivity because of the small number of the questions (Hollen et al., 2000).

Nurses over 40 years of age ($n = 37$) had better scores in terms of knowledge and liberality. Scores related to knowledge, medication education, opioid knowledge, and liberality correlated positively with the hours of pain management education received by the nurses. Hospice nurses had better knowledge and liberality scores on the NCCPI than hospital nurses ($p = 0.0001$ and $p = 0.0122$, respectively).

Concerns for psychological dependence with opioid administration in patients with cancer continued to be an issue for both groups. Another area of concern was the use of placebo; 30% of hospital nurses and 20% of hospice nurses believed that

administration of placebo can be used to determine the reality of pain (Hollen et al., 2000)

Healthcare professionals' negative attitudes and lack of cancer pain management knowledge may be major barriers to effective pain relief. Bauwens, Distelmans, Storme, and Kaufman's (2001) study explored attitudes and knowledge regarding management of cancer pain in a sample of Flemish healthcare professionals using a descriptive, pretest-posttest, follow-up design.

A convenience sample was obtained through announcements in the journal *Palliative Zorg*, and consisted of 197 healthcare professionals: 7 physicians, 3 psychologists, 163 nurses, 11 social workers, and 13 people who worked in hospital, home care, or hospice. Data were collected using a Pain and Symptom Control Questionnaire consisting of 21 multiple choice questions covering knowledge and attitudes about cancer pain management, patients' involvement in the treatment plan, opioid knowledge, and treatment possibilities (Bauwens et al., 2001).

Lack of knowledge regarding symptom control was identified in the pretest scores, and only 43% of the participants correctly identified that 80% of cancer patients experience pain. Seventy-six percent of the participants agreed that most of the patients with cancer pain were undertreated, and 48% of them thought the patient should have complete control over pain treatment. More than 50% of the nurses knew that the oral route of administration was preferred for morphine, but only few a nurses knew that morphine and codeine should not be combined (Bauwens et al., 2001).

Following a 3-day course on cancer pain and symptom control, a significant improvement was noted on the posttest scores in the areas of knowledge of and attitudes

to cancer pain management, patients' involvement in the treatment plan, opioid knowledge, and treatment possibilities. Data collection at the 3-month follow-up had a response rate of 39%. Scores were the same or better than the 3-day posttest scores, indicating that the participants retained the material (Bauwens et al., 2001).

The purpose of Wilkes, Lasch, Lee, Greenhill, and Chiri's (2003) study was to assess the impact of a case-based education program on graduate nursing students' knowledge of and attitudes regarding cancer pain. No theoretical framework was cited for this study. A sample of 92 graduate nursing students from three nursing programs in the New England area completed the pretest. Most participants (98%) were female; 70% were over 30 years of age; 90% were white, and only 10% were African American, Hispanic, Asian, or of other ethnic groups. This paper and pencil questionnaire included 13 multiple-choice pain knowledge questions and a demographic instrument. All the students reported benefitting equally from the program and significant improvement was reported in pain knowledge scores on the posttest ($p < 0.001$). The study findings cannot be generalized because of the predominantly White, female sample; however, the findings do highlight the importance of pain management education and how nurses can have a crucial role in relieving the suffering related to undertreated cancer pain.

In spite of all the effective interventions available, cancer pain may remain undertreated. The purpose of Vallerand, Riley-Doucet, Hasenau, and Templin's (2004) study was to assess the effects of an educational program, Power Over Pain (POP), on knowledge of cancer pain management and opioid-related side effects among homecare nurses (RNs and LPNs).

A convenience sample of 202 nurses was sought from a population of RNs and LPNs who worked in one of 11 Midwestern metropolitan home healthcare agencies in which oncology patients were being treated (Vallerand et al., 2004). The researchers used four instruments: the Nurses' Knowledge and Attitude Survey, the Barrier Questionnaire (BQ), the Perception of Control over Pain (PC) tool, and a demographic instrument. The internal consistency reliabilities of the NKAS and the BQ were evaluated. Cronbach's alphas for the tools were 0.74 and 0.75, respectively. The authors also assessed test-retest reliability and found resulting correlations that supported each instrument.

Forty-six percent of the participants ($n = 91$) had an associate degree or diploma in nursing; and 44% ($n = 88$) had bachelors degrees in nursing. Another 6% ($n = 12$) were masters prepared RNs. Very few (3%) of the participants were male. The age of the participants ranged from 24 to 71 years, with a mean age of 44 years ($SD = 8.29$). Thirty-nine percent of the nurses had over 20 years of work experience. Nurses in the intervention group showed significant improvement in their knowledge, attitudes, and perceived barriers to cancer pain management, and an increase in perceived control over pain compared to the nurses in the control group. The study findings indicate that effective pain management education for nurses can improve pain management attitudes (Vallerand et al., 2004).

Overall, it can be concluded that the area of nurses' knowledge of cancer pain and its management needs more research. Available evidence indicates that the majority of patients with cancer do not receive adequate cancer pain management because of nurses' lack of knowledge.

Nurses' Attitudes Toward Pain Management and Patients in Pain

Pain has a negative impact on all aspects of daily living for the patient with cancer. Knowledge deficits and negative attitudes, not only among nurses, but among other healthcare professionals, may promote undertreatment of cancer pain. Xue, Schulman-Green, Czaplinski, Harris, and McCorkle (2007) conducted a comparative descriptive study to explore attitudes and knowledge of pain management among in-patient healthcare providers.

In this study (Xue et al., 2007), the Wisconsin Pain Initiative (WPI) and a demographic instrument were administered to a convenience sample of 96 healthcare providers (50 RNs, 18 pharmacists, and 28 physicians) working on gynecologic or medical oncology units at a large teaching hospital in an urban area in the northeastern United States. The WPI, a widely used test with established validity and reliability, includes 36 items addressing areas of pain assessment, attitudes, and knowledge of pain management.

The mean age of the medical oncology nurses was 36 years ($SD = 9.7$), and gynecologic oncology nurses' mean age was 35 years ($SD = 9.6$). Pharmacists and physicians were slightly younger with mean ages of 31 and 28 years, respectively. Years of professional experience were as follows: 12.9 for medical oncology nurses, 10.3 for gynecologic oncology nurses, 8.5 for the pharmacists, and 1.7 years for the physicians. Over half (54%) of the medical oncology nurses were certified in oncology nursing compared to only 13% of the gynecologic oncology nurses (Xue et al., 2007).

Posthoc analysis showed significant differences in knowledge among groups ($p=0.00007$), with medical oncology nurses and pharmacists scoring higher than

physicians and gynecologic oncology nurses. Unlike nurses and pharmacists, physicians tended to believe cancer patients overreport pain ($p = 0.00007$). Physicians who believe patients are overreporting pain are most likely undertreating pain (Xue et al., 2007).

With the nurse having assessment skills, the pharmacist having pharmacological knowledge and experience, and the physician having clinical expertise, the findings of the study highlight the importance of utilizing a team approach that will benefit the patient by providing adequate pain management. Some of the limitations of this study were the small sample size, use of one hospital in one geographic location, and the inclusion of residents and interns rather than experienced physicians (Xue et al., 2007).

In another study, Bernardi et al. (2007) assessed baseline knowledge and attitudes of Italian oncology nurses about cancer pain management. An Italian version of the NKASRP was used in this nationwide study. The sample included 287 Italian oncology and hospice nurses working in 21 oncology units in north, south, and central Italy. The median age of the participants was 35 years, and 79% of the nurses ($n=226$) were female. Over half (60%) of the nurses had worked in oncology for more than 3 years, 22% had worked for 1 to 3 years, and 13% had worked less than 1 year in an oncology setting.

Fifty percent of the Italian oncology nurses underestimated their patients' pain and did not treat it correctly. They also inadequately evaluated their own knowledge of pain management. Most of the participants had extreme fears of respiratory depression. Results of stepwise regression analysis indicated that nurses with a higher mean score on the NKASRP had participated in more courses on pain education. According to the study findings, there are still significant deficits in knowledge and incorrect beliefs that may negatively affect the management of oncology patients in pain (Bernardi et al., 2007).

The undertreatment of cancer pain may be related to medical and nursing staff members' negative attitudes and knowledge deficits regarding the use of analgesics. Wells et al. (2001) conducted a study to assess the knowledge and attitudes of nursing and medical staff on a surgical unit regarding the use of opioids for cancer pain management before and after working with a newly established Hospital Palliative Care Team. The population consisted of 158 nurses and physicians who worked on a surgical unit in a large Scottish teaching hospital where oncology patients were being treated.

A convenience sample of 103 nurses and 32 physicians participated at baseline; however, the final sample at 1-year follow-up was 101 (79 nurses and 22 physicians). The mean age was 35 years at baseline and 34 years at follow-up. In the baseline sample, 75% were female, and that increased to 78% in the follow-up (Wells et al., 2001).

A 25-question demographic survey and the Elliott Knowledge and Attitude Scale (KAS) were administered. Both questionnaires were completed in the presence of one of the researchers whenever possible; however, if not possible, internal mail was used to return the questionnaires. One year after working with the palliative care team, the original sample was contacted and asked to complete the questionnaires as a follow-up (Wells et al., 2001). Improvement in knowledge scores was reported in the following areas:

- Narcotics for pain relief being given at any time during the course of the disease ($p = 0.023$);
- Narcotic doses sufficient to relieve cancer pain inevitably decreasing respiration to the point that it shortens the patient's life ($p = 0.01$), and

- Patients who take narcotics early in their disease not having anything available to control their pain later ($p = 0.009$) (Wells et al., 2001).

