

PAIN MANAGEMENT IN HISPANIC AND  
NON-HISPANIC PATIENTS

A RESEARCH PAPER

SUBMITTED TO THE GRADUATE SCHOOL  
IN PARTIAL FULLFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE

MASTERS OF SCIENCE

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DECEMBER 2010

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RESEARCH SUBJECT: Pain Management in Hispanic and Non- Hispanic Patients  
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Ethnicity has been shown to be an independent risk factor for inadequate administration of analgesia. The finding may be influenced by Hispanic patients' expectations of pain relief, the perception of the caregivers and cultural dynamics. Pain expression may vary among different populations. Patients from minority populations may be more likely to have poor pain management, less analgesia prescribed and lower doses administered for their pain (McNeil, Sherwood, & Starck, 2003). The purpose of this study is to examine the role of ethnicity on pain expectations, perceptions, and management from the patient and the healthcare team. The framework is Bates Bio-Cultural Model of Pain which integrates the social learning theory into the physiologic explanation of how pain develops and is interpreted. A convenience sample of 100 patients presenting to a tertiary community hospital will be used including both genders ranging in age from 18-75 with similar chief complaints, varying educational levels and marital status. Findings will provide information on how ethnicity affects perceptions and expectations of pain and eventually how well pain is managed.

## Chapter I

### Introduction

The Hispanic population in the United States has increased by almost 800% between 1950 and 2008, growing from an estimated 4 million to 47 million. High birth rates and immigration have been cited as reasons for the rapid growth of this population. Hispanics who reside in the United States share common values, language, and religion, but they also differ in many aspects such as country of origin, length of U.S. residence, income level, education and degree of acculturation. Even though Hispanics are the fastest growing population, little work has studied the influence of culture on aspects of care and treatment. Even more neglected has been in quality of life issues, symptom management and pain control which are strongly influenced by culture (Pletcher, Kertesz, Kohn, & Gonzales, 2008).

Throughout U.S. history, race has played a significant role in shaping policies toward pain. The pain field has developed rapidly over the past two decades, as evidenced by the increased pain management content in the scientific literature, pain curricula development, and the availability of clinical practice guidelines. The Joint Commission on Accreditation of Hospitals and Healthcare Organizations (JCAHOs) recent mandate regarding an individuals “right” to appropriate pain care supports the increasing importance of pain as a quality-of-life domain and pain relief as an indicator

for quality medical care. Despite guidelines, educational interventions, and standards aimed at optimizing pain management, the literature continues to report under treatment of pain, particularly among patients who are racial and ethnic minorities (Green, Anderson, & Baker, 2008). The newly approved JCAHO pain assessment and management standards present a rare and important opportunity for widespread and sustainable improvement in how pain is managed in the United States. The new JCAHO standards require organizations to:

- Recognize the right of patients to appropriate assessment and management of their pain
- Identify patients with pain in an initial screening assessment
- Perform a more comprehensive pain assessment when pain is identified
- Record the results of the assessment in a way that facilitates regular assessment and follow up
- Educate relevant providers in pain assessment and management
- Determine and assure staff competency in pain assessment and management
- Address pain assessment and management in orientation of all new staff
- Establish policies and procedures that support appropriate prescription or ordering of effective pain medications
- Ensure that pain does not interfere with participation in rehabilitation
- Educate patients and their families about the importance of effective pain management
- Address patient needs for symptom management in the discharge process
- Collect data to monitor the appropriateness and effectiveness of pain management

(Berry & Dahl, 2000, p. 6).

The National Institutes of Health (NIH) was one of the first agencies to define health disparities as differences in the incidence, prevalence, mortality and burden of disease and other adverse health conditions existing among specific population groups in the United States. The U.S. congress charged the Institute of Medicine (IOM) of the National Academy of Sciences (NAS) to assess the contribution of health care inequities

to disparities in the delivery of health care services among racial and ethnic minorities (Green, Anderson, & Baker, 2008). They were specifically asked to determine the presence and extent of racial and ethnic disparities that are not attributable to known factors such as access issues, to evaluate potential sources of disparities including role bias, discrimination, and stereotyping at the individual, institutional and health care system levels; and to provide recommendations regarding interventions to eliminate these disparities. The IOM convened an expert panel that reviewed over 600 papers on health disparities, conducted four public workshops on professional and advocacy perspectives regarding disparities, commissioned papers from national leaders on issues related to disparities, heard expert testimony, and conducted focus groups involving both healthcare providers and patients. The IOM concluded that racial and ethnic disparities are consistently found across a wide range of health care settings, diseases and clinical services. Health systems, healthcare providers and patients were found to contribute to racial and ethnic disparities in health care (Cone, Richardson, Todd, Betancourt, & Lowe, 2003).

To promote high standards of pain management the Agency for Healthcare Research and Quality developed the document *Clinical Practice Guidelines for Acute Pain Management: Operative or Medical Procedures and Trauma*. This document outlines collaborative and interdisciplinary approaches to pain control and specified the need for evaluation of clinical outcomes of pain management (McNeil, Sherwood, & Starck, 2001). In response, a subgroup developed an instrument to assess patient satisfaction with pain management. The prototype questionnaire, the American Pain Society Patient Outcome Questionnaire (APS-POQ), consisted of 15 items to address

pain intensity, interference with various activities of daily living related to pain, patient satisfaction, wait time for analgesic, change in medication, reason for desiring more medications and education to the patient on pain management (McNeill et al.).

### *Background/Significance*

The nature of pain is both subjective and objective. It is commonly accepted that the person experiencing the pain defines it, thus the definition goes beyond the physiologic. As a subjective phenomenon, pain expression can vary among different populations. Patients from minority populations are vulnerable to pain management and are more likely to have poor pain management experiences, to have less analgesia prescribed and to receive lower doses of medications for their pain (Epps, Ware, & Packard, 2008). Although healthcare professionals as well as patients may create formidable impediments, traditional patterns of professional practice may be the most intractable barrier to effective pain management. The failure of staff to routinely assess and document pain, the lack of access to practical treatment protocols, and the common view that pain is an expected and insignificant symptom continue to impeded progress (Berry & Dahl, 2000). Inadequate pain management and other symptoms not only decrease the quality of life, it also creates a financial burden on the healthcare system and on our society. Unrelieved pain costs millions of dollars annually, as a result of longer hospital stays, re-hospitalizations, and visits to the emergency rooms. Furthermore, patients who are unable to work because of pain increase the cost of disability programs. Patients with uncontrolled pain may not only lose income but also access to insurance coverage. There is evidence that adequate pain management will indeed save previous health care dollars and resources (Berry & Dahl).

For Hispanic Populations, one of the fastest growing, there are cultural issues that have an impact on research design such as cultural considerations for *simpatia* (a striving for harmonious relationships without interpersonal conflict), respect and family involvement, culturally influenced treatment modalities and adjunctive therapies (Pletcher et al., 2008). Themes have been identified to represent a profile of ancient Hispanic civilizations expressions, beliefs and care associated pain experiences. Among the themes identified were (a) pain was predetermined by the Gods, (b) man had an obligation to endure pain in the performance of his duties, (c) pain was an acceptable and anticipated form of life, (d) pain should be endured with stoicism, (e) maintaining balance was effective in alleviating pain, and (f) pain was a consequence of abnormal behavior. Because cultural background has been recognized as a major influence in a persons life these themes still play a significant role in the pain perceptions and reactions of Hispanic patients today (Juarez, Ferrell, & Borneman, 1998).

#### *Statement of Problem*

Ethnicity has been shown to be an independent risk factor for inadequate administration of analgesia. This finding may be influenced by Hispanic patients' expectations of pain relief, the perceptions of the caregivers and cultural dynamics. Pain expression may vary among different populations. Patients from minority populations may be more likely to have poor pain management, less analgesia prescribed and lower doses administered for their pain (McNeill et al., 2001). Extensive research into relations between ethnicity and pain has yielded few but firm generalizations, in part because both pain and ethnicity are multidimensional, malleable, and shaped by culture. Various

studies using diverse methods suggest that culture plays a crucial role in the individual experience of pain (Morris, 2001).

### *Purpose of the Study*

The purpose of this descriptive study is to examine the role of ethnicity on pain expectations, perceptions and management from the patient and healthcare team.

### *Research Questions*

1. How does ethnicity affect pain beliefs, response to pain and effects of pain?
2. How does ethnicity affect pain management practices by healthcare providers?
3. How does ethnicity influence the effectiveness of education on pain relief interventions?

### *Organizing Framework*

Few studies have examined the pain experiences of Hispanics, yet evidence indicates a multicultural influence on the way people respond to pain. The Bates Biocultural Model of Pain integrates social learning theory into the physiologic explanation of how pain develops and is interpreted. Bates' model bridges the narrow medical conception of pain and proposes that cognitive control of pain perception exerts a direct influence of the pain responses and that cognitive control is influenced by several cultural, attitudinal, and experiential factors (McNeill et al., 2001).

### *Definition of Terms*

1. Pain Management Practices: Conceptual.

Pain management practices are nurses' perceptions of provision of pain control and comfort measures through clinical decision making (Mrozek & Werner, 2001).

2. Pain Beliefs: Conceptual.

Pain beliefs are whatever the experiencing person says it is (McCaffery & Beebe, 1989).

