A COMPARISON OF PAIN PERCEPTION BETWEEN ELDERLY AFRICAN AMERICANS AND CAUCASIANS

by

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ABSTRACT

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This study explored the differences and similarities in pain perception reported in elderly African Americans and elderly Caucasian subjects by addressing the question of whether ethno-cultural background of clients affect their pain perception. The literature was reviewed in the areas of cultural influences on pain perception, the elderly and pain perception, the association of pain perception to past experiences, and the meaning of pain. The Gate Control Pain Theory emphasizing the role of psychological variables in pain perception and behavioral responses to pain was the basis of the theoretical framework (Melzack & Wall, 1965).

The sample consisted of 64 elderly subjects - 32 African Americans and 32 Caucasian subjects - who were interviewed at a clinic in the Southwestern part of the United States (May-July, 1997). The McGill-Melzack Pain Questionnaire was administered to clients volunteering to be in the study.

Descriptive statistics were computed on socio-demographic items as well as on the characteristics of pain perception described by the subjects. African American

subjects were 34.4% males and 65.6% females; and Caucasian subjects were 31.2% males and 68.8% females. The age of the subjects ranged from 61 years to 92 years old. The mean age for African Americans was 69 years and 70 years for Caucasians.

The study revealed that both groups chose the word Nagging most frequently to describe their pain. A 2X2 analysis of variance was used to determine the impact of ethnicity and gender on pain perception as well as the interactive impact of ethnicity and gender on pain perception. There was a statistically significant difference between elderly African American and elderly Caucasian subjects in terms of the present pain intensity (PPI) ($F = 6.30$, $df = 1$, $p = .015$), establishing that these two ethnic groups differed in PPI. However, the respondents' gender did not significantly affect their PPI. Pearson's Product Moment Correlation was used to evaluate the strength of the relationship between ethnicity, gender, present pain intensity (PPI) and pain rating index (PRI). There was a moderate correlation ($r = .36$, $p = .01$) between present pain intensity (PPI) and ethnicity.

The study indicated cultural universality as well as cultural diversity in pain perception between elderly African Americans and elderly Caucasian subjects. These findings further serve as the basis for understanding this culturally diverse groups of clients.

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With love,

Janice Marie Johnson-Umezulike, RN, MN

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CHAPTER I

INTRODUCTION

Pain is common among elderly people. Population-based studies suggest that the prevalence of pain increases with age, although reports on pain tend to decrease slightly among the oldest. It is well known that arthritis, cancer, and many painful conditions are more common in the elderly. Other specific pain syndromes known to affect the geriatric population disproportionally include herpes zoster, temporal arthritis, polymyalgia rheumatica, and atherosclerotic peripheral vascular disease (B.R. Ferrell & B.A. Ferrell, 1996).

As the elderly American population increases in ethnic diversity, nurses must prepare to care for the elderly in pain who are from various cultures. Culture is known as playing an important role in affecting the patient's perception of pain (Weber, 1996). Therefore, studying pain perception in the elderly from various ethnic groups is very important. The American Nurses Association (1991) has stated that a knowledge of cultural diversity is vital at all levels of nursing.

The American Nurses Association (ANA) recognized the importance of cultural diversity in its Position Statement on Cultural Diversity in Nursing Practice (ANA, 1991). The ANA statement maintains that cultural assessment of the client is an expected nursing function and that sensitive

nursing care and appropriate client advocacy cannot be accomplished without knowledge of cultural diversity.

Many investigators in the past have studied pain in the elderly, pain perception, and pain perception among ethnic groups. Unfortunately, there have been no research studies on pain perception among elderly ethnic groups. The most recent studies within the last five years were those studies that looked at pain in the elderly, pain perception, and pain and culture among various age groups and gender, excluding the elderly (Calvillo & Flaskerud, 1993; Closs, 1994; B.A. Ferrell, 1991; Greenwald, 1991; Melding, 1991; Neill, 1993; Reid, 1992). These researchers concluded that there were differences in pain between ethnic groups and that further studies are needed in this specialized area.

Since there have not been studies conducted on pain perception among elderly ethnic groups, it is very important to pursue research in this area. By doing so, elderly clients and nurses may become more knowledgeable about how cultural influences play a large part in understanding pain perception. Because each individual is unique, nurses must include information about culture with clinical assessment of the client to provide culturally sensitive care.

Purpose

The purpose of the study was to compare the differences in the following characteristics of pain perception between elderly African American and elderly Caucasian subjects:

qualities of pain and present pain intensity.

Research Questions

To better understand pain perception among elderly African American and elderly Caucasian subjects, the following research questions were asked:

1. What are the characteristics of pain perception described by elderly African American and elderly Caucasian subjects?
2. What are the differences in pain perception described by elderly African American and elderly Caucasian male and female subjects?
3. What is the strength of the relationship between the Present Pain Intensity (PPI) and the Pain Rating Index (PRI) for each of the two ethnic groups?