If nurses are fearful of opioids because of misconceptions, they may be more likely to undermedicate their patients. Similarly, physicians may not prescribe appropriate pain medications, and patients will continue to suffer from pain. Raising awareness of issues related to opioid use may help improve both knowledge and attitudes, but clearly deficits still exist. While it may be hard to allow staff to attend continuing education offerings, Wells et al. (2001) concluded that management should find a way to ensure that staff members are current regarding pain management guidelines and practices.

The purpose of the Lasch et al.'s (2002) study was to determine the beliefs and attitudes of medical and nursing students and faculty toward pain and cancer pain management. A sample of 72 students, faculty, and administrators attending or working at any of three nursing schools and two medical schools, including the medical residency program, participated in the Cancer Education Module for the Management of Pain (CEMMP) project (Lasch et al., 2002).

Interviews, both individual and in focus groups, and observations were the methods used for data collection to find out why knowledge deficits and attitudes persist and how they can be addressed in medical and nursing curricula. Data were analyzed using the Folio Views ® computer program, which allowed the researchers to code data at different levels, including demographic information as well as thematic trends (Lasch et al., 2002). Themes identified included informant's knowledge of and meaning attributed to pain, knowledge deficits regarding pain medications and adjunct therapies,

the role of faculty members and experienced mentors in pain management education, pain management in medical and nursing curricula, and prioritization of the significance of learning about pain.

Lasch et al. (2002) concluded that for pain management and palliative care education to be a standard and integral part of nursing and medical curricula, schools will need to develop new concepts of morality in nursing and medicine so students and faculty have the potential to correct their biases and misconceptions in relation to cancer pain. Additional emphasis should also be placed on the meaning of pain and addiction, thinking about palliative care and relieving patients' suffering as being at least as important as prolonging patients' lives.

To examine changes in knowledge and attitudes of pain resource nurses (PRNs), McMillan, Tittle, Hagan, and Small (2005) studied PRNs after completing an intensive course on pain management. A purposive sample of 18 registered nurses (RNs) was obtained from the inpatient staff of four units in one large Veterans Administration (VA) hospital in the southeastern United States. Nurses were chosen based upon education, including education related to pain management, unit manager recommendation, and interest.

Four measurement instruments were used for data collection: the Pain Management Principles Knowledge Test (PMPKT), the Nurses' Attitude Survey (NAS), the Pain Survey, and a demographic instrument. The PMPKT, which was developed by the investigators, consists of 31 multiple-choice questions measuring nurses' knowledge of pain management. The PMPKT covered different areas such as physiology, goals and principles of pain management, addiction, and tolerance (McMillan et al., 2005).

The NAS consists of 25 items to assess attitudes toward pain, use of narcotics, and use of nonpharmacological methods of pain control. A higher score indicates a more positive attitude. The NAS revised instrument demonstrated internal consistency reliability, with a Cronbach's alpha of 0.86. The Pain Survey consists of four case scenarios in which nurses are asked to rate patients' pain, select a pain management dose, and identify concerns related to the case. Six additional multiple-choice questions assess for gender bias. A higher score on the survey indicates a more positive attitude (McMillan et al., 2005).

The mean age of the nurses in the study was 43 years, and 16 of the 18 participants were female. Five nurses had a diploma in nursing; three had an associate degree in nursing, and ten nurses had baccalaureate degrees in nursing. The attitude scores on the Pain Survey ranged from 0 to 18 with 0 being the most negative; the results provided information on nurses' attitudes toward patients in pain. Most nurses (88%) indicated they would reduce the dose of opiate for a patient who was laughing with visitors. The NAS scores improved only three-points on the posttest; therefore, it was believed that nurses still lacked knowledge and held negative attitudes toward pain and patients in pain even with exposure to education and the plethora of published guidelines for pain management (McMillan et al., 2005).

Summary of Literature Review

Cancer pain not only greatly affects patients' and their families' daily lives; it is one of the most frightening consequences of the disease. The undertreatment of cancer pain is persistent worldwide, despite well-established clinical practice guidelines for pain management.

The literature review provided evidence that nurses' have negative attitudes and misconceptions and are lacking in knowledge related to pain management. These factors pose barriers to effective pain management. The literature review also indicated that nursing attitudes and knowledge deficits could be corrected and maintained with courses and classes, thereby, improving the treatment of pain in a specific patient population.

Most of the studies on nurses' knowledge and attitudes toward cancer pain management strongly indicated the need for basic and continuing pain management education (Bernardi et al., 2007; McMillan et al., 2005; Rushton et al., 2003). The literature review addressed the influence of attitudes on behavior. For example, if providers believe patients tend to overreport pain, they may undertreat patient's pain (Xue et al., 2007).

McMillan et al. (2005) identified the areas where knowledge was deficient as well as attitudes that served to impede effective pain management practices. The need for further education was clearly identified. When educational interventions were implemented, there was often significant improvement in knowledge and attitude scores.

The participants in the studies included in the literature review were nurses, physicians, pharmacists, and other healthcare professionals. Only a few studies looked at oncology nurses knowledge and attitudes toward cancer pain management, with small sample sizes and low response rates. The generalizability of the results is questionable (Bernardi et al., 2007; Idell et al., 2007; Rushton et al., 2003; Xue et al., 2007; Yildirim et al., 2008).

The studies reviewed utilized interview guides, small group interviews, and other general and self-reported surveys. Several studies used the same or similar instruments to

examine the participants' knowledge and attitudes toward cancer pain management. The data from the various studies reviewed indicates a lack of the participants' knowledge and the presence of negative attitudes that may influence cancer pain management.

Overall, it can be concluded that the area of nurses' knowledge and attitudes toward cancer pain management needs more research. Available evidence indicates that the majority of patients with cancer do not receive adequate cancer pain management because of nurses' lack of knowledge and negative attitudes. Campbell, Edwards, and Fillingim (2005) showed that there are no racial or ethnic differences in pain sensation threshold but that the expression of pain is culturally driven. Care providers should not impose their beliefs on patients, and they should be aware of the cultural differences in reports and treatment of pain (Al-Atiyyat, 2009).

In addition, unequal and deficient treatment of cancer patients from different ethnic minorities in the United States has been reported in many recent studies (Goss et al., 2009; Surbone, 2010). It has also been reported that minority patients are not receiving adequate pain management when compared to nonminority patients which could be related to providers' inability to accurately assess and manage their patients' pain (Green et al., 2003; Narayan, 2010).

Therefore, it is crucial to expand the research addressing oncology nurses' cultural competence. However, there are few studies addressing the issues of oncology nurses' cultural competence. The literature suggests that nurses' pain management practices may be associated with some of the key components of cultural competence, but there are no studies examining the relationships among these variables (Al-Atiyyat, 2009; Narayan, 2010).

Chapter 3

Methodology

The purposes of this study were to obtain information about the knowledge and attitudes of oncology nurses in relation to cancer pain management, to identify factors associated with nurses' pain management knowledge and attitudes, and to explore oncology nurses' cultural competence and its relationship to knowledge and attitudes toward pain management.

Research Questions

Accessing a sample from the database of nurses listed with the Oncology Nurses Society (ONS), this exploratory study addressed the following research questions:

1. What are oncology nurses' knowledge and attitudes regarding cancer pain management?
2. What is oncology nurses' level of cultural competence?
3. What is the relationship between oncology nurses' cultural competence and their scores on the Nurses' Knowledge and Attitude Survey Regarding Pain (NKASRP)?
4. Are educational factors and staff characteristics related to nurses' attitudes toward cancer pain management?

5. Are educational factors and staff characteristics related to nurses' cultural competence?

Design

The absence of recent research studies focusing on oncology nurses' cultural competence and its relationship to their knowledge of and attitudes toward cancer pain management prompted this nonexperimental, exploratory, cross-sectional study. This method was chosen because of the need for a clearer understanding of whether cultural competence influences oncology nurses in caring for their patients.

Sample

A random sample of RNs licensed in the United States, listed as members of the Oncology Nursing Society (ONS), and providing care to adult patients with cancer was invited to participate in a web-based survey. Due to subjects' self-selection, the responses represent a sample of convenience.

Inclusion criteria. To receive an email message inviting a potential subject to participate in this study, the individual needed to (a) be a licensed RN in the United States, (b) be a member of the Oncology Nursing Society, (c) reside in the United States, (d) report a primary position other than researcher/principal investigator or academic educator, (e) have a primary functional area in patient care, (f) be employed in a full- or part-time position providing care to adult patients with cancer, and (g) permit ONS to release his/her email address.

Exclusion criteria. Nurses were not eligible to participate in the study if (a) they are not actively practicing as an oncology nurse in a clinical setting; (b) their nursing practice was limited to pediatric patients; (c) their primary function was as a researcher,

principal investigator, or academic educator; (d) they were not able to take a survey in English; or (e) they did not have a valid e-mail address on file with ONS.

Recruitment of study participants, Upon receiving formal approval from the Institutional Review Board (IRB) at the University of San Diego (Appendix C), nurses were invited by e-mail to participate in the study. A copy of the invitation is included in Appendix D. Potential respondents were recruited from the Oncology Nurses Society (ONS) membership.