3. Ethnicity: Conceptual.

Ethnicity is having an ethnic quality or affiliation (Al-Atiyyat & Mohammed, 2009).

4. Education on pain interventions: Conceptual.

Education on pain interventions are person centered through collaborative goals to provide anticipatory instruction on pain causes, appropriate prevention and relief measures (International Association for the Study of Pain, 2010).

### *Limitations*

There are limitations in research of specific cultural groups, including challenges with translation, bias of convenience sampling, accurate interpretation of data collected, recruitment of enough subjects for valid sample size, and demographics of hospital selected.

### *Assumptions*

Healthcare providers inaccurately interpret and manage pain expectations in ethnic patients. Ethnic patients feel undereducated about their pain and methods to

control their pain. Ethnic patients have their pain undertreated. Minorities have difficulty expressing their pain control needs.

*Summary*

By understanding cultural similarities and differences healthcare providers can better prevent problems related to stereotyping, miscommunication and interpersonal stress that lead to inadequate control of pain. Despite conflicting studies on cultural influences and pain, understanding cultural diversity and ethnicity should be a primary concern for the nurses caring for patients with pain. Healthcare professionals need to become sensitive not only to the patients' heritage but also their own and pay particular attention to what happens when different heritages come together (Al-Atiyyat & Mohammed, 2009). Most importantly, just putting the patient in the center of the equation will be a gigantic step for future success.

## Chapter II

### Literature Review

Pain is a complex phenomenon, and under treated or inadequately treated pain can have negative physical and physiologic consequences for patients of all ages and races. Pain is considered the result of an “ensemble act” with cellular, molecular, genetic, physiologic, psychological, and social factors jointly processing the signal to create the circumstances that a person designates as pain. It also has been suggested that perhaps sociologic and cultural factors impose societal roles that further impact the interpretation and expression of pain (Miller & Newton, 2006). The purpose of this study is to examine the role of ethnicity on pain expectations, perceptions and management from the patient and healthcare team. The literature review consists of selected research studies that have been done on ethnicity and pain management. This chapter is organized into 4 sections: (a) organizing framework, (b) ethnicity and patient pain management perceptions, (c) provider perceptions and effectiveness of pain management, and (d) literature summary.

#### *Organizing Framework*

The Bates Biocultural Model of Pain integrates social learning theory into the physiologic explanation of how pain develops and is interpreted. Bates’ model bridges the narrow medical conception that pain is a symptom of tissue damage with the social

and behavioral view of pain as a product of attitude, value, and experience that affects the physiological processes and outcomes involved in pain perception and response (Sherwood, McNeill, Palos, & Starck, 2003). Social modeling, group norms and learned values influence pain perception, the processing of the pain response and the behavior related to pain. It is assumed that all humans have similar neurophysiologic responses to painful stimuli; this model exposed factors that influence response, namely social learning processes within ethno cultural groups. This model provides a framework for interpreting the influence of cultural context, group characteristics, and language barriers on the pain experience (Sherwood et al.).

#### *Ethnicity and Patient Pain Management Perceptions*

The nature of pain is both subjective and objective. It is commonly accepted that the person experiencing pain defines it, thus the definition goes beyond the physiologic. Pain expression will vary among different populations. Patients from minority populations are vulnerable to pain management and are more likely to have less analgesia prescribed and to receive lower doses of pain medication for their pain (Sherwood et al., 2003). The purpose of the study was to better understand the experience and management of acute pain from the perspective of the adult Hispanic patient three weeks postoperative. The study utilized the biocultural model of pain which integrated the social learning theory into the physiologic explanation of how pain develops and is interpreted (Sherwood et al.).

For enriched data collection, this study recruited participants with diverse levels of acculturation in both rural and urban populations from two hospitals that serve sizeable numbers of Hispanics. One was a 500-bed hospital located in a largely Hispanic

community in a metropolitan area of Texas and the other was a 200-bed community hospital in an 80% Hispanic rural area along the Texas-Mexican border. Participants were recruited according to inclusion criteria: self identified Hispanics, Spanish or English speaking, surgery within the previous three weeks, 18 years or older, and a willingness and ability to participate at the scheduled time. The convenience sample included 35 self-identified Hispanics recovering from a surgical procedure. Participants ranged from age 23-80 years and 50% spoke English as a primary language. The majority was married and Catholic and half had less than a high school education. Over 60% (n=20) were first generation immigrants to the U.S. from Mexico (Sherwood et al., 2003).

This qualitative study used focus groups and individual interviews to elicit information from Hispanics regarding acute pain experiences, beliefs, expectations related to pain experience and pain relief, and approaches used to manage pain. Data was also collected on their perceptions of satisfaction with pain management and healthcare providers. Working with an advisory group, the researchers developed an interview guide with a detailed script to ensure consistency. The interview tool was prepared and translated into Spanish by bilingual members of the advisory group. Bilingual trained data collectors were used to conduct the focus groups and the interviews. The limitations included challenges in translation, data transcription and interpretation of terms with multiple meanings or no equivalent word in the other language. Recruiting participants was also difficult and thus positive group discussions did not materialize. The final limitation was that even though both genders were equally recruited the participants were mostly female (Sherwood et al., 2003). According to a study by Daunt (2003), there are challenges to minority recruiting and when recruiters are of a different culture than the

potential subjects, there is an increase for a lack of trust, because the recruiter may not understand the intricacies of the specific culture (Daunt, 2003).

The results were placed into five categories. Category one of the study was made up of four themes: attitudes beliefs and expectations; responses to pain; effects of pain; and descriptions of pain. Participants described varying attitudes towards pain and were influenced by their beliefs about pain that they had developed while young from their parents. Their responses to pain included crying, screaming, sadness, and the need to talk about the pain. The pain interfered with activities of daily living and their routine lives. Words to describe the pain included sharp, cracking, deep, intense, hammered, sore and stabbing. Category two had three themes: management using medications, non-medication management of pain, and effectiveness of pain management. Most participants reported medications as the primary means of managing pain. Non-medication management included prayer, heat, positioning, pillows, quiet, music, TV/movies, reading, and massage. Participants agreed that medications were the most effective strategy and that the non-medication methods helped the effect of the medications. Category three expanded the meaning of pain: sources of information, language preference, and the type of information received and the effectiveness of the information. Sources of information were pamphlets from office, clinics, hospitals, and the library along with magazines and books on healing. Some also relied on TV and the internet. Nearly half of the patients preferred materials in English over Spanish. Only three reported that they were given inadequate instruction about managing pain, side-effects and the use of analgesia. Category four included: provider response to pain and the patient response to providers. Participants reported a range of provider responses

from really concerned and attentive to disbelief and inattention. Participants were very satisfied with providers that were concerned and attended to their pain in a timely manner. But they were dissatisfied with caregivers that didn't seem to care about their pain. In category five the themes of gender, religion, ethnicity, and other factors were identified. Some felt that men and women reacted differently to pain but others felt gender didn't matter. The theme of religion had contrasting descriptions; 'religion makes a difference', and 'religion plays no part in it'. Participants did feel that Hispanics find it harder to express pain and find it harder understand medical terms. Other factors of age and physical status had conflicting results (Sherwood et al., 2003).

Results show how misinterpreting the pain experience for Hispanics may lead to ineffective treatment. The inventory of the pain experience as described in this study can help sensitize providers as they interview and assess patients in pain. Increasing the knowledge base regarding the Hispanic pain experience is an important first step in developing evidence-based practice for Hispanic populations, thus reducing disparities in pain management for members of ethnic minority groups (Sherwood et al., 2003). To overcome the barriers to cultural recruiting Daunt recommends using gatekeepers in the community like; church leaders, family, physicians, and community leaders to serve in the role to facilitate a larger number of subjects (Daunt, 2003).

Gibby, Aday, Todd, Cleeland, & Anderson (2006) identified that ethnic groups are at risk for poorer health and shorter survival and pain is one of the most frequent symptoms related to disease processes. The purpose of their study was to describe the prevalence and impact of pain in the middle to late aged adults. There was not a specific framework identified for this study.

The authors addressed the prevalence and impact of pain in a community sample of aging ( $\geq 51$  years old), 82% were non-Hispanic whites ( $n = 11,021$ ), 13% non-Hispanic blacks ( $n = 1,804$ ), and 7% Hispanics ( $n = 952$ ). The age cut points included “middle aged adults” for those 51-64 years (51%), “older adults” for those 65-74 years (29%), “old-old adults” for those 75- 84 years (17%), and “oldest old” for those  $>85$  years (3%). Educational level was having less than secondary education (high school). Fifty-three percent were men. Thirty-three percent had 2 or more chronic conditions. Thirteen percent reported physiological distress. Pain, pain severity, activity limitation as a result of pain, co morbid conditions, and socio-demographic variables were addressed (Gibby et al., 2006).