Definition of Terms

The following terms for this study were defined as follows:

Pain Perception (Theoretical)

The point at which an individual recognizes that pain is present and responds to it (and this is influenced by the individual's quality and intensity of pain) (Melzack, 1975).

(Operational)

Responses on the McGill-Melzack Pain Questionnaire (1975) which measures an individual's intensity and quality of pain.

Elderly (Theoretical)

An individual who has advanced beyond middle age; and having lived a longer time (New Webster's Dictionary, 1975).

(Operational)

African American and Caucasian male or female subjects over the age of sixty who have the ability to recall their pain perceptions (exhibiting a score of 0 - 2 errors on the Short Portable Mental Status Questionnaire) within the past six months.

Pain Rating Index (PRI) (Operational)

Twenty groups of words on the Pain Rating Index (PRI) of the McGill-Melzack Pain Questionnaire (1975) will describe pain quality. The groups are divided into three major categories of pain: sensory (S), groups 1 to 10; affective (A), groups 11 to 15; and evaluative (E), group 16. Groups 17 to 20 include miscellaneous (M) adjectives describing pain.

Present Pain Intensity (PPI) (Operational)

The patient's choice of one of the six words on the PPI section of the McGill-Melzack Pain Questionnaire (1975) that best describes the overall pain intensity of the subject.

Theoretical Framework

The theoretical framework for this study is the Gate Control Theory of Pain. In 1965, Melzack and Wall proposed a theory to provide a satisfactory general explanation of the phenomenon of pain called the "Gate Control Theory of

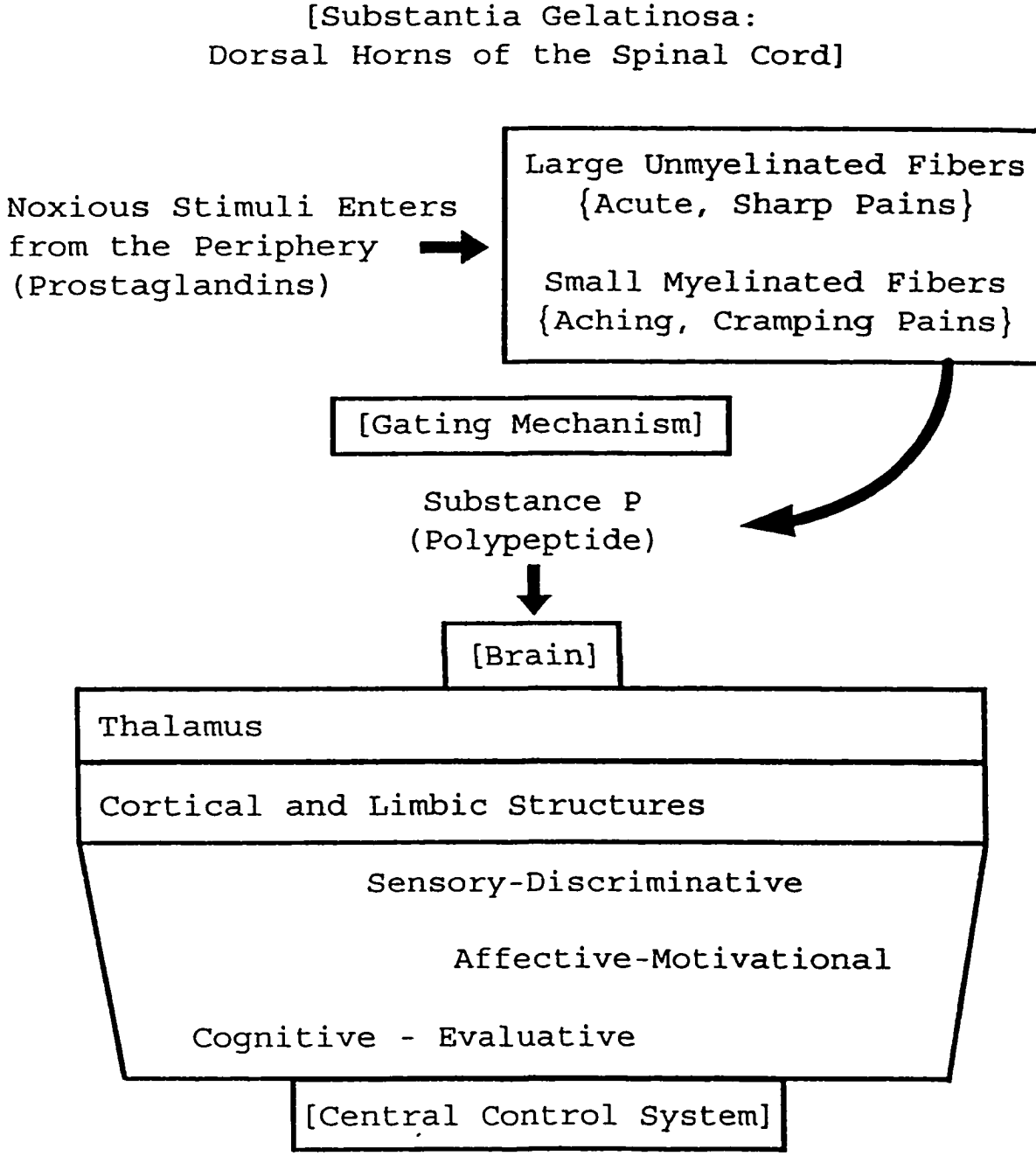
Pain". In this theory, individualized pain perception is found to be a complex balance of factors, with an emphasis on the sensory and emotional components of pain perception. (See Figure 1).