ONS has more than 36,000 members who represent the spectrum of oncology nursing activities. About 15,000 members are nurses who provide care to adult patients and approximately one-half of them (an estimated 8,700 nurses) provided ONS with their email addresses (Nirenberg, Reame, Cato, & Larson, 2010). E-mail invitations to participate in the study were sent to 4,000 randomly selected, eligible members utilizing the ONS email list. The researcher believed that most ONS members had access to the Internet; therefore, the survey was conducted using an Internet website. Oversampling was intended to ensure an adequate response rate.

Protection of Human Subjects

Participation in the study was voluntary and based on the nurses' ability to complete the online survey. Ethical considerations included explaining the purpose of the study and stating the ability to withdraw at any time. Since responses were anonymous, there was no threat of breach of confidentiality. There were no foreseeable risks to participation in the survey. The e-mail invitation included standard informed consent language advising the participant that they were giving implied consent by accessing the survey online.

Data Collection Procedures

Ferrell and McCaffery's (2008) Nurses' Knowledge and Attitude Survey Regarding Pain (NKASRP), the Cultural Competence Assessment Survey (CCA) (Doorenbos, Schim, Benkert, & Borse, 2005; Schim, Doorenbos, Miller, & Benkert, 2003), and a demographic questionnaire were used in this study of oncology registered nurses to measure their pain management knowledge, attitudes, and cultural competence. A link to the survey was provided in the introductory e-mail message. The survey was housed on a secure Web site, and anonymity was ensured because the survey did not ask identifiable demographic questions and did not save any links to the individual respondent. The survey was conducted over a one-month period in September 2011. The entire sample was sent a follow-up e-mail after one week to encourage participation.

ONS disseminated the survey electronically to randomly selected ONS members and preserved members' confidentiality. A lottery incentive of \$25 for 20 randomly selected participants who complete and submit the survey was described in the e-mail invitation (Appendix D) to increase the likelihood of participant response.

The raw data from the online survey were saved in a password-protected Microsoft Excel® document and then imported into the Statistical Package for Social Sciences (SPSS Version 12.0) for Windows for data analysis. To avoid problems associated with missing data, all survey items pertaining to scale scores were mandatory fields; participants were not be able to proceed without completing compulsory items and could opt to withdraw from the study. For other, non-scored questions (e.g., demographic data), the scores of nonresponders were compared to responders. As an example, if

gender data were missing, then the cultural competence scores were compared grouping the participants into male, female, and nonresponders.

Nurses' Knowledge and Attitude Survey Regarding Pain. Ferrell and McCaffery's (2008) Nurses' Knowledge and Attitude Survey Regarding Pain (NKASRP, Appendix A) was used to survey oncology registered nurses regarding their pain management knowledge and attitudes. The NKASRP was developed in 1987 and has been used extensively from 1987 to the present

Content validity of the survey has been established through review by pain experts. The content of the tool is derived from current standards of pain management such as those of the American Pain Society, the World Health Organization, and the Agency for Healthcare Policy and Research. Construct validity has been established by comparing scores of nurses at various levels of expertise such as students, new graduates, oncology nurses, graduate students, and senior pain experts. The instrument was identified as discriminating between levels of expertise. Test-retest reliability was established ($r > .80$) by repeat testing in a continuing education class of staff nurses ($N = 60$). Internal consistency reliability was established ($\alpha > .70$) for items reflecting both knowledge and attitude domains. These results indicate an acceptable level of internal consistency for the scales. Coefficient alphas above 0.70 usually are considered satisfactory (Polit & Beck, 2008).

As indicated in Chapter 2, the NKASRP has been used and found to be effective in studies in the United States, Turkey, and Italy. In Rushton, Eggett, and Sutherland's (2003) study, variations were noted on the instrument in the attitudes and knowledge

levels regarding cancer pain management, with oncology nurses scoring better than nononcology nurses.

In another study in Turkey, Yildirim et al. (2008) used the NKASRP to study knowledge and attitudes regarding cancer pain management among 68 oncology nurses. The survey was translated from English to Turkish by a team of four bilingual persons. The instrument was then back translated into English by another translator; the Cronbach's alpha for the Turkish version was 0.74.

Cultural Competence Assessment Survey (CCA). The Cultural Competence Assessment Survey (CCA) (Doorenbos et al., 2005; Schim et al., 2006b; Schim et al., 2003) is a valid measure of the level of cultural competence among healthcare professionals and was utilized in this study to assess oncology nurses' cultural competence (Appendix B). The CCA is a 26-item survey used to evaluate cultural awareness and sensitivity, cultural competence behaviors, and cultural diversity experience (Schim et al., 2006b; Schim et al., 2003).

Demographic items on the CCA included questions about the participant's age, previous training on cultural diversity, level of education (associate, bachelors, or graduate degree), and race or ethnicity (Schim et al., 2006b). The cultural awareness and sensitivity (CAS) subscale of the CCA uses a five-point Likert-like response set of "no opinion," "strongly disagree," "disagree," "agree," and "strongly agree." The cultural competence behaviors (CCB) subscale has a response set of "not sure," "never," "at times," "often," and "always."

Summing the items from the CCB and CAS subscales yields a score for each subscale. Higher scores on the CCB and CAS indicate more positive attitudes, higher

levels of knowledge, and greater cultural competence (Schim et al., 2006b). Internal consistency reliability for the CCA was reported at .92. The Cronbach's alpha coefficients for the 11-item CAS and the 16-item CCB subscales were reported at .75 and .93, respectively; which suggests that the CCA instrument and the two subscales (CAS & CCB) demonstrated high levels of internal consistency reliability.

Content and face validity for all the items have been established (Schim et al., 2003). The CCA was used in a comparative study by Schim, Doorenbos, and Borse (2005) to assess variables related to cultural competence among healthcare providers in Ontario and Michigan. A total of 145 participants completed the Cultural Competence Assessment (CCA) instrument, and regression analysis was used to determine associations. Healthcare providers who had higher levels of education and prior cultural diversity training scored significantly higher on the CAS and the CCB subscales than those with less education or without exposure to cultural diversity training.

Data Analysis Plan

Data coding and analysis were carried out by the researcher using the Statistical Package for Social Sciences (SPSS Version 12.0) for Windows. Prior to analysis, the data were systematically examined for out-of-range values and data inconsistencies. Reporting was automated for online surveys and was supplied in an Excel® spreadsheet by the vendor. The data were imported into SPSS® for analysis. Since the participants completed the online form, no double entry was necessary.

The researcher employed descriptive statistics to analyze demographic information, including age, number of years as a nurse, number of years working in oncology, and educational background. Data were categorized into statistically

appropriate groupings. Then group comparisons were performed using univariate analyses of variance for three or more groups. Responses to demographic factors involving two comparison groups (e.g., male/female) were analyzed using the student's *t*-test for continuous variables and Mann-Whitney *U* for ordinal data.

For the CCA, descriptive analyses were used to portray the nurses' characteristics. A one-way ANOVA was conducted to determine the variance in cultural competence scores on the CCB and CAS subscales related to participants' age, previous cultural competency training, educational background, and race or ethnicity. To investigate any association between CCA results and the NKASRP scores, Pearson correlations were calculated and tested for significance.

Summary

This chapter addressed the appropriateness of the study design selected for this study and provided details on the sample, the inclusion and exclusion criteria, and the procedures used to recruit study participants. Procedures for protection of human subjects were discussed, followed by a description of the instruments and data analysis plan.

Chapter 4

Results

This study examined oncology nurses' cultural competence, knowledge, and attitudes toward cancer pain as well as educational factors and staff characteristics that may influence cultural competence, knowledge, and attitudes. This chapter presents the study findings, including the demographic characteristics of the sample and the results of the analysis of participants' responses.

Sample

Four thousand randomly selected oncology nurses who were members of the Oncology Nursing Society were invited by email to participate in this exploratory study. A total of 320 nurses provided at least partially complete responses, for a response rate of 8%. A total of 225 nurses completed all portions of the survey, including demographic information. Table 1 presents the respondents' demographic characteristics.

Table 1

Demographic Characteristics of the Sample

Variable	N	Percent (%)*
Gender (N=225)		
Male	16	7
Female	209	93
Religious Affiliation (N=227)		
Christian	168	74
Jewish	9	4
Muslim	3	1
Unaffiliated	30	13
“Other”	17	8
Highest Degree in Nursing (N= 225)		
Diploma	11	5
Associate degree	32	14
Baccalaureate degree	97	43
Masters degree	82	36
Doctoral degree	3	1

* Percents are rounded and may not total to 100

Most of the subjects (93%, $n = 209$) were female, and only 7% ($n = 16$) were male. These figures are comparable to the gender composition of the nursing profession. The respondents' average age at the time of the survey was 48 years ($SD = 11$, range = 24-70). Three (1%) subjects reported that they had a doctoral degree in nursing as their highest level of education. The largest group of respondents (43%, $n = 97$) held a bachelors degree in nursing, and 36% ($n = 82$) had a masters degree in nursing. Few of the respondents reported that they had an associate degree (14%) or hospital diploma in nursing (5%). Thirty eight percent the respondents ($n = 120$) were OCN® certified. Table 2 summarizes information about respondents' work settings, employment status, and primary positions.