The data was taken from a 2000 Health and Retirement study that is a population based survey designed to study health and well-being of aging Americans. Physiological distress was measured using the Center for Epidemiological Studies (CESD) scale which is a 20-item scale that measures a continuum of physiological distress with symptoms of depression and anxiety. The authors used descriptive statistics to summarize data. Chi-square analysis was conducted to determine associations between race/ethnicity and pain severity and other variables. To control type I error rates, the authors used a modified Bonferroni approach with the level of significance adjusted from the customary .05 to .007, given the number of tests that were conducted. The authors conducted a multivariate logistic regression analysis by using severe pain as the dependent variable. Pain prevalence was defined by the response to the question, “Are you often troubled with pain?” The authors coded pain as “0” for a response of “no” and “1” for a response of “yes” to the same question. Pain severity was defined by the response (mild, moderate,

or severe) to the follow up question; “How bad is the pain most of the time?” Activity limitation as a result of pain was defined by the following question; “Does the pain make it difficult to do your usual activities?” The responses were coded as “0” for “no” and “1” for “yes” (Gibby et al., 2006).

Results showed pain prevalence was 28%, and 17% of the sample reported activity limitations as a result of pain. Non-Hispanic blacks (odds ratio (OR), 1.78; 99% confidence interval (CI), 1.33-2.37) and Hispanics (OR, 1.80; 99% CI, 1.26-2.56) had higher risk for severe pain compared to non-Hispanic whites. Analysis of respondents with pain (n=3,811) showed that having chronic diseases, 2 co-morbid conditions, (OR, 1.5; 99% CI, 1.09-2.17), physiologic distress (OR 1.99; 99% CI, 1.54-2.43), and lower educational level (OR, 1.45; 99% CI, 1.14-1.85) were significant predictors of severe pain and helped explain racial/ethnic differences in pain severity (Gibby et al., 2006).

In conclusion, this study provided empirical evidence that severe pain is prevalent and has an adverse impact on daily function, especially among aging ethnic and racial minorities. In addition, socio-demographic variables, access to care and clinical health status are relevant in understanding pain as it relates to population health in general and minority health in particular. The finding also highlights the important role of the primary care provider in providing appropriate pain assessment and treatment (Gibby et al., 2006). Hazelett, Powell, and Androulakakis, (2002) identified the significance the nurse plays in the pain management for patients. The study indicated that patients rate pain control as one of the highest priorities in their care and although nurses cannot make decisions to initiate pain treatment, they usually determine when and how much will be given based upon their pain assessment (Hazelett et al.).

A multinational study of pain among Hispanics was conducted by Sherwood, McNeill, Hernandez, Penarrieta, & Peterson (2005). This study found that research was limited on the multicultural influences of pain management outcomes in Hispanics in the United States. The authors' purpose was to compare descriptive analysis of the patient in the post-op pain experience. A multicultural evidence-based framework was utilized to integrate the best evidence available from a synthesis of research, nursing expertise and consensus opinion. This operational view of evidence-based practice is consistent with Bates Biocultural model of pain. Thus a culturally focused approach to evidence-based practice is consistent with patient-centered care that depends on recognizing the values and beliefs of each individual in planning appropriate care.

The study was conducted with 95 participants in two settings, a large urban hospital area in Houston, and a regional area in Rio Grande Valley. The mean age was 41 years with 74% females and 26% males. There were 52% with less than a high school education and 38% had a language preference of reading and speaking in Spanish. The instrument was administered in Spanish 30.5% of the time and in English 69.5% of the time. Inclusion into the study consisted of new post-operative adult patients experiencing pain (Sherwood et al., 2005).

The Houston Pain Outcome Instrument (HPOI) was used to measure various outcomes of the pain experience including intensity, pain-related interference with mood and physical function, components of satisfaction with pain management and education about pain. It consisted of 57 items including six questions about surgical experience, the type of information about pain management provided and expectations about pain management. It was developed in English and Spanish. The reliability of the instrument

was estimated using Cronbach's Coefficient Alpha. In addition, a demographic chart audit was used to gather data about age, gender, educational level, religion, and language preference (Sherwood et al., 2005).

The study found over half of the patients still had a pain >8 after pain medications and 60% had a pain at 4-5. Over 60% of the patients stated "wanting to be left alone when in pain". 56% of the patients expected total pain relief and if it didn't occur it significantly affected their satisfaction. 39% reported overall under management of their pain and inadequate education from caregivers. 50% stated their pain made them feel depressed, dependent on others, and helpless. 50% also reported feeling frustrated and angry when their pain was not managed properly (Sherwood et al., 2005).

In conclusion, the study identified the importance of clinicians in considering patient satisfaction scores in treating pain. The study results indicated that caregivers also have a lot more to do in relation to how well the patient is educated about pain, pain management and prescribed interventions. The evidence showed that cultural considerations are a critical component of evidence based pain management to reduce disparity among population groups as well as research that extends beyond traditional Anglo samples (Sherwood et al., 2005). Yellen (2003) discussed nurse sensitive variables on patient satisfaction. In her study she defined patient satisfaction with pain management of the patients opinion of how well nursing is managing and controlling his/her pain. Patients have the right to appropriate assessment and management of pain while in the hospital. The American Nurses Association considers patient satisfaction with overall care and patient satisfaction with nursing care to be two nurse-sensitive quality indicators for acute care (Yellen).

Juarez et al. (1998) studied the influences of culture on cancer pain management in Hispanic patients. The study identified that Hispanics are the fastest growing minority in the United States and little research was available on how culture plays a role in pain management. The authors' purpose was to describe the influence of culture on pain and explore how pain is expressed by Hispanic patients with cancer. The study was based on the conceptual model of Ferrell and colleagues, the Impact of Pain Dimensions of Quality of Life (QOL). In this model, QOL is defined as a personal sense of well-being encompassing a multidimensional perspective that includes physical, physiological, social, and spiritual domains. QOL is viewed as a dynamic construct affected by one's own ability to adapt in the face of discrepancies between the expected and actual experience of well-being. The second framework for this study was Bated Biocultural Model of Pain Perception which integrates aspects of the gate control theory with social learning and social comparison theories. The specific aims of the study were: (a) to describe the influence of culture on pain in Hispanic patients with cancer, (b) to explore how pain is expressed by Hispanics with cancer, and (c) to determine the influence of culture on drug and nondrug management of pain (Juarez, et al.).

The study used qualitative data from interviews with Hispanic subjects with cancer. The subjects for this companion study were selected from three home health and hospice agencies participating in a larger pain intervention study. A total of 17 subjects participated in the interviews and were identified by a purposive sample. Criteria for selection included: Spanish as the major or only language, a diagnosis of cancer, pain related to cancer, living at home, and self-identification as Hispanic. The mean age was 56 years (range 36-79), 82% were women, and the mean education level was 8 years

(range 1-14 years). Most of the patients (76%) were born in Mexico. Eighty-two percent spoke only Spanish and had lived in the U.S. for an average of 22 years. Written informed consent was obtained by the interviewer and the interviews were conducted in the patients' home usually with a family member present (Juarez et al., 1998).

A demographic data tool was used to describe the subjects. The second instrument was the Hispanic Pain-Experience Questionnaire (HPEQ). The HPEQ was developed as an open-ended questionnaire to describe cultural considerations in the experience and management of pain. The interview questions were: (a) Tell me about your family beliefs about pain? Who in your family helps you with your pain? (b) What words or terms do you use for your pain? Tell me about the pain you are having? (c) Tell me about your beliefs that influence the way you manage your pain? and (d) What do you use to treat your pain that is not prescribed by your doctor?. To enhance the reliability of the data, only one research nurse was used to conduct the interviews. The interviewer was bilingual and an experienced oncology nurse. The interviews were tape-recorded and transcribed verbatim. Although this study had some important findings, there were limitations of a predominately female population and a small sample size (Juarez et al., 1998).

Eight themes emerged from the question about influence of culture on pain: (a) culturally they were taught not to complain about pain; (b) most remembered a family medicine woman that tended to pain; (c) they were taught to follow and believe in God; (d) they used folk healers to manage their pain before conventional help; (e) they felt if they started taking medications they would become "addicted" and felt their body could heal itself; (f) all the patients felt that family was the most important factor in pain

control; (g) receiving advice from family/neighbors was just as valid as the advice from doctors; and (h) they felt advice from the pharmacist would help them in healing especially if it was an herbal preparation. Seven themes emerged in response to what words/terms they used for pain and who they told: (a) The patient used anatomic descriptions for location of pain; (b) the respondents described other symptoms they had with pain; (c) they used a pain scale to report pain intensity; (d) the patients stated they told a loved one when they were in pain; (e) they used behavioral expressions when in pain like grimacing; (f) telling God they were in pain was a significant way they dealt with pain; and (g) using pain descriptor like sharp, dull, etc. helped the patients characterize their pain. The respondents had six themes to describe influences about pain medications: (a) most reported taking their medication as prescribed; (b) for many, fear of addiction was a major concern; (c) some reported that the side effects from the medications were just as bad as the pain; (d) most reported taking herbal medications from Mexico; (e) many stated that they didn't always understand their doctor's orders for medications; and (f) some reported forgetting to take their medications because they were just too sick. The respondents used the following nondrug interventions to treat their pain; relaxation/prayer, distraction, massage, heat/cold, family member recommendations, home remedies, ointments/creams, vitamins/injections, and herbs/teas (Juarez et al., 1998).

Findings suggest that culture, family beliefs and religion contribute significantly to management and expression of pain by the patient and caregiver. When providing care to Hispanic patients, it is imperative to be nonjudgmental, sensitive and respectful. A multidisciplinary cancer team should incorporate the patients' folk healthcare practices

and beliefs into the plan of care whenever possible. It is also essential to provide written instructions in the patients' preferred language and include the family members and friends in the care. When the patients' overall beliefs and values are respected, compliance with pharmacological and other interventions may increase (Juarez et al., 1998). A study by Monsivias and McNeill (2007) studied how fears and misconceptions of any patient are often rooted in multiple cultural contexts. Culture to most is understood as the knowledge through which groups of people interpret their lives and direct behavior. Combine this with the culture of the healthcare system and that of contemporary society and the patient and practitioners are bound to be confused (Monsivias & MsNeill, 2007). A study by Lasch, Wilkes, Montuori, Chew, Leonard, and Hilton (2000) discussed the challenge of educating different cultures and providing culturally specific education materials. The study emphasized that education material with the correct literacy level and correct translation greatly increases an individual's knowledge, self-efficacy, and skills to manage and gain control over their situation. The key to success is to involve and partnership with the intended audience (Lasch et al.).

Inadequate treatment of pain is a pervasive problem in hospitalized patients, especially those in minority groups. The purpose of a study by McNeill, Sherwood, & Starck (2001) was to describe outcomes of pain management and predictors of patient satisfaction in a minority sample. It utilized the Bates Biocultural Model of Pain perception to guide the study's development, implementation, and interpretation of the results (McNeill et al., 2001).

A cross-sectional descriptive study design was used. The sample consisted of hospitalized Hispanic inpatients in a 400 bed regional hospital in a rural setting. There

were 83% (n=86) women, 17% 9 (n=16) men with 49% (n=51) having a high school education. There were 60% (n=62) of the patients admitted after having a cesarean section with 98% (n=102) admitted within 24 hours. The eligibility criteria included: self-identified as Hispanic, 18 years or older, hospitalized for at least 24 hours, post-operative or diagnosed with a painful condition, and English speaking (McNeill et al., 2001).

Data was collected with 3 instruments. The demographic data sheet requested information regarding gender, age, diagnosis, medical condition, ethnicity, length of hospital stay, educational level, and payer source. The APS-POQ modified, measured the reported intensity of pain at any given point in time, the extent to which pain interferes with activities, patient satisfaction with pain management, and beliefs about pain. A Pain Management Index (PMI) was used to measure pain intensity. The reliability of the APS-POQ in this sample was estimated using a Cronbach coefficient alpha. The study had several limitations. First, the study had an overrepresentation of female obstetrical surgical patients. Second, there was a lack of availability of Spanish instruments that limited the data collection (McNeill et al., 2001).

Mean ratings for current and average pain were moderate, whereas severe mean ratings were reported for worst pain. High interference caused by pain was found for walking and sleep. Patients were satisfied with pain management. However a negative correlation was found between satisfaction and current pain intensity ( $r = -.49$ ,  $p = .001$ ). Pain management index scores revealed that 36% of the participants were inadequately treated for pain; also negative correlations with age indicated less effective management for elders. By using logical regression, satisfaction with pain management was predicted

by general pain in the last 24 hours (odds ratio= 4.02), pain related interference with mood (odds ratio= 7.31), and age (odds ratio= 1.8) (McNeill et al., 2001).

The influence of ethnicity on patient satisfaction has been relatively uncharted in the literature. More studies are needed to chart the impact and correlation ethnicity has on satisfaction. Clinical implications included the need to apply standardized guidelines for pain management and to educate patients, particularly minority elders about pain management approaches (McNeill et al., 2001). To increase competency of nurses in pain management approaches, Domenig (2004) proposed a trans-cultural competency for nursing. This means for nursing the ability to grasp and understand individual backgrounds in the particular situation and in various contexts to deduce appropriate ways if treating the patient ad their pain. Trans-culturally competent staff members reflect on their own experiences ad prejudices, and have the ability to see and understand things from other people's perspective, and they avoid cultural judgments and stereotyping of certain target groups (Domenig).

#### *Provider Perceptions and Effectiveness of Pain Management*

African Americans and Hispanics comprise the two largest ethnic minority groups with cancer in the United States. According to a study by Cope (2000), minority groups are also at a high risk for metastatic diseases and have more challenging pain management due to language and treatment barriers. The study was conducted to determine the pain treatment needs of socioeconomically disadvantaged African American and Hispanic patients with recurrent metastatic cancer. It also assessed attitudes and practices of the healthcare professionals treating those patients. The framework for this study was not identified.

In one study, the sample comprised of 44 African American and 64 Hispanic socioeconomically disadvantaged patients with cancer recruited from four oncology clinics in Texas, Florida, and California. In study two, the sample size consisted of 57 healthcare professionals (20 physicians, 28 nurses; 14% Hispanic, 17% African American, 11% Asian) who were responsible for caring for those minority patients with cancer in study one. Both studies used convenience samples. The criteria for inclusion into the study included: diagnosis of metastatic cancer, minority group, and a nurse or physician caring for oncology patients in the stated group (Cope, 2000).

The measurement in study one consisted of the patients completing the Brief Pain Inventory (BPI), and each physician completed the Physician Pain Assessment Survey. A patient-physician discrepancy score was then computed for each of the pain assessment categories. To calculate the PMI, analgesics were classified into four levels from strongest to weakest. PMI was computed by subtracting the patient's pain level from the analgesic level (Cope, 2000). In study two, a Cancer Pain Questionnaire was completed by the nurses and physicians that assessed their knowledge and attitudes regarding cancer pain, their current pain management practices, and their perceptions of barriers at their clinic. The data was compared to an Eastern Cooperative Oncology group (ECOG) survey of physicians and minority patients (Cope, 2000). Reliability was not reported in either study.

The results in study one indicated no significant differences existed between the ethnic groups. The majorities of the patients were from a lower socioeconomic status and had less than a high school education. The African American patients reported 51% of their pain was relieved with current pain medications, whereas the Hispanic patients

reported 61% of their pain was relieved. Thirty-one percent of the African American and 28% of the Hispanic patients had negative PMI scores, indicating under medication with analgesics. Physicians underestimated pain severity and pain interference with activities and sleep for the majority of patients. Fifty-five of the Hispanics and 43% of the African American patients reported they needed more information regarding their pain medication. Thirty-nine percent of the Hispanic and 47% of the African American patients reported a need for stronger analgesic medication (Cope, 2000). In study two, 48% of physicians indicated they would wait until the patient had less than six months to live before recommending the maximum dose of analgesia. Ninety-four percent rated a strong opioid as their first choice for treatment of prolonged moderate to severe pain. Inadequate pain assessment, patient reluctance to report pain, and inadequate staff knowledge were the top barriers reported by the physicians and nurses. Only 53% reported good training in cancer pain management (Cope, 2000). A study by Kirk (2007) addressed the moral obligations that healthcare team members have to both the patient and the caregiver of a patient with cancer and terminal cancer. Often it is not the nurse that is the primary caregiver, it is the family member and thus every attempt needs to be made to ensure proper understanding of all treatment regimens (Kirk).

In conclusion, the study suggests that pain in minority patients with cancer is not well controlled and healthcare professionals underestimated the patients' pain levels. It indicated that a majority of the patients wanted further information about their pain medications. The study also identified inadequate pain assessments, which supports the need for ongoing cancer pain management education for healthcare professionals (Cope, 2000). The Kirk (2007) study identified having a plan of action with the family and

patient. The plan included; establishing common goals and investigating disparities, establishing shared perceptions and investigating disparities, establishing shared beliefs and investigating disparities, and establishing shared actions/behaviors and investigating disparities (Kirk). Further analysis by Yildirim, Cicek, & Uyar (2009) identified the positive effect of a pain education program for patients to redirect any misconceptions about pain control and pain management and guide them toward a successful treatment plan. In the study, 32 out of 40 of the patients who were given a pain education plan reported high satisfaction and increased compliance with their pain treatment (Yildirim et al., 2009).

In a study by Epps, Ware, & Packard (2008), inadequate analgesia was reported for patients presenting to the emergency department (ED) with long bone fractures indicating that minority patients may be receiving inadequate pain care. The purpose of the study was to determine if there were wait time differences in pain treatment for ethnic adults. There was not a framework identified for this study.

The study used a quantitative retrospective design with purposive sampling of medical records of 234 European- American, African American and Hispanic adult patients that presented with long bone fractures from two small Georgia hospitals. There were 55% (n= 128) that were ages 18-49 years of age and 45% (n= 106) were 50 years or older. Women composed 51% (n=120) of the group. The sample included 51% (n= 120) European Americans, 40% (n= 93) Hispanics and 9% (n= 21) African Americans. The data was analyzed from ICD-9 codes during three years (January 1, 2001- December 31, 2003). The independent variables included the patient's age, gender, ethnicity, fracture location, type of analgesia, nurse's note on pain, use of a pain assessment, and pain scale.

The dependent variable was the wait time between admission to the ED and the first dose of analgesia. Records were excluded if the patient was less than 18 years of age or had a diagnosis of chemical impairment, dementia, delirium, or disorientation to time, place or name (Epps et al., 2008).

The medical records identified with the ICD-9 codes included fractures of the humerus, radius, ulna, femur, tibia, fibula, femoral neck, and any combination fractures of these bones were analyzed. The other instruments assessed were the nurse's notation on pain in the record and the pain rating score 0-10 as described by the patient.