Table 2

Work Setting, Employment Status, and Primary Position

Work Setting (N = 314)	N	%
Bone marrow transplant unit	30	10
Intensive care unit	4	1
Med/surg unit – general	17	5
Med/surg unit – oncology	67	21
Oncology specialty unit	42	13
Home care	4	1
Hospice	10	3
Infusion center	53	17
Physician's office	28	9
Radiation	17	5
"Other"	42	13
Employment Status (N = 225)		
Full-time	186	83
Part-time	30	13
Retired	4	2
Unemployed	5	2
Primary Position (N = 220)		
Staff nurse	110	44
CNS	23	9
Nurse practitioner	23	9
Case manager	11	4
Director/manager/coordinator	22	9
Nurse navigator	16	6
"Other"	15	6

Two questions asked the participants to report the number of years working in oncology nursing and the number of years as a nurse. The average number of years of

oncology experience reported was 16 years; with an average of 22 years in nursing overall. There was wide variability in the number of years of experience, with responses ranging from less than 1 to 43 years in oncology and less than 1 to 48 years in general nursing. Two-thirds of the nurses (66%, $n = 148$) had at least 10 years of oncology nursing experience.

Analysis of Data by Research Question

Five research questions formed the basis for this study of oncology nurses' knowledge and attitudes about cancer pain and pain management and the relationships among cultural competence, demographic factors, and knowledge and attitudes regarding cancer pain management. Findings related to each question are presented below.

Research question 1. Research question 1 asked "What are oncology nurses' knowledge and attitudes regarding cancer pain management?" This question was examined using Ferrell and McCaffery's (2008) Nurses' Knowledge and Attitude Survey Regarding Pain (NKASRP). The possible range of scores on the tool is 0-40. The higher the total score, the more adequate the nurse's knowledge and the more positive the attitudes toward cancer pain management. Three hundred forty-three nurses completed the Internet survey in whole or in part; 23 were eliminated because they did not meet the inclusion criteria (e.g., worked as a researcher/PI or academic educator). Three hundred twenty nurses completed the Nurses' Knowledge and Attitude Survey Regarding Pain (NKASRP), with a mean score of 28 ($n = 320$, $SD = 5.95$) (see Figure 2). This relatively low mean score suggests deficiencies in the knowledge and attitudes of the nurses regarding cancer pain and pain management.

Figure 2. Oncology Nurses' Knowledge and Attitude Survey Related to Pain (NKASRP) Scores

As reflected in Table 3, more than 20% of nurses responded incorrectly to 15 questions regarding pharmacologic knowledge of analgesia, addiction, and recommended routes for opioid administration. Thirty-eight percent of the participants did not know that aspirin and other nonsteroidal anti-inflammatory agents were effective analgesics for painful metastases (Item 5). Similarly, 23 % of the nurses did not know that respiratory depression was rare when standard doses of opioids are administered for chronic pain management (Item 6). Likewise, 23% of respondents did not know the duration of IV morphine (Item 8). Fifty-seven percent of nurses incorrectly thought that promethazine (Phenergan) and hydroxyzine (Vistaril) were reliable potentiators of opioids (Item 9). Thirty-one percent of nurses falsely thought that morphine has a dose ceiling (Item 11). More than 70% of respondents did not know that Vicodin is approximately equal to 5-10

mg of morphine (Item 18), 31 % did not know that opioids could be used to treat idiopathic pain (Item 19), and more than half (52%) did not realize that benzodiazepines were effective analgesics for muscle pain (Item 21). Nearly one-third of the respondents (32%) did not know the dose equivalent of IV morphine for a 30 mg oral dose of morphine (Item 26), and two-thirds did not understand that respiratory depression from the relatively high doses of morphine used to manage chronic cancer pain occurs in less than a 1% of patients (Item 28). Similarly, more than one-half (55%) of the nurses incorrectly answered the question about alcohol and drug abuse (Item 33), and at least one-third of the participants did not know the expected time at which IV and oral morphine peaks (Items 34-35). Almost half did not recognize the clinical manifestations of opioid physical dependence (Item 36). Finally, 44% incorrectly responded to the proper dose of opioids needed to manage pain (Item 37b).

Table 3

Percentage of Correct and Incorrect Responses on NKASRP Items

Question (Answer)	n	% Correct	% Incorrect
1. Vital signs are always reliable indicators of the intensity of a patient's pain. (False)	320	93	7
2. Because their nervous system is underdeveloped, children under two years of age have decreased pain sensitivity and limited memory of painful experiences. (False)	320	85	15
3. Patients who can be distracted from pain usually do not have severe pain. (False)	320	91	9
4. Patients may sleep in spite of severe pain. (True)	320	88	12
5. Aspirin and other nonsteroidal anti-inflammatory agents are NOT effective analgesics for painful bone metastases. (False)	320	62	38
6. Respiratory depression rarely occurs in patients who have been receiving stable doses of opioids over a period of months. (True)	320	77	23
7. Combining analgesics that work by different mechanisms (e.g., combining an opioid with an NSAID) may result in better pain control with fewer side effects than using a single analgesic agent. (True)	320	98	2
8. The usual duration of analgesia of 1-2 mg morphine IV is 4-5 hours. (False)	320	77	23
9. Research shows that promethazine (Phenergan) and hydroxyzine (Vistaril) are reliable potentiators of opioid analgesics. (False)	320	43	57
10. Opioids should not be used in patients with a history of substance abuse. (False)	320	78	13
11. Morphine has a dose ceiling (i.e., a dose above which no greater pain relief can be obtained) (False)	320	69	31
12. Elderly patients cannot tolerate opioids for pain relief. (False)	320	96	4
13. Patients should be encouraged to endure as much pain as possible before using an opioid. (False)	320	98	2

Table 3 (continued)

Percentage of Correct and Incorrect Responses on NKASRP Items

Question (Answer)	<i>n</i>	% Correct	% Incorrect
14. Children less than 11 years old cannot reliably report pain, so nurses should rely solely on the parent's assessment of the child's pain intensity. (False)	320	98	2
15. Patients' spiritual beliefs may lead them to think pain and suffering are necessary. (True)	320	98	2
16. After an initial dose of opioid analgesic is given, subsequent doses should be adjusted in accordance with the individual patient's response. (True)	320	92	8
17. Giving patients sterile water by injection (placebo) is a useful test to determine if the pain is real. (False)	320	94	6
18. Vicodin (hydrocodone 5 mg + acetaminophen 500 mg) PO is approximately equal to 5 - 10 mg of morphine PO. (True)	320	29	71
19. If the source of the patient's pain is unknown, opioids should not be used during the pain evaluation period, as this could mask the ability to correctly diagnose the cause of pain. (False)	320	69	31
20. Anticonvulsant drugs such as gabapentin (Neurontin) produce optimal pain relief after a single dose. (False)	320	97	3
21. Benzodiazepines are not effective pain relievers unless the pain is due to muscle spasm. (True)	320	48	52
22. Narcotic/opioid addiction is defined as a chronic neurobiologic disease, characterized by behaviors that include one or more of the following: impaired control over drug use, compulsive use, continued use despite harm, and craving. (True)	320	97	3
23. The recommended route of administration of opioid analgesics for patients with persistent cancer-related pain is: (oral)	320	86	14

Table 3 (continued)

Percentage of Correct and Incorrect Responses on NKASRP Items

Question (Answer)	n	% Correct	% Incorrect
24. The recommended route of administration of opioid analgesics for patients with brief, severe pain of sudden onset, such as trauma or postoperative pain is: (intravenous)	320	93	7
25. Which of the following analgesic medications is considered the drug of choice for the treatment of prolonged moderate to severe pain for cancer patients? (morphine)	320	89	11
26. Which of the following IV doses of morphine administered over a 4 hour period would be equivalent to 30 mg of oral morphine given q 4 hours? (morphine 10 mg IV)	320	68	32
27. Analgesics for post-operative pain should initially be given: (around the clock on a fixed schedule)	320	82	18
28. A patient with persistent cancer pain has been receiving daily opioid analgesics for 2 months. Yesterday the patient was receiving morphine 200 mg/hour intravenously. Today he has been receiving 250 mg/hour intravenously. The likelihood of the patient developing clinically significant respiratory depression in the absence of new comorbidity is: (less than 1%)	320	34	66
29. The most likely reason a patient with pain would request increased doses of pain medication is: (The patient is experiencing increased pain)	320	96	4
30. Which of the following is useful for treatment of cancer pain? (All of the above)	320	92	8
31. The most accurate judge of the intensity of the patient's pain is: (the patient)	320	99	1
32. Which of the following describes the best approach for cultural considerations in caring for patients in pain: (Patients should be individually assessed to determine cultural influences)	320	97	3

Table 3 (continued)

Percentage of Correct and Incorrect Responses on NKASRP Items

Question (Answer)	n	% Correct	% Incorrect
33. How likely is it that patients who develop pain already have an alcohol and/or drug abuse problem? (5-15%)	320	45	55
34. The time to peak effect for morphine given IV is: (15 min)	320	71	29
35. The time to peak effect for morphine given orally is: (1 – 2 hours)	320	66	34
36. Following abrupt discontinuation of an opioid, physical dependence is manifested by the following: (sweating, yawning, diarrhea and agitation with patients when the opioid is abruptly discontinued)	320	51	49
37a. Andrew is 25 years old, and this is his first day following abdominal surgery. As you enter his room, he smiles at you and continues talking and joking with his visitor. Your assessment reveals the following information: BP = 120/80; HR = 80; R = 18; on a scale of 0 to 10 (0 = no pain/discomfort, 10 = worst pain/discomfort) he rates his pain as 8. On the patient's record you must mark his pain on the scale below. Circle the number that represents your assessment of Andrew's pain: (8)	320	91	9
37b. Your assessment, above, is made two hours after he received morphine 2 mg IV. Half hourly pain ratings following the injection ranged from 6 to 8 and he had no clinically significant respiratory depression, sedation, or other untoward side effects. He has identified 2/10 as an acceptable level of pain relief. His physician's order for analgesia is "morphine IV 1-3 mg q1h PRN pain relief." Check the action you will take at this time: (Administer morphine 3 mg IV now)	320	56	44

Table 3 (continued)

Percentage of Correct and Incorrect Responses on NKASRP Items

Question (Answer)	<i>n</i>	% Correct	% Incorrect
38a. Robert is 25 years old, and this is his first day following abdominal surgery. As you enter his room, he is lying quietly in bed and grimaces as he turns in bed. Your assessment reveals the following information: BP = 120/80; HR = 80; R = 18; on a scale of 0 to 10 (0 = no pain/discomfort, 10 = worst pain/discomfort) he rates his pain as 8. On the patient's record you must mark his pain on the scale below. Circle the number that represents your assessment of Robert's pain: (8)	320	94	6
38b. Your assessment, above, is made two hours after he received morphine 2 mg IV. Half hourly pain ratings following the injection ranged from 6 to 8 and he had no clinically significant respiratory depression, sedation, or other untoward side effects. He has identified 2/10 as an acceptable level of pain relief. His physician's order for analgesia is "morphine IV 1- 3 mg q1h PRN pain relief." Check the action you will take at this time: (Administer morphine 3 mg IV now)	320	93	7

Not all participants responded to the questions regarding their perceptions of barriers to adequate pain management and their level of comfort in managing cancer pain. Among those who responded ($n = 225$), more than 50% of the nurses identified inadequate pain medication orders and lack knowledge by healthcare providers, patients, and their families as the most prevalent barriers to effective pain management. When asked how effective they believed they were at managing pain for cancer patients, 24% ($n = 53$) felt somewhat, a little, or not at all effective in managing cancer pain; 56% ($n =$

125) perceived themselves as quite effective in managing cancer pain, and only 21% ($n = 47$) believed they were very effective in managing cancer pain.

Research question 2. Research question 2 addressed oncology nurses' level of cultural competence. While 85% of 236 participants responding reported that had they participated in prior cultural diversity training, only 64% ($n = 150$) felt competent working with people from different cultures.

A total of 236 participants completed the Cultural Competence Assessment Survey (CCA). The range of possible scores for the overall instrument is 2 to 14. In this study, the mean overall CCA score was 11 ($n = 236$, $SD = 1.51$, range = 5 to 14). The CCA contains 2 subscales, the cultural awareness scale (CAS) and the cultural competence behaviors scale (CCB). The range of possible scores for the CAS is 1 to 7. The mean CAS score for participants in this study was 6.0 ($n = 236$, $SD = .49$, range = 3 to 7). Possible scores on the CCB also range from 1 to 7, with a mean CCB subscale score of 5.0 ($n = 236$, $SD = 1.24$, range = 2 to 7) in this study.

The CCA includes a third subset of questions derived from the Marlowe-Crowne Social Desirability Scale, which examines participants' inclinations to answer in a socially desirable way. The range of scores on this scale is zero to 13. Higher scores indicate a greater need for social approval and suggest that participants are responding to items in ways they perceive as socially acceptable, rather than on the basis of their own beliefs or behaviors. In this study, the mean score on the Marlowe-Crowne Social Desirability Scale was 10, suggesting that the relatively high CCA scores should be interpreted with caution as they may not accurately reflect respondents' true perspectives.

Research Question 3. Research question 3 asked, "What is the relationship between oncology nurses' cultural competence and their scores on the Nurses'

Knowledge and Attitude Survey Regarding Pain?" A Pearson correlation coefficient (r) was used to determine if there was a significant relationship between scores on the CCA and its subscales and those on the NKASRP (see Table 4). Respondents' scores on the NKASRP were correlated with overall CCA scores as well as the CAS and CCB subscale scores. The level of significance was higher, however, for the correlations of the NKASRP score with the overall CCA and the CAS subscale ($p < .001$) than with the CCB subscale ($p < .01$).

Table 4

Pearson r Correlations between Cultural Competence Scores and the Scores on the NKASRP

Scale	Overall CCA	CCB Subscale	CAS Subscale
CCB Subscale	.955**		
CAS Subscale	.668**	.418**	
NKASRP Scores	.289**	.197*	.393**

* $p < .01$. ** $p < .001$.

An independent samples t -test was used to compare participants who reported feeling competent working with people from different cultures and those who did not feel competent. Nurses who reported feeling competent scored significantly higher on the CCA ($t = 3.42, p = .001$), on the CCB ($t = 2.739, p = .007$), and on the CAS ($t = 3.503, p = .001$) than those who reported feeling less competent. There was no difference between the two groups on scores on the NKASRP ($t = 1.651, p = .682$), or on how effective they felt they were in managing pain for cancer patients (Mann-Whitney Test; $z = 1.429, p = .153$).

Research question 4. Research question 4 addressed the influence of educational factors and staff characteristics on NKASRP scores. A one-way ANOVA was performed grouping nursing education into three distinct groups each encompassing approximately one-third of the total sample. Nurses with ADN or diploma preparation scored significantly lower ($M_{\text{ADN}} = 30.47$) than nurses with MSN or higher level ($M_{\text{MSN}} = 33.06$) nursing education ($F [2, 222] = 4.814, p = .009$). In Scheffé post-hoc testing, BSN graduates were not statistically different from either ADN or MSN groupings.

To have an adequate grouping comparing years of experience in nursing and oncology-specific nursing experience, three groups were formed (e.g., 10 years or fewer, 11 to 20 years, and more than 20 years) necessitating an ANOVA with post-hoc Scheffé test. Those with 10 or fewer years of experience in nursing scored significantly lower on the NKASRP than nurses with more than 20 years of nursing experience ($F [2, 222] = 4.457, p = .005$). Nurses with 11 to 20 years of experience were not significantly different from either comparison group. Similarly, those with 10 or fewer years as oncology nurses scored significantly lower than nurses with more than 20 years of oncology experience ($F [2, 222] = 5.665, p = .004$). These findings seem to suggest that knowledge and attitudes related to pain and pain management expand with greater exposure to nursing practice in general and to oncology nursing practice, in particular.

Independent samples *t*-tests indicated no significant differences in NKASRP scores between male and female nurses ($t = 1.657, p > .05$) or based on employment status ($t = 2.700, p = .007$). For age comparison, three groups naturally formed among participants of different ages (e.g., under 40 years of age, 40-55 years, over 55 years), dictating a one-way ANOVA with post-hoc Scheffé analysis. Out of a possible total of 40

points on the NKASRP, nurses over 40 years of age ($M_{40-55} = 32.75$, $M_{>55} = 32.33$) scored significantly higher than nurses under 40 years of age ($M_{<40} = 30.17$), ($F [2, 222] = 6.137$, $p = .003$). There was no significant difference between nurses age 40 to 55 years and those over 55 years of age.

An independent samples t -test was used to compare the mean NKASRP scores between nurses who spoke English only and English with other languages. Nurses who spoke languages other than English ($n = 21$) scored significantly lower ($M_{\text{English and other languages}} = 29$) than nurses who spoke English only ($M_{\text{English only}} = 33$) ($t = 2.225$, $p = .027$). If English was not the first language of these responders, the results might be a function of one's ability to interpret concepts presented in the NKASRP.

Research question 5. The final research question was, "Are educational factors and staff characteristics related to nurses' cultural competence?" Only gender was associated with cultural competence scores. Male nurses scored significantly lower on the CCA ($t = -2.608$, $p = .01$) and the CCA subscale (CAS) than female nurses ($t = -2.287$, $p = .037$). Scores on the CCB subscale were not significantly different ($t = -1.423$, $p = .156$). Another significant difference was noted on the Social Desirability Scale between male and female nurses ($t = -2.276$, $p = .024$), with women ($M_{\text{Female}} = 9$) scoring higher than men ($M_{\text{Male}} = 6$). This finding may help to explain the gender differences in the CCA and its subscales. It is possible that the desire to provide socially acceptable responses led women to respond in ways that resulted in higher scores rather than indicating their true attitudes and beliefs.

Age, years of experience in both nursing and oncology nursing, speaking languages other than English, and level of nursing education were not associated with the

nurses' cultural competence scores. No significant differences were noted among the three educational levels ($F [2, 222] = .397, p > .05$). Significant differences on the Social Desirability Scale were noted for nurses who spoke English only ($M_{\text{English Only}} = 6.2$) and nurses who spoke languages other than English ($M_{\text{English and other languages}} = 8.6$). ($t = 2.674, p = .008$). This finding may reflect cultural tendencies to provide what is perceived to be the response desired by the investigator, rather than one's true opinion. Or, it may reflect differential validity of the scale for English-speaking and nonEnglish-speaking populations.

Summary of Results

A total of 320 nurses provided at least partially complete responses, for a response rate of 8%. Two hundred twenty five nurses completed all portions of the survey, including demographic information. Only 21% ($n = 47$) believed they were very effective in managing cancer pain. Overall, the results suggest deficiencies in the knowledge and attitudes of the nurses regarding cancer pain and pain management. More than 50% of the nurses identified inadequate pain medication orders and lack knowledge by healthcare providers, patients, and their families as the most prevalent barriers to effective pain management. While 85% of the participants reported that had they participated in prior cultural diversity training, only 63% ($n = 150$) felt competent working with people from different cultures. There was a positive correlation between scores on the NKASRP and the CAS subscale scores indicating that nurses who were more culturally aware and sensitive had higher positive attitudes toward and knowledge of cancer pain management.