Limitations of the study included the use of retrospective analysis with no possibility of verification of data accuracy, a convenience sample was used that could have created selection bias and there was no way to determine if the English and Spanish pain rating scale was accurately used by the patient and nurse. The demographic differences may have limited the study and it was unknown if there was any medication taken prior to the ED visit (Epps et al., 2008).

In this study, all patients reported substantial pain and a significant overall wait times was found between Hispanic and European American patients. Hispanic patients waited an average of 102 minutes for the first dose of analgesia while, European Americans waited an average of 67 minutes. There was a nurse notation on pain in 83% of the records and a pain rating scale was used in 67% of patients. Thirty-seven patients (24%) rated their pain as 5-7, and 63% rated it as 8-10. The average pain score for all groups was an 8. Almost half of the patients waited more than one hour for the first dose of analgesic and 47% received only one dose (Epps et al., 2008).

The authors concluded that further study is needed to examine possible causes for the disparities. The study cited that ED nurses are the best advocates for patients in pain and perhaps nurse driven approaches to pain with protocols could decrease the wait times for analgesia for all patients (Epps et al., 2008). This was further reinforced by a study by Puntillo, Neighbor, O'Neil, and Nixon (2003) that found 1/3 of all ED patients had untreated moderate to severe pain. Puntillo's study stated that healthcare professionals withhold pain medications because of the risk for adverse reactions, risk of obscuring symptoms, concern for nullifying informed consent, and concern about credibility of the patient report of pain. However, the most significant factor for improper pain management was an inaccurate pain assessment by nurses. The study noted that 44% of 305 ED nurses surveyed felt that they had inadequate knowledge of pain management principles and that it was a significant barrier that affected their practice.

Inadequately treated pain is a major public health problem in the United States and a particular problem in the emergency department (ED). The purpose of a study by Pletcher, et al. (2008) was to determine whether opioid prescribing in the ED had decreased over the years, whether non-Hispanic white patients are more likely to receive an opioid than other racial/ethnic groups, and whether differential prescribing by race/ethnicity has diminished. There was not a framework specified for this study.

This study used a 4-stage probability sample design of 13 years of national survey data on ED visits collected from the National Hospital Ambulatory Medical Care Survey (NHAMCS). Data was collected randomly over a 4 week reporting period each year and sent to the centralized reporting facility. The population and inclusion criterion was adults over 18 with pain presenting to the ED. The ethnic groups chosen consisted of;

Whites, African Americans, Hispanics, and Asian/other. Those with sickle cell, repeat ED pain visits, and alcohol/drug problems as a diagnosis were excluded (Pletcher et al., 2008).

The study utilized the National Hospital Ambulatory Medical Care Survey (NHAMCS), a national survey on ED visits. The sample size was categorized in to ED visits with pain, specific race/ethnicity, prescribed opioid, and the covariates of age, sex, visit complaint, and severity of pain at the time of the visit. The limit of the study was the use of the NHAMCS which limits clinical details about the visit and the patient encounter. The authors were not able to determine when in the visit the patient requested pain medication and what quantities were prescribed (Pletcher et al., 2008).

Pain related visits accounted for 156,729 of 374,891 (42%) of emergency department visits. Opioid prescribing for pain related visits increased from 23% in 1993 to 37% in 2005 ( $P < .001$  for trend), and this trend was more pronounced in 2001-2005 ( $P = .02$ ). Over all the years, white patients with pain were more likely to receive an opioid (31%) than black (23%), Hispanic (24%), and Asian/other (28%) ( $P < .001$  for trend) and differences did not diminish over time ( $P = .44$ ). Opioid prescribing rates 40% for all white patients and 32% for all other patients in 2005. Differential prescribing by race/ethnicity was evident for all types of pain visits and was more pronounced with increasing pain severity (Pletcher et al., 2008).

The study concluded that opioid prescribing for patients making a pain related visit to the ED increased after national quality improvement initiatives in the late 1990s, but differences in prescribing by race/ethnicity have not diminished. The authors

indicated the need for more education for healthcare workers of how ethnicity affects patient response to pain and the need for pain medication (Pletcher et al., 2008).

Lee, Burelbach, and Fosnocht (2001) identified ethnicity as an independent risk factor for inadequate ED analgesia administration. The purpose of their study was to compare ED pain management expectations in Hispanic versus Non-Hispanic patients with painful conditions. There was not a framework identified for this study.

A prospective convenience sample of patients at a university ED was used in the study. Surveys from 58 Hispanic and 408 Non-Hispanic patients were recorded. The mean age for Hispanics was 33 years with 57% (n=33) being male and 78% (n=45) with English as a primary language. The mean age for Non-Hispanics was 39 years with 47% (n=192) being male and 99% (n=402) with English as a primary language. All patients presented with chief complaints of abdominal pain, back pain, and isolated extremity injury. Inclusion criteria consisted of; over age 18, Hispanic and Non-Hispanic patients presenting to the ED with painful illnesses or injuries (Lee et al., 2001).

Patient's expectations of pain relief were recorded on a 100mm visual analogue scale (VAS). Research associates blinded to the study objectives performed the prospective survey to the patients. The study had several limitations. A convenience sample was used and could have led to bias and limit the extent to which the results could be generalized. The differences in the ages could have had an influence over the expectations of pain relief. Finally, the acuity of pain was not addressed as inclusion criteria for either group (Lee et al., 2001).

There was no difference between Hispanic and Non-Hispanics with regard to reported mean patient expectations for pain relief, pain intensity at time of presentation,

or reported reasonable time to wait for pain medication administration. The expected degree of pain relief for Non-Hispanics was 71.7 and for 75.6. Pain at presentation to the ED was 62.8 for Non-Hispanics and 64.4 for Hispanics. The wait time for pain medications for Non-Hispanics was 30.6 minutes and for Hispanics it was 33.4 minutes (Lee et al., 2001).

Although this study did not reveal significant differences in data results the authors still concluded that healthcare workers still need further education and training on how best to interpret and manage pain in the minority population (Lee et al., 2001). A study by Kerr, Shever, Titler, Qin, and Picone (2007) examined the unique contribution of nursing intervention on pain management and length of stay. This study recommended that nursing implement a pain management plan comprised of; a comprehensive assessment, assurance that the patient receives attentive analgesic care, consideration of cultural influences on pain response, exploration of factors that worsen the pain, and control of environmental factors that could influence discomfort (Kerr et al., 2007).

Cooper, Gallo, Gonzales, and Vu (1999) studied how race/ethnicity and gender of patients and physicians affects the patient/healthcare provider relationship and participatory decision making (PDM) styles. The authors recognized that many studies have documented race and gender differences in healthcare treatment but few have documented how those factors related to the patient/physician relationship. There was no framework identified for this study.

A telephone survey was conducted on 1816 adults. Inclusion criteria consisted of; age 18-65 years (mean age 41) who recently attended 1 to 32 primary care practices associated with a large mixed model managed care organization in an urban setting.

Sixty-six percent of patients surveyed were female, 43% were white and 45% were Hispanic. The provider sample (n=64) was 63% male, with 56% white and 25% Hispanic. The data collected included race/ethnicity, physician race/ethnicity, physician and patient gender, education of patient, marital status and self rated perceived score from the patient (Cooper et al., 1999).

A five point scale from poor to excellent of self rated perceived health was completed by patients and the patients completed a 100 point scale of how participatory their physician was during their visit. Likewise the physician completed the same 100 point scale of how well they thought they participated in the visit with the patient. The instruments relied on self reporting by the patient and the physician/nurse and were limited by practice measures (Cooper et al., 1999).

Hispanic patients rated their visits as significantly less participatory than whites in models adjusting for age, gender, education, marital status, health status, and length of patient-physician relationship (mean PDM score, 58 vs. 61;  $P=.03$ ). Ratings of minority and white physicians did not differ with respect to PDM style (adjusted mean PDM score for Hispanics 59.2 vs. whites 61.7;  $P=.13$ ). Patients in race-concordant relationships with their physicians/nurses rated their visits significantly more participatory than patients in race-discordant relationships (difference 2.6;  $P=.02$ ). Patients of female physicians/nurses had more participatory visits (adjusted mean score for female 62.4 vs. 59.5 for male;  $P=.03$ ). Patient satisfaction was highly associated with PDM scores within all race/ethnicity groups (Cooper et al., 1999).

The authors concluded that Hispanic patients did rate their visits as less participatory than whites. However, patients seeing physicians/nurses of their own race

rated the PDM score as more participatory. Improving cross-cultural communication between healthcare givers and patients may lead to more patient involvement in care, higher levels of patient satisfaction, and better health outcomes (Cooper et al., 1999). A study by Donahue, Piazza, Griffin, Dykes, and Fitzpatrick (2008) analyzed the relationship between nurses' perception of empowerment and patient satisfaction. It concluded that nurses who practiced in a supportive environment were more empowered to provide excellent care and thus improve patient satisfaction. The study found that patients that were satisfied with the skill of the nurses were very satisfied with their care and pain management and were more likely to recommend the hospital. The present competitive healthcare environment underscores the importance of understanding improving patient satisfaction with care and ultimately promoting positive patient outcomes.

Todd, Samaroo, and Hoffman (1998) developed a study to determine if Hispanic patients with fractures were less likely to receive analgesia than Non-Hispanic patients. The authors identified that inadequate analgesia for trauma victims in the emergency department) ED seemed to be a problem nation wide. The term "oligoanalgesia" was coined to denote the underuse of analgesics for patients with painful conditions presenting to the ED.