The results of this study suggest that oncology nurses' knowledge and attitudes toward cancer pain management may be linked to some of the key components of cultural

competence. If nurses tend to superimpose their own cultural beliefs when providing care to oncology patients, they may be doing so while hampering the quality of care with respect to pain management. If so, they should be more culturally sensitive to the differences in how patients report pain and adjust their treatment accordingly.

Chapter 5

Discussion

The purpose of this study was to determine if oncology nurses' knowledge of and attitudes toward cancer pain management were associated with their levels of cultural competence. This inquiry utilized a nonexperimental, exploratory, cross-sectional design with a randomly selected sample of 4,000 ONS members asked to complete the Nurses' Knowledge and Attitude Survey Regarding Pain (NKASRP), the Cultural Competence Assessment Survey (CCA) and a demographic questionnaire. This chapter presents a discussion of the results, implications, additional limitations, recommendations for further research, and conclusions.

Demographics of the Participants

As the participants of this study were solicited from the ONS, a comparison was made to verify that the sample represented the membership of that organization. Most of the subjects (93%, $n = 209$) were female, and only 7% ($n = 16$) were male. These figures are comparable to the gender composition of the ONS membership (96% female). The respondents' average age at the time of the survey was 48 years, comparable to the membership average, reportedly between 45 and 49 years of age. The largest group of respondents (43%, $n = 97$) held a bachelor's degree in nursing, and 36% ($n = 82$) had a

masters degree in nursing. The ONS does not publish the education level of their members (Oncology Nursing Society, 2012). Thirty-eight percent of the respondents ($n = 120$) were OCN® certified compared to 46% of the ONS members overall. The largest proportion of participants reported their primary position as staff nurses 44% ($n = 110$), proportionally similar to the ONS membership in which staff nurses comprise the largest percentage (54%). Eighty-three percent ($n = 186$) of the respondents reported working full time, which was similar to 79% of the ONS members who reported the same employment status. These figures indicate the comparability of the sample to the overall ONS membership.

Discussion and Implications

This is one of the few studies that focused exclusively on oncology nurses in the United States. Given a total of 40 questions on the NKASRP, a mean score of 28 implies that nurses gave incorrect responses on average 30% of the time. Considering that respondents are oncology nurses who routinely work *at the bedside* with cancer patients experiencing pain, this relatively low mean score suggests considerable deficiencies in their knowledge and attitudes regarding cancer pain and pain management.

Only a few studies looked at oncology nurses knowledge and attitudes toward cancer pain management in the United States; due to small sample sizes and low response rates, the generalizability of the results is questionable (Idell et al., 2007; Rushton et al., 2003). Other studies have demonstrated a similar lack of pain management knowledge and negative attitudes among Italian (Bernardi et al., 2007) and Turkish oncology nurses (Yildirim et al., 2008). In Yildirim et al.'s study, the majority of the participants (97%) incorrectly believed that patients with cancer overreported their pain.

Similar to the results of this study, the data from the previous studies indicates a lack of participants' knowledge and the presence of negative attitudes that may influence cancer pain management. Oncology nurses need to understand the principles of cancer pain management, and they need to have knowledge of and appropriate attitudes toward pain relief, since they are the experts on whom patients with cancer rely to assure that they will not endure unnecessary pain.

In this study, nurses with 10 or fewer years of experience in either nursing in general or oncology nursing in particular scored significantly lower than nurses with more than 20 years of nursing or oncology nursing experience. Nurses over 40 years of age scored significantly higher than younger nurses. Both of these findings suggest that knowledge of and attitudes toward cancer pain management improve with experience. In order to improve cancer patients' outcomes, hospitals and nursing leaders should encourage the retention of experienced oncology nurses and consider linking less experienced nurses with more experienced peers.

Nurses with ADN or diploma preparation scored significantly lower on the NKASRP than nurses with MSN or higher levels of nursing education, suggesting that improving basic nursing education by moving nursing schools to higher level academic institutions may be an important factor in assuring improved knowledge and attitudes towards cancer pain management among oncology nurses. In addition, oncology nurses should be encouraged to further their education and attend cancer pain management training. The findings of this study, particularly the areas of greatest knowledge deficit, could be used by the ONS to design nursing courses to improve oncology nurses' knowledge and attitudes about cancer pain management and to augment the OCN and the

AOCN curricula. This could be also the foundation for developing an ONS Cancer Pain CNS program.

There are no previous studies of oncology nurses' cultural competence that can provide benchmarking for this group. Assessing oncology nurses' cultural competence is a step toward improving oncology nurses' cultural knowledge and awareness and should help in designing and evaluating educational plans and their effectiveness in improving oncology nurses' cultural competence. In this study, the average CCA score was relatively high ($M = 11$); however, the mean score on the Marlowe-Crowne Social Desirability Scale was 10, suggesting that CCA scores should be interpreted with caution as they may not accurately reflect respondents' true perspectives.

While 85% of the participants reported that they participated in prior cultural diversity training, only 63% ($n = 150$) felt competent working with people from different cultures. Therefore, cultural diversity training alone does not appear to elevate the nurse to a feeling of competence. Nurses who reported feeling culturally competent scored significantly higher on the CCA, CCB, and CAS than those who reported feeling less competent. There was no difference in scores between the two groups on the NKASRP or on how effective they felt they were at managing pain for cancer patients. This suggests that experience alone, like cultural diversity training alone, does not equate to a sense of cultural competence. More study should be done to investigate whether alternative training methods (e.g., role modeling, return demonstration, video tape with replay and analysis) or other factors may be used to enhance cultural competence.

Unequal and deficient treatment of cancer patients from different ethnic minorities in the United States has been reported in many recent studies (Goss et al.,

2009; Surbone, 2010). It has also been reported that minority patients are not receiving adequate pain management when compared to non-minority patients. These findings could be related to providers' inabilities to accurately assess and manage their patients' pain (Green et al., 2003; Narayan, 2010). Respondents' scores on the NKASRP were correlated with overall CCA scores as well as with the CAS and CCB subscale scores. The results of this study suggests that oncology nurses' knowledge and attitudes toward cancer pain management may be linked to some of the key components of cultural competence. Improvements in cancer pain management may result from efforts to increase cultural competence among oncology nurses, but such efforts need to go beyond the current level of diversity training provided in nursing education.

There was also a positive correlation between scores on the NKASRP and the CAS subscale scores ($r = .393, p < .001$) indicating that nurses who were more culturally aware and sensitive had more positive attitudes and more knowledge of cancer pain management. A slightly less significant positive correlation was seen between the CCB subscale and NKASRP scores. This suggests that improving cultural competence, as measured by the CCA, may correspond to improvement in nurses' pain knowledge and attitudes, as measured by the NKASRP. The implication of these findings could be that experience with patients from diverse cultures could also relate to one's experience, knowledge, and attitudes toward the management of cancer pain.

The association between the CCA and CCB subscale ($r = .995, p < .001$) was extraordinarily high and warrants further examination; the CCB subscale could potentially be used as a proxy for the lengthy CCA survey in subsequent research. While statistically significant, the correlation between the Marlowe-Crowne Social Desirability

Scale and the CCB was small ($r = .233, p < .001$), suggesting that cultural competency behavior comprises much more than wanting to be perceived as socially desirable.

Gender was the only demographic factor associated with differences in cultural competence scores; female nurses scored significantly higher on the CCA scores and the Marlowe-Crowne Social Desirability Scale than male nurses. It is possible that the desire to provide socially acceptable responses led women to respond in ways that resulted in higher scores rather than indicating their true attitudes and beliefs.

Significant differences on the Social Desirability Scale were noted for nurses who spoke English only ($M_{\text{English Only}} = 6.2$) and nurses who spoke languages other than English ($M_{\text{English and other languages}} = 8.6$). ($t = 2.674, p = .008$). This finding may reflect cultural tendencies to provide what is perceived to be the response desired by the investigator, rather than one's true opinion. Or, it may reflect differential validity of the scale for English-speaking and nonEnglish-speaking populations.

Additional Limitations

The sample was limited to the national ONS membership, nurses who were expected to have a certain level of commitment and knowledge of oncology nursing, including pain management. The sample of the oncology nurses recruited within ONS may not represent all oncology nurses nationwide.

One additional limitation of the study is the use of an online survey. People who chose to participate may be more comfortable with the subject matter or with technology and the use of the Internet. Likewise, participants may feel compelled to answer questions with socially desirable responses. The findings might vary with a different approach to recruitment (e.g., by mail, at conferences). The relatively high scores on the

social desirability scale diminish the credibility of the cultural competence findings. A different measure of cultural competence for oncology nurses less sensitivity to social desirability bias might be needed.

Recommendations for Further Research

More research is needed to assess, understand, and educate oncology nurses for cultural competence. In addition, the results of this study suggest that more work is needed to improve pain management skills and practices for nurses who are regularly caring for patients with pain-related issues. After analysis of the findings, several recommendations are presented that warrant further research.

1. Observational study of oncology nurses' interactions with patients from different cultures is warranted. In addition, future research should look at other healthcare providers' levels of cultural competence.
2. Interviews of patients with cancer to assess their perceptions of the cultural competence of oncology nurses may be helpful in designing more effective cultural diversity training.
3. Because medical reimbursement will be calculated based in part on patient satisfaction, the association between Oncology nurses' NKASRP scores, CCA scores, and patient satisfaction scores should be tested further.