The retrospective cohort study took place at UCLA Emergency Medical Center, a level 1 trauma center. Inclusion of participants included a total of 139 patients; 31 Hispanic and 108 Non Hispanic patients between the ages of 15-55 years of age with an ICD-9 code of a long bone fracture from an assault, car accident or fall. The primary language was English and 58% were Non Hispanic males with 71% Hispanic males.

Patients were excluded if they were intoxicated, or did not present to the ED within 6 hours of the injury (Todd et al., 1998).

Medical record review was used for patients with ED visits within a two year period with ICD-9 codes of traumatic long bone injuries. A multiple logistic regression analysis used Strata version 3.0 to evaluate the independent influence of different variables on the probability of analgesic administration. The retrospective design allowed for potential misclassification of predictor or outcome variables. The authors cannot be sure that the injuries in each of the patient groups were equally painful since pain is dependent on the patient interpretation. The study also could not measure the presence of family support and translators for the patient. The authors identified that the difference in analgesia could relate to the failure of the physicians to recognize pain in patients who are culturally different however, this study did not analyze that variable (Todd et al., 1998).

Of 31 Hispanic patients with extremity fracture, 17 (55%) received no analgesic, as compared to 28 (26%) of the Non-Hispanic white patients. Thus the relative risk (RR) of no analgesic was more than twice as great for Hispanics as compared to Non-Hispanics. Various stratified analyses related patient characteristics and severity of the injury did not produce any substantial changes in this relative risk. Hispanic ethnicity was the strongest predictor of no analgesic (odds ratio 7.46; 95% CI, 2.22 to 25.04;  $P < .01$ ). Finally, two-thirds of patients received pain medications however; Hispanics were twice as likely as Non-Hispanics to receive no pain medications (Todd et al., 1998).

In conclusion, the authors felt that an ethnic basis for variability in analgesic practice needs to be further characterized. Continued education needs to be given to ED

physicians to establish equal pain treatment guidelines for all patients regardless of race/ethnicity (Todd et al., 1998). This is supported by a similar study by Guru and Dubinsky (1999) where 49% of patients reported that their pain was not relieved on discharge from the ED. The same study also showed healthcare workers in the ED did not document assessments and reassessments of patient pain levels. It concluded that pain assessment should be regarded as a “vital sign” to ensure that it receives the attention it deserves in the busy environment of the emergency department (Guru & Dubinsky).

Although numerous studies have independently examined ethnic difference in clinical and experimental pain, few have investigated difference in both sensitivity to controlled noxious stimuli and clinical reports in the same sample. Edwards, Doleys, Fillingham, and Lowery (2001) examined the effects of ethnicity on experimental pain tolerance and adjustment to chronic pain.

Participants in the study were 337 consecutive chronic pain patients (68 Hispanic and 269 white) referred by physicians, rehabilitation nurses, or insurance companies to a multidisciplinary treatment center for evaluation and treatment of chronic noncancerous pain. Inclusion criteria were not restricted according to etiology or location of pain because the rather general measures used in the present study was designed for use with a variety of chronic pain populations. Primary sites of pain included the lower back (54%), leg (11%), shoulder/arm (11%), neck (6%), and other (18%). The mean age for both groups was 40 years and there were 52% Hispanic males and 63% white males. Most had duration of pain for an average of 29 months and 1.3 had previous surgeries. Over half were taking some type of pain medication prior to the study (Edwards et, al. 2001).

A Multidimensional Pain Inventory (MPI) with 13 scales divided into three sections assessed the impact of pain on the respondents life, responses of significant others to the communication of pain, and the daily activity level of the patient. The reliability and validity of the MPI are well established. The Beck Depression Inventory (BDI) is a widely used, 21 item self report measure assessing cognitive, affective, and vegetative symptoms of depression. Research evaluating the psychometric properties of the BDI suggests that it has excellent reliability and validity as an index of depression. Oswestry Disability Questionnaire (ODQ) is a 10 item self report scale assessing the extent to which functional daily activities are restricted by pain. The ODQ has been recommended as a standard tool for the assessment of pain related disability and therefore has been established as reliable and valid. McGill Pain Questionnaire consists of 20 groups of a single word pain descriptors with the words in each group increasing rank order intensity, It has taken on the gold standard against which other, newer instruments are compared. Strait-Trait Anxiety Inventory (STAI) is a self report scale consisting of 20 statements evaluating recent levels of anxiety. It is among the most commonly used scales to measure anxiety. Pain Rating Scales asked the patient to rate their pain on a 0 (no pain)- 10 (most severe pain ever) scale (Edwards et, al. 2001).

No ethnic differences emerged for the following variables; age, primary pain location, pain duration, and number currently taking pain medications. Hispanics reported significantly greater perceived pain severity and pain related disability than whites. In addition, whites demonstrated greater tolerance for the ischemic pain stimulus. The study supported evidence of differential responses to pain among various ethnic groups. It

highlights the potentially valuable role of laboratory pain stimuli in elucidating ethnic group differences in clinical pain (Edwards et, al. 2001).

### *Literature Summary*

The literature acknowledges that culture influences pain management and that disparities exist. The challenge of respecting diversity is great. Because culture is fluid and dynamic, how can we respect differences while avoiding stereotyping of patients? The answer is clear. Patients should never be approached as empty vessels, as the bearers of particular cultures. Rather, it is essential to approach patients first as unique persons, assessing them within the context of their family or other key social support systems. General knowledge about theoretical differences among groups is also helpful (Koenig and Gates-Williams, 1995). Nurses hold an intimate place, perhaps a sacred place, in caring for a patient and family in pain. Nurses have the opportunity to “give voice” to pain and thus, to suffering. Pain has often been described as a moral crisis, particularly given the vast chasm between our ability to relieve pain and actual practice. Caring relationships between nurses and people in pain of any culture requires commitment, compassion, and presence. Nursing care of those experiencing or witnessing in pain is just not “doing for”. It is “being with” (Ferrell, 2005).

## Chapter 3

### *Methods and Procedures*

As a primary subjective phenomenon, pain expression may vary among different populations. Patients from minority populations may be more likely to have poor pain management, less analgesia prescribed, and lower doses administered for their pain (Sherwood et al., 2003). The purpose of this study is to examine the role of ethnicity on pain expectations, perceptions, and management from the patient and healthcare team.

#### *Problem Statement*

Ethnicity has been shown to be an independent risk factor for inadequate administration of analgesia. This finding may be influenced by Hispanic patients' expectations of pain relief, the perceptions of caregivers, and cultural dynamics. Pain expression may vary among different populations. Pain is whatever the person says it is. It should not be decided by the caregiver. Patients from minority populations may be more likely to have poor pain management, less analgesia prescribed, and lower doses administered for their pain (McNeill et al., 2003). Extensive research into relations between ethnicity and pain has yielded few but firm generalizations, in part because both pain and ethnicity are multidimensional, malleable, and shaped by culture. Various studies using diverse methods suggest that culture plays a crucial role in the individual experience of pain (Morris, 2001).

### *Research Questions*

1. How does ethnicity affect pain beliefs, responses to pain and effects of pain?
2. How does ethnicity affect pain management by healthcare providers?
3. How does ethnicity influence effectiveness of pain relief interventions?

### *Population, Sample, and Setting*

This study will include emergency department (ED) patients from a 75 bed tertiary rural community hospital in Warsaw, Indiana. A convenience sample of 100 patients is anticipated. Participants will be recruited according to inclusion criteria; self identified Hispanics and Non- Hispanics presenting to the ED with acute pain, first time visit to the ED for the identified pain, age 18 years and older, ability or willingness to participate in the study. Exclusion criteria are a history of dementia, mental illness, substance abuse, acute drug/alcohol influence, and a chronic pain condition.

### *Protection of Human Subjects*

Permission will be obtained from the Institutional Review Board (IRB) at Ball State University and the participating hospital Institutional Review Board. This study will be conducted ethically with the protection of human rights of each subject which will include: (a) self-determination, (b) privacy, (c) anonymity and confidentiality, (d) fair treatment, and (e) protection from discomfort and harm.

Each patient participating will be given a verbal and written explanation of the study. Additional information will include the potential for no risk or harm, the ability to choose to participate or withdraw at any time, and inherent provisions for privacy and confidentiality. No risks have been identified with this study. Benefits from this study

include an awareness of pain perceptions of minorities and how well the pain is being managed.

### *Procedure*

After receiving the IRB approval, the research project will be introduced to the Chief Nursing Officer and the ED director and manager approximately 6 weeks prior to the beginning of the study. The meeting will discuss the purpose of the study, the risks and benefits, inclusion and exclusion criteria and methods for data collection. The ED staff will not be informed that the study is taking place.

Potential participants will be identified by the ED manager using the ED census sheet which lists diagnosis, age, gender and ethnicity. A research assistant who is bilingual will call potential participants 3 days after discharge and ask if they are interested in completing an interview questionnaire regarding their ED experience with pain management. If they agree, a meeting will be arranged where full disclosure is given to the subjects regarding the study and consent is signed.

### *Research Design*

A descriptive qualitative design will be used. Analysis of individual interview data will be used. The purpose of the descriptive qualitative analysis is to better understand the Hispanic versus Non-Hispanic pain experience while being treated in the ED. This will seek to understand how Hispanic patients perceive and express pain and how ED healthcare providers interpret and manage that pain.

The Bate Bio-cultural Model of Pain will be utilized as the framework for this study because it integrates social learning theory into physiologic explanation of how pain develops and is interpreted (Sherwood et al., 2003).

### *Instrumentation and Reliability*

Each participant will complete a demographic tool before the interview to allow the researcher to gather information about gender, age, marital status, religious preference, language preference, country of origin, and educational level.

Working with an advisory group, an interview guide with a detailed script to ensure consistency will be used. The tool is in English and Spanish and is translated by bilingual members of the advisory group. The interviews will be conducted by the bilingual research assistant using the interview script. The data from the interview tool will be categorized into five categories:

1. Category 1- characteristics of the pain experience. This includes attitudes, beliefs, expectations, responses to pain, and descriptions of pain.
2. Category 2- Managing Pain. this includes management using pain medications, non-medications management and effectiveness of pain management.
3. Category 3- Information about pain. This includes sources of information in language preference, type of information received, and effectiveness of information.
4. Category 4- Interaction with providers. This includes caregiver response to pain and patient response to caregiver.
5. Category 5- Cultural considerations. This includes gender, religion, ethnicity, and other factors.

The reliability of the interview tool will be validated by the bilingual

interdisciplinary advisory group to ensure a detailed script in English and Spanish. The use of bilingual trained data collectors will ensure accuracy in the delivering of the script to the patients.

### *Data Analysis*

Bilingual data collectors will use the detailed script to elicit information by personal interviews either by telephone or in person. The participants were allowed to choose a English or Spanish interview script. Data will be analyzed using descriptive qualitative techniques to identify categories and themes from the descriptions. Standard methods of comprehending, synthesizing, theorizing, and re-contextualizing will guide data analysis. The researcher will complete multiple readings of the interview transcripts so as to comprehend the whole set of data, that is, the Hispanic view of pain. The interview data will be synthesized for the participants' descriptions to identify patterns within categories. To assure rigor and validate the results, the researchers will re-read the transcripts, review the stages of data analysis and discuss differing points of view so as to reach consensus of the meaning and confirm the finding. Three members of the advisory group will also validate the composite descriptions of their representation of Hispanic descriptions of the Hispanic pain experience (Sherwood et al., 2003).

### *Limitations*

There are always challenges with translation, transcription, and the interpretation when researching a specific cultural group. Having a bilingual script with bilingual interviewers helped to bridge the community. Recruiting enough participants presented a challenge. The size and location of the hospital and limiting the research to the ED limited the sample size and could have potential for bias.

*Summary*

The purpose of the study is to examine the role of ethnicity on pain expectations, perceptions, and management from the patient and healthcare team. This study will be a qualitative descriptive design. The convenience sample will include 100 Hispanic and Non-Hispanic ED patients in a Midwest rural tertiary hospital. The framework for this study is Bates Bio-cultural Model of Pain. A bilingual interview guide and script will be utilized to obtain data from the participants. The study will replicate a previous study by Sherwood et al., (2003). Findings from this study will provide information to healthcare providers treating pain in ethnic groups.

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Literature Review Table

Source #1	Problem	Purpose	Sample	Frame-work	Concepts	Design	Instrument	Results	Implication
Cope (2000)	African American and Hispanic comprise the 2 largest ethnic minority groups in the US and more likely to present at later stages of disease than Caucasians, they are also at higher risk for cancer pain from metastatic disease therefore pain management can be a challenge due to language & treatment barriers.	<b>Study 1.</b> To determine the pain treatment needs of socioeconomically disadvantaged African American and Hispanic patients with recurrent or metastatic cancer <b>Study 2.</b> Asses the attitudes and practices of the healthcare professionals treating the patients in the study one regarding cancer pain and treatment practices.	<b>Study 1.</b> 44 African Americans 64 Hispanics Socioeconomically disadvantaged patients with cancer. <b>Study 2.</b> 57 healthcare professionals (29 physicians, 28 nurses; 14% Hispanic, 17% African American, 11 % Asian) who were responsible for the care of the minority patients with cancer in study one. Both used Convenience samples	Not specified	Pain Management of cancer pain	Experimental	1. Brief Pain Inventory (BPI) 2. Physician Pain Assessment Survey 3. Pain Management Index (PMI) 4. Cancer Pain Questionnaire 5. Eastern Cooperative Oncology Group (ECOG)  Reliability & validity were not reported	No difference in the groups. 51 % of African Americans and 61% of Hispanics reported that their pain was relieved with pain medication. 55% Hispanics and 43% African Americans reported needing more information about pain management. 39% Hispanics and 47% African Americans reported the need for stronger meds.	Patients need more education regarding pain management. Healthcare providers need good training in cancer pain management

Source #2	Problem	Purpose	Sample	Frame-work	Concepts	Design	Instrument	Results	Implication
Sherwood McNeill, Palos, & Starck (2003)	Pain expressions may vary among different populations. Patients from minority populations may be more likely to have poor pain management, less analgesia prescribed, and lower doses administered for their pain. More research is needed to investigate the pain experience of the Hispanic patients.	To understand the experience and management of acute pain from the perspective of the adult Hispanic patient within three weeks post-op	35 self identified Hispanics recovering from surgery. Age ranged from 25-80 years. 32 females, 3 males, 50% spoke Spanish, 60% were 1 <sup>st</sup> generation immigrants to the U.S. from Mexico. Majority were married & Catholic. Half has high school educations.	Bates Biocultural model of pain	Pain management in acute post op Hispanic patient	Descriptive	The researchers developed an interview guide with a detailed script to ensure consistency  <u>Reliability:</u> language & translation of data, recruiting subjects was difficult, mostly female	The Hispanic descriptions of pain were put into five categories: Characteristics of pain experience, managing pain, information about pain, interactions with providers, and cultural considerations.	The first step in effective pain management is accurate assessment. Language poses a barrier for Non-English speaking patients. Patients need to be informed about methods of pain management no matter what their language or culture. This study can help sensitize providers as they interview and assess patients in pain.

Source #3	Problem	Purpose	Sample	Frame-work	Concepts	Design	Instrument	Results	Implication
Epps, Ware, & Packard (2008)	Inadequate analgesia has been reported for patients presenting with long bone fractures and ethnic and minority patients may be receiving inadequate pain care. More research is needed to determine if different ethnicities wait longer for pain medications.	To determine if wait time differences in pain treatment existed for ethnic and minority adults admitted to the ER suffering from long bone fractures (18 years old or older)	Purposive convenience sampling of medical records of 234 European/American and Hispanic patients presenting from two small Georgia hospitals with ICD-9 coding of long bone fracture within 3 years.	Not specified	Pain management wait times	Retrospective descriptive design	Medical records identified by ICD-9 code of long bone fracture. Pain rating score of 0-10 in English to Spanish. Wait time in minutes. Type of analgesic- Opioid versus non versus a combination <u>Reliability:</u> no possibility of verifying accurate data, potential bias with convenience sample	The Hispanic population waited significantly longer than others to receive their first dose of pain medication indicating a problematic wait time disparity. The Hispanics waited 39 minutes longer than others.	Further study is needed to examine other causes for disparity like language and cultural issues. The study did show that ER nurses are the best advocates for patients and pain and further work may need to be done with physicians

Source #4	Problem	Purpose	Sample	Frame-work	Concepts	Design	Instrument	Results	Implication
Juarez, Ferrell, & Borneman (1998)	Hispanics are the fastest growing minority in the US. Little research has studied the influence of culture aspects of cancer diagnosis and treatment including pain. More research is needed to determine if culture plays a role in Hispanic patient responses to cancer pain	To describe the influence of culture on pain management in Hispanic cancer patients	Convenience sample of 17 subjects with a mean age of 56 years. 82% women, 76% born in Mexico with 82% speaking Spanish and living in U.S. an average of 22 years. Mean education of 8 <sup>th</sup> grade.	Based on the conceptual framework of the pain and quality of life model and the Biocultural Model of pain	Pain management of cancer pain and the influences of culture	Descriptive companion pilot study	Demographic data tool Hispanic pain experience questionnaire(HPEQ) Four interview questions <u>Reliability</u> To enhance the reliability only one research nurse was used and the interviews were recorded Bias occurred because most were women & small sample size	Four categories: Influence of culture on pain, expressions of pain, managing pain & non drug interventions. Findings suggest that cultural background, family beliefs, and religion play a pivotal role in pain management	Individualize patient care  Provide written instructions  Communicate with the patient and family about pain management

Source #5	Problem	Purpose	Sample	Frame-work	Concepts	Design	Instrument	Results	Implication
Sherwood McNeill, Hernandez, Panarrieta, & Peterson (2005)	The limited research on pain management outcomes in Hispanics primarily from the U.S., thus lacking the distinct multicultural influences.	To compare the descriptive analysis of the post-op pain experience of Hispanics in the U.S., Puerto Rico, and Mexico and tests the reliability of a new Spanish language instrument	95 patients from 2 U.S. hospitals, 50 patients from Puerto Rico, 178 from Mexico were analyzed for language & communication in pain assessment & experience, satisfaction in pain management & strategies	A multicultural evidence based framework Bates Biocultural model of pain	Pain experience, patient satisfaction, effectiveness of pain management strategies	Descriptive analysis	The Houston Pain Outcome Instrument (HPOI)  Pain Management Index  Demographic chart audit form  <u>Reliability</u> The HPOI was estimated using Cronbach's Coefficient Alpha. In all settings it was >0.75	Pain experience: Across all sites Over half had pain >8. 60% had pain at 4-5. over 60% reported "wanting to be left alone when in pain", 56% expected nearly total pain relief & if it didn't occur it significantly affected their satisfaction. 39% reported under management	Consider patient satisfaction issues in management  Patients in other countries need better approaches to pain management & further research is needed in this concept