An Internet-based, closed-ended survey can reveal nurses' perceptions of cultural competence and knowledge of pain management, but more research is needed to examine actual practices and patient experiences with oncology nursing care.

Conclusions

Oncology nurses' knowledge and attitudes toward cancer pain management were correlated with cultural competence and with level of education. More than 50% of the nurses identified inadequate pain medication orders and knowledge deficits by healthcare providers, patients, and their families as the most prevalent barriers to effective pain management. As respondents were oncology nurses routinely working *at the bedside* with cancer patients, the relatively low mean score on the NKASRP suggests deficiencies in their knowledge and attitudes regarding cancer pain and pain management. For improved patient care, increased patient satisfaction, and better outcomes, oncology nurses should be encouraged to expand their knowledge of cultural differences as well as knowledge of cancer pain and cancer pain management. Similarly, those caring for patients with highly complex conditions would benefit from additional education to customize care.

Cultural competence may be enhanced by planning and testing cultural diversity training that positively affects nurses' abilities to provide culturally appropriate and safe patient care. While 85% of the respondents reported that had they participated in prior cultural diversity training, only 63% felt competent working with people from cultures other than their own. Cultural knowledge, awareness, and sensitivity should be fostered in healthcare organizations and schools of nursing. The results of this study suggest that oncology nurses who are culturally competent also display elevated knowledge and attitudes toward cancer pain management; thus, oncology nurses should be aware of how cultural differences influence their perceptions of reports of pain and treatment behaviors.

Major knowledge deficits and unsound beliefs still exist among oncology nurses, impeding cancer pain management. The educational implications of this study could be

employed by the ONS to design nursing courses on cancer pain management and cultural competence to augment the OCN and the AOCN curricula. Further consideration should be given to developing an ONS Cancer Pain CNS program.

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Appendix A

Knowledge and Attitudes Survey Regarding Pain

True/False – Circle the correct answer.

T	F	1. Vital signs are always reliable indicators of the intensity of a patient's pain.
T	F	2. Because their nervous system is underdeveloped, children under two years of age have decreased pain sensitivity and limited memory of painful experiences.
T	F	3. Patients who can be distracted from pain usually do not have severe pain.
T	F	4. Patients may sleep in spite of severe pain.
T	F	5. Aspirin and other nonsteroidal anti-inflammatory agents are NOT effective analgesics for painful bone metastases.
T	F	6. Respiratory depression rarely occurs in patients who have been receiving stable doses of opioids over a period of months.
T	F	7. Combining analgesics that work by different mechanisms (e.g., combining an opioid with an NSAID) may result in better pain control with fewer side effects than using a single analgesic agent.
T	F	8. The usual duration of analgesia of 1-2 mg morphine IV is 4-5 hours.
T	F	9. Research shows that promethazine (Phenergan) and hydroxyzine (Vistaril) are reliable potentiators of opioid analgesics.
T	F	10. Opioids should not be used in patients with a history of substance abuse.

- T F 11. Morphine has a dose ceiling (i.e., a dose above which no greater pain relief can be obtained).
- T F 12. Elderly patients cannot tolerate opioids for pain relief.
- T F 13. Patients should be encouraged to endure as much pain as possible before using an opioid.
- T F 14. Children less than 11 years old cannot reliably report pain, so nurses should rely solely on the parent's assessment of the child's pain intensity.
- T F 15. Patients' spiritual beliefs may lead them to think pain and suffering are necessary.
- T F 16. After an initial dose of opioid analgesic is given, subsequent doses should be adjusted in accordance with the individual patient's response.
- T F 17. Giving patients sterile water by injection (placebo) is a useful test to determine if the pain is real.
- T F 18. Vicodin (hydrocodone 5 mg + acetaminophen 500 mg) PO is approximately equal to 5-10 mg of morphine PO.
- T F 19. If the source of the patient's pain is unknown, opioids should not be used during the pain evaluation period, as this could mask the ability to correctly diagnose the cause of pain.
- T F 20. Anticonvulsant drugs such as gabapentin (Neurontin) produce optimal pain relief after a single dose.
- T F 21. Benzodiazepines are not effective pain relievers unless the pain is due to muscle spasm.

- T F 22. Narcotic/opioid addiction is defined as a chronic neurobiologic disease, characterized by behaviors that include one or more of the following:
impaired control over drug use, compulsive use, continued use despite harm, and craving.

Multiple Choice – Place a check by the correct answer.

23. The recommended route of administration of opioid analgesics for patients with persistent cancer-related pain is _____

- a. intravenous
- b. intramuscular
- c. subcutaneous
- d. oral
- e. rectal

24. The recommended route for administration of opioid analgesics for patients with brief, severe pain of sudden onset such as trauma or postoperative pain is _____

- a. intravenous
- b. intramuscular
- c. subcutaneous
- d. oral
- e. rectal

25. Which of the following analgesic medications is considered the drug of choice for the treatment of prolonged moderate to severe pain for cancer patients?

- a. codeine
- b. morphine
- c. meperidine
- d. tramadol

26. Which of the following IV doses of morphine administered over a 4 hour period would be equivalent to 30 mg of oral morphine given q 4 hours?

- a. Morphine 5 mg IV
- b. Morphine 10 mg IV
- c. Morphine 30 mg IV
- d. Morphine 60 mg IV

27. Analgesics for post-operative pain should initially be given

- a. around the clock on a fixed schedule
- b. only when the patient asks for the medication
- c. only when the nurse determines that the patient has moderate or greater discomfort

28. A patient with persistent cancer pain has been receiving daily opioid analgesics for 2 months. Yesterday the patient was receiving morphine 200 mg/hour intravenously. Today he has been receiving 250 mg/hour intravenously. The likelihood of the patient developing clinically significant respiratory depression in the absence of new comorbidity is

- a. less than 1%
- b. 1-10%
- c. 11-20%
- d. 21-40%
- e. > 41%

29. The most likely reason a patient with pain would request increased doses of pain medication is

- a. The patient is experiencing increased pain.
- b. The patient is experiencing increased anxiety or depression.
- c. The patient is requesting more staff attention.
- d. The patient's requests are related to addiction.

30. Which of the following is useful for treatment of cancer pain?

- a. Ibuprofen (Motrin)
- b. Hydromorphone (Dilaudid)
- c. Gabapentin (Neurontin)
- d. All of the above

31. The most accurate judge of the intensity of the patient's pain is

- a. the treating physician
- b. the patient's primary nurse
- c. the patient
- d. the pharmacist
- e. the patient's spouse or family

32. Which of the following describes the best approach for cultural considerations in caring for patients in pain:

- a. There are no longer cultural influences in the U.S. due to the diversity of the population.
- b. Cultural influences can be determined by an individual's ethnicity (e.g., Asians are stoic, Italians are expressive, etc).
- c. Patients should be individually assessed to determine cultural influences.
- d. Cultural influences can be determined by an individual's socioeconomic status (e.g., blue collar workers report more pain than white collar workers).

33. How likely is it that patients who develop pain already have an alcohol and/or drug abuse problem?

< 1%	5 – 15%	25 - 50%	75 - 100%
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34. The time to peak effect for morphine given IV is

- _____ a. 15 min.
- _____ b. 45 min.
- _____ c. 1 hour
- _____ d. 2 hours

35. The time to peak effect for morphine given orally is

- ☐ a. 5 min.
- ☐ b. 30 min.
- ☐ c. 1 – 2 hours
- ☐ d. 3 hours

36. Following abrupt discontinuation of an opioid, physical dependence is manifested by the following:

- ☐ a. sweating, yawning, diarrhea and agitation with patients when the opioid is abruptly discontinued
- ☐ b. Impaired control over drug use, compulsive use, and craving
- ☐ c. The need for higher doses to achieve the same effect.
- ☐ d. a and b

Case Studies: Two patient case studies are presented. For each patient you are asked to make decisions about pain and medication.

Directions: Please select one answer for each question.

37. Patient A: Andrew is 25 years old, and this is his first day following abdominal surgery. As you enter his room, he smiles at you and continues talking and joking with his visitor. Your assessment reveals the following information: BP = 120/80; HR = 80; R = 18; on a scale of 0 to 10 (0 = no pain/discomfort, 10 = worst pain/discomfort) he rates his pain as 8.

A. On the patient's record you must mark his pain on the scale below. Circle the number that represents your assessment of Andrew's pain.

0 1 2 3 4 5 6 7 8 9 10

No pain/discomfort

Worst Pain/discomfort

B. Your assessment, above, is made two hours after he received morphine 2 mg IV. Half-hourly pain ratings following the injection ranged from 6 to 8, and he had no clinically significant respiratory depression, sedation, or other untoward side effects. He has identified 2/10 as an acceptable level of pain relief. His physician's order for analgesia is "morphine IV 1-3 mg q1h PRN pain relief." Check the action you will take at this time.

1. Administer no morphine at this time.
2. Administer morphine 1 mg IV now.
3. Administer morphine 2 mg IV now.
4. Administer morphine 3 mg IV now.

38. Patient B: Robert is 25 years old, and this is his first day following abdominal surgery. As you enter his room, he is lying quietly in bed and grimaces as he turns in bed. Your assessment reveals the following information: BP = 120/80; HR = 80; R = 18; on a scale of 0 to 10 (0 = no pain/discomfort, 10 = worst pain/discomfort) he rates his pain as 8.