Source #6	Problem	Purpose	Sample	Frame-work	Concepts	Design	Instrument	Results	Implication
McNeill, Sherwood, & Starck (2001)	Hispanic groups is fastest growing ethnic group in the U.S. and presents a challenge to the existing health care system and inadequate treatment of pain is a pervasive clinical problem in hospitalized patients	Describe pain management outcomes of pain management and predictors of patient satisfaction in a minority sample	104 hospitalized Hispanic inpatients in Rio Grande Valley hospital 86% women 17% men 49% high school education, 98% had pain in past 24 hours with majority being obstetrical	Bates Biocultural Model of Pain Perception	What are the outcomes of pain experience of hospitalized Hispanic patients  What factors influence patient satisfaction with pain in this population	A cross sectional Descriptive Survey Design	The American Pain Society Patient Outcome Questionnaire  Demographic Form  Pain Management Index <u>Reliability</u> Cronbach Coefficient of .69 Majority of sample young females with OB surgery procedures, lack of Spanish instruments for data collection	98% of patients reported pain in the past 24 hours with a mean satisfaction score of 4.74 with most stating when they asked for medication "I get it right away" Obviously dissatisfied patients indicated a higher level of pain. Factors of type of surgery, gender, support and immediacy of administration were shown to affect satisfaction	Health care workers need to examine what influences patient satisfaction in the Hispanics  Ethnicity can have a great affect on pain and pain management

Source #7	Problem	Purpose	Sample	Frame-work	Concepts	Design	Instrument	Results	Implication
Lee & Fosnocht (2001)	Ethnicity is an independent risk factor for inadequate ED analgesia.	To compare ED pain management expectations in Hispanic versus Non-Hispanic patients with painful conditions.	Convenience Sample of 58 Hispanic and 408 Non-Hispanic patients with ages 29-40 years, all males with chief complaints of abdominal pain, back pain, and extremity injury presenting to a university ED	Not identified	Pain management in ED patients with painful conditions	Prospective Descriptive Survey	100-mm Visual Analogue Scale  <u>Reliability:</u> Selection bias in the convenience sample of patients. Acuity of pain was not addressed & it was conducted at a single university ED	There were no differences between Hispanic and Non-Hispanics with regard to mean patient reported expectations of pain relief, pain intensity at time of ED visit, or reported reasonable time to wait for pain medications	Ethnicity has been shown to be an independent risk factor for inadequate administration of analgesia in the ED. Health care providers need to receive more education of how best to interpret and manage the pain

Source #8	Problem	Purpose	Sample	Frame-work	Concepts	Design	Instrument	Results	Implication
Pletcher, Kertesz, Kohn, & Gonzales (2008)	Inadequate treated pain is a major public health problem in the U.S. and a particular problem in the ED. Racial/ethnic groups appear to be at increased risk for inadequate pain treatment	To determine whether opioid prescribing in ED's has increased, whether non-Hispanicwhite patients are more likely to receive an opioid than other racial/ethnic groups and whether differential prescribing by race/ethnicity has diminished.	Nationally representative sample of all visits to EDs based on non institutional general and short stay hospitals. Data collected randomly during a 4 week reporting period each year from 1993-2005	Not identified	Opioid treatment of pain by ethnicity	4-stage probability Design	13 years of national survey data on ED visits collected by National Hospital Ambulatory Medical Care Survey (NHAMCS)  <u>Reliability</u> The survey offers limited clinical details about each encounter. Race was determined by someone other than the patient thus being categorized incorrectly.	Pain related visits accounted for 42% of ED visits. Opioids were given to 31% of white patients, 23% of blacks, and 24% to Hispanics, & 28% to others  Differential prescribing was noted for all types of pain related to ethnic groups.	Opioid prescribing rates for ED patients with visits of pain have increased over the years however it has shown no increase for ethnic groups. ED workers are needing more education on how ethnicity affects patient response to pain and need for pain medications

Source #9	Problem	Purpose	Sample	Frame-work	Concepts	Design	Instrument	Results	Implication
Cooper, Gallo, & Vu, (1999)	Many studies have documented race and gender differences in health care received by patients. However, few studies have related differences in the quality of interpersonal care to patient and physician race and gender.	To describe how the race/ethnicity and gender of patients and physicians are associated with physicians participatory decision making (PDM) styles	1816 adults aged 18-65 years with mean age of 41 who attended 1 of 32 primary care practices. 66% were female with 43% white and 45% were of other races, 63% male with 56% white and 25% other races.	Non identified	Do minority patients rate their PMD styles as less participatory than white patients. What is the association between race and gender in MD/pt relationship and PDM style	Baseline survey for a randomized clinical trial.  Observational Study	Patients rating of physicians' PDM on a 100point scale. Telephone survey 5 point scale of self rated perceived health  <u>Reliability</u> Pts not assigned to MDs in a randomized fashion, PDM styles relied on pt self report, limited MD practice measures	Other race patients rated their visits with MD's as less participatory than whites. Patients seeing MDs of the same race rated the visits as more participatory	Improving cross cultural communication between MDs and patients may lead to more patient involvement in care, higher levels of patient satisfaction and better health care outcomes.

Source #10	Problem	Purpose	Sample	Frame-work	Concepts	Design	Instrument	Results	Implication
Todd, Samaroo, & Hoffman (1998)	Adequate analgesia for victims of trauma is an important goal of medical practice. The underuse of medications has been shown in patients with painful conditions.	To determine if Hispanic patients with fractures are less likely to receive ED analgesics than similar non Hispanic white patients	139 patients presenting with fracture trauma to UCLA ED, 31 Hispanics, with a mean age of 33 & 108 Non Hispanics with a mean age of 32. Presenting from a fall, assault or car accident with a long bone fracture treated by primarily white ED MD's	Non Identified	Administration of pain medication to Hispanic and Non Hispanic ED patients with trauma	Retrospective cohort study,	Multiple logistic regression using Strata version 3.0.  Medical record review of ICD-9 code of isolated long bone fracture from fall, MVC, or assault  <u>Reliability</u> Pain varies among pts with similar injuries, no presence of pt support (family) to take mind off of pain	2/3 of the patients received medication however Hispanics were twice as likely as Non Hispanics to receive no pain medication	ED staff continue to need education on affects of pain related to ethnicity. All patients have a right to effective pain management regardless of race, & ethnicity

Source #11	Problem	Purpose	Sample	Frame-work	Concepts	Design	Instrument	Results	Implication
Gibby, Aday, Todd, Cleeland, & Anderson (2006)	Disparities in healthcare persist for racial and ethnic minorities in the U.S.. They are at risk for poorer health & shorter survival. Pain is one of the most frequent symptoms of diseases & studies related to race are limited	To describe the prevalence and impact of pain in a racially and ethnically diverse sample of middle to late aged adults.	≥51 years of age, non Hispanic whites (n=11,021), non Hispanic blacks (n=1804), Hispanics (n= 952)	Multivariate Model for Pain Severity	Pain, Pain severity, activity limitation as a result of pain, comorbid conditions & sociodemographic variables	Descriptive, Chi-square analysis with a modified Bonferroni approach	Data from Health & Retirement Study (HRS) Center for Epidemiologic studies scale  <u>Reliability</u> 1-item question to measure pain, variables were all self reported, questions for past events required recall bias	Pain prevalence was 28%, 17% reported activity limitations as a result of pain, Hispanics & non Hispanic blacks both had a higher risk for severe pain compared to Non Hispanic whites. Comorbid conditions, stress, lower educational level were significant predictors for severe pain	This study shows how important the role of the primary care provider in providing appropriate pain assessment and treatment, along with education especially for lower education levels and the aging population in general

Source #12	Problem	Purpose	Sample	Frame-work	Concepts	Design	Instrument	Results	Implication
Edwards, Doleys, Fillingim, & Lowery (2001)	Few studies have examined ethnic differences in both clinical & experimental pain in a single sample	To examine the effects of ethnicity on experimental pain tolerance and adjustment to chronic pain.	337 subjects; 68 Non white & 269 white patients with chronic pain referred to a multidisciplinary treatment center. Mean age of 40.	Not Identified	Chronic pain patients of varying ethnicity and how pain was controlled or tolerated	Descriptive	Oswestry Questionnaires Multidimensional Pain Inventory (MPI) Beck Depression Inventory (BDI) McGill Pain Questionnaire State Trait Anxiety Inventory <u>Reliability</u> Multiple selection bias, no experimental characteristics analyzed, no measures for coping with pain	This study shows ethnic differences in the reported severity of chronic pain, in chronic pain related disability, and in tolerance for a noxious stimulus	Highlights the potential valuable role of laboratory pain stimuli in elucidating ethnic group differences in clinical pain