A. On the patient's record you must mark his pain on the scale below. Circle the number that represents your assessment of Robert's pain:

0 1 2 3 4 5 6 7 8 9 10

No pain/discomfort

Worst Pain/discomfort

B. Your assessment, above, is made two hours after he received morphine 2 mg IV. Half-hourly pain ratings following the injection ranged from 6 to 8, and he had no clinically significant respiratory depression, sedation, or other untoward side effects. He has identified 2/10 as an acceptable level of pain relief. His physician's order for analgesia is "morphine IV 1-3 mg q1h PRN pain relief." Check the action you will take at this time:

1. Administer no morphine at this time.
2. Administer morphine 1 mg IV now.
3. Administer morphine 2 mg IV now.
4. Administer morphine 3 mg IV now.

Appendix B

Cultural Competence Assessment Survey

1. In the past 12 months, which of the following racial/ethnic groups have you encountered among your clients and their families or within the healthcare environment or workplace? *Mark 'X' for all that apply.*

- ☐ Hispanic/Latino (including Mexican, Mexican American, Chicano, Puerto Rican, Cuban, other Spanish)
- ☐ White/Caucasian/European American
- ☐ Black/African American/Negro
- ☐ American Indian/Alaska Native
- ☐ Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or other Asian)
- ☐ Native Hawaiian/Pacific Islander
- ☐ Arab American/Middle eastern
- ☐ Other (specify) _____

2. In your current environment what percentage of the total population is made up of people from these racial/ethnic groups? *Write in percents to add to 100%*

- _____ Hispanic/Latino (including Mexican, Mexican American, Chicano, Puerto Rican, Cuban, other Spanish)
- _____ White/Caucasian/European American
- _____ Black/African American/Negro
- _____ American Indian/Alaska Native

_____ Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or
other Asian)

_____ Native Hawaiian/Pacific Islander

_____ Arab American/Middle Eastern

_____ All other groups combined

100 % = TOTAL

3. In the past 12 months which of the following special population groups have you encountered among your clients and their families or within the healthcare environment or workplace? *Mark 'X' for all that apply.*

- ☐ Mentally or emotionally ill
- ☐ Physically challenged/disabled
- ☐ Homeless/housing insecure
- ☐ Substance abusers/alcoholics
- ☐ Gay, lesbian, bisexual, or transgender
- ☐ Different religious/spiritual backgrounds
- ☐ Other (specify)

4. In your current environment what percentage of the total population is made up of people from these special population groups? *Write in percents; may not total 100%*

_____ Mentally or emotionally ill

_____ Physically challenged/disabled

9. Aspects of cultural diversity need to be assessed for each individual, group, and organization.

[illegible]

10. If I know about a person's culture, I don't need to assess their personal preferences for health services.

[illegible]

11. Spiritual and religious beliefs are important aspects of many cultural groups.

[illegible]

12. Individual people may identify with more than one cultural group.

[illegible]

13. Language barriers are the only difficulties for recent immigrants to the United States.

[illegible]

14. I believe that everyone should be treated with respect no matter what their cultural heritage.

[illegible]

15. I understand that people from different cultures may define the concept of “healthcare” in different ways.

[illegible]

16. I think that knowing about different cultural groups helps direct my work with individuals, families, groups, and organizations.

[illegible]

For each of the following statements put 'X' in the box that best describes how often you do the following:

17. I include cultural assessment when I do individual or organizational evaluations.

[illegible]

18. I seek information on cultural needs when I identify new people in my work or school.

[illegible]

19. I have resource books and other materials available to help me learn about people from different cultures.

[illegible]

20. I use a variety of sources to learn about the cultural heritage of other people.

[illegible]

21. I ask people to tell me about their own explanations of health and illness.

[illegible]

22. I ask people to tell me about their expectations for health services.

[illegible]

23. I avoid using generalizations to stereotype groups of people.

[illegible]

24. I recognize potential barriers to service that might be encountered by different people.

[illegible]

25. I remove obstacles for people of different cultures when I identify barriers to services.

[illegible]

26. I remove obstacles for people of different cultures when people identify barriers to me.

[illegible]

27. I welcome feedback from clients about how I relate to people from different cultures.

[illegible]

28. I find ways to adapt my services to individual and group cultural preferences.

	Very	Somewhat			Few		Not
Always	Often	Often	Often	Sometimes	Times	Never	sure
☐	☐	☐	☐	☐	☐	☐	☐

29. I document cultural assessments if I provide direct client services.

	Very	Somewhat			Few		Not
Always	Often	Often	Often	Sometimes	Times	Never	sure
☐	☐	☐	☐	☐	☐	☐	☐

30. I document the adaptations I make with clients if I provide direct client services.

	Very	Somewhat			Few		Not
Always	Often	Often	Often	Sometimes	Times	Never	sure
☐	☐	☐	☐	☐	☐	☐	☐

Your answers to these last few questions will help us understand responses from different kinds of people who complete the survey. ALL answers are strictly confidential.

Read each item below and decide whether the statement is true or False as it pertains to you personally. Mark your answers with an 'X' in the True or False box.

31. It is sometimes hard for me to go on with my work if I am not encouraged.

True	False
☐	☐

32. I sometimes feel resentful when I don't get my way.

True	False
☐	☐

33. On a few occasions, I have given up doing something because I thought too little of my ability.

True False

☐☐

34. There have been times when I felt like rebelling against people in authority even though I knew they were right.

True False

☐☐

35. No matter who I'm talking to, I'm always a good listener.

True False

☐☐

36. There have been occasions when I took advantage of someone.

True False

☐☐

37. I'm always willing to admit it when I make a mistake.

True False

☐☐

38. I sometimes try to get even rather than forgive and forget.

True False

☐☐

39. I am always courteous, even to people who are disagreeable.

True False

☐☐

40. I have never been irked when people expressed ideas very different from my own.

True False

☐☐

41. There have been times when I was quite jealous of the good fortune others.

True False

☐☐

42. I am sometimes irritated by people who ask favors of me.

True False

☐☐

43. I have never deliberately said something to hurt someone's feelings.

True False

☐☐

44. In what year were you born?

45. Using the categories below, what do you consider yourself? *(Choose one or more)*

- ☐ Hispanic/Latino (including Mexican, Mexican American, Chicano, Puerto Rican, Cuban, other Spanish)

- ☐ White/Caucasian/European American
- ☐ Black/African American/Negro
- ☐ American Indian/Alaska Native
- ☐ Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or other Asian)
- ☐ Native Hawaiian/Pacific Islander
- ☐ Arab American/Middle eastern
- ☐ Other (specify) _____

46. What is your highest level of education completed?

- ☐ Less than high school
- ☐ Diploma
- ☐ High school or GED
- ☐ Associate degree
- ☐ Bachelors degree
- ☐ Graduate or professional degree

47. Have you ever participated in cultural diversity training?

Yes	NO
☐	☐

48. If you have had prior diversity training, which option below best describes it? (Check all that apply)

- ☐ Separate college course for credit
- ☐ Content covered in a college course
- ☐ Professional conference or seminar
- ☐ Employer-sponsored program
- ☐ On-line (computer assisted) education
- ☐ Continuing education offering
- ☐ Other diversity training types (Specify) _____

49. Which of the following best describes your current role?

- ☐ LPN
- ☐ RN
- ☐ Clerical Worker
- ☐ Nutritionist
- ☐ Therapist (occupational or physical)
- ☐ Physician
- ☐ Other _____

Thank you for taking this survey. We appreciate your time and effort!

Appendix D
Invitation Letter

Dear Oncology Nurse,

My name is Ayman Alnems. I am a doctoral student in the School of Nursing at the University of San Diego, San Diego, CA. I am asking for your participation in my dissertation research study to learn about cultural competence among oncology nurses and their knowledge and attitudes toward cancer pain management. Your participation in this study has the potential to help nurses better understand this important area of oncology nursing practice.

If you decide to participate, you will be asked to complete an online survey that takes about 20 minutes to complete. You will be asked about things like how you interact with cancer patients, how you manage your roles, and how effective you feel in managing patients' cancer pain. You will also be asked a few questions about yourself, such as your age, ethnicity, and marital status.

The risks of participating in this study are minimal and no more than those encountered in everyday life. Your responses will be kept confidential and all your information will be coded with a number. All email and URL addresses will be immediately separated from your survey responses as soon as they are received. We will keep the study data for a minimum of 5 years.

If you participate in this study, you can choose to be entered in a lottery raffle to win a \$25 Amazon gift card. Your chances of winning are 1 in 20. If you choose to participate, you will be asked to fill in your email address so I can send you the card digitally if you win. All email addresses will be destroyed as soon as the prizes are awarded.

Taking part in this study is entirely optional. Choosing not to participate will have no effect on your employment, healthcare, or any other services to which you are entitled.

You may quit being in the study at any time or decide not to answer any specific questions, and you will still be eligible to enter the lottery raffle. Should you decide to participate in this study, please print out a copy of this page for future reference.

I will be happy to answer any questions you have about the study. You may contact me at (aymanurse@gmail.com) or (619) 718-2617. You can also contact my faculty advisor, Dr. Mary Jo Clark, at (clark@sandiego.edu) or (619) 260-4574.

If you would like to participate, please click on this link to begin the study: <https://www.surveymonkey.com/s/WRW8RWM>

Thank you in advance for taking the time to complete the surveys. It's only with the kind help of nurses like you this study can be successful.

Sincerely,

Ayman Alnems, RN

Please note: If you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.

https://www.surveymonkey.com/optout.aspx?sm=Ahu6WAhMTHCeFIMiIe32Hw_3d_3d