The gating mechanism is proposed to be located in the cells of the substantia gelatinosa in the dorsal horns of the spinal cord. Within the spinal cord there are small myelinated and large unmyelinated nerve fibers. The small nerve fibers, on one hand, transmit impulses slowly and are associated with dull pain such as burning, aching, and cramping. The large fibers, on the other hand, transmit pain rapidly and are associated with acute, sharp, pricking type pain (Melzack & Wall, 1965).

When a painful stimulus occurs, the nociceptors, bare nerve endings in the periphery, initiate transmission of the pain impulse. The nociceptors may be stimulated by compression, stretching, or by chemical insult such as prostaglandins. Whether the nociceptive impulses are facilitated or inhibited by the "gate" is determined by a mechanism intrinsic to the spinal cord. For example, in response to a mild stimulation, large nerve fibers can greatly diminish the pain felt due to stimulation of the small fibers (Melzack & Wall, 1965).

Substance P, a polypeptide, is the neurotransmitter which regulates the nerve impulse from the periphery to the brain. Pain impulses are modified in the central nervous

Figure 1. Components and Functional Aspects of the Gate Control Pain Theory.



Source (Adapted from Melzack & Wall, "Pain Mechanisms: A New Theory", Science, 150, 975, November, 1965, and from Bennett, "The Pathophysiology of Pain", Current Problems in Surgery, February, 1973, p.11). Adapted by Janice M. Johnson-Umezulike, 1995.

system by chemical mediators including norepinephrine and serotonin. The transmission of pain can be blocked when endorphins at the spinal level occupy the opiod receptors (Melzack & Wall, 1965).

The other determining factor in the Gate Control Theory of Pain is the central control mechanism such as the cognitive, motivational-affective, behavioral, and sensory-discriminative factors. The pain impulse terminates in the brain at the thalamus (where conscious perception may be localized), and the cerebral cortex (where the pain is recognized and interpreted). The limbic system, which is anatomically close to these structures, and a part of the central nervous system, appears to be responsible for the emotional component of pain at this level. Past pain perceptions, belief about pain, and other outcomes of the patient's socialization influence the patient's perception of pain at the cerebral level. The limbic system and the cortical structures comprise the pathway largely responsible for motivational and affective functions. The thalamic and neocortical structures are associated with identifying sensory-discriminative capacity (Lipman, 1984). The Central control mechanisms, the motivational-emotional and the sensory-discriminative systems are proposed to be influential in modulating pain perception via a host of intervening variables (D. Ross & S. Ross, 1988).

Assumptions

The following assumptions were used for this study:

1. Pain is measurable and can be described by individuals who have perceived pain in the past.

2. There are three major psychological dimensions of pain: sensory - discriminative, motivational - affective, and cognitive - evaluative.

3. Pain is a complex, subjective response with several quantifiable features, including intensity, time course, quality, impact, and personal meaning.

4. Elderly individuals present several pain management problems.

5. The elderly report pain very differently from younger individuals due to physiologic as well as psychological and ethnic changes associated with aging.

6. Pain is considered by many as a part of normal aging.

Limitations

The following limitations are described for this study:

1. The results of this study could not be generalized beyond the subjects in this sample due to the use of a convenience sample (drawn from one small health clinic in a Southern city).

2. Since the subjects were requested to characterize their pain which had occurred within the last

six months, the passage of time may have altered their description of the intensity of pain perceived.

3. The subjects' previous perceptions of pain and the variation in the health care system could have altered their description of the intensity of pain experienced.

Significance of the Study

A cardinal nursing responsibility is providing comfort to all individuals, regardless of ethnicity. Therefore, optimal management of pain is critical to achieving this goal.

Ethnic background has been recognized as a major determinant in how individuals perceive and react to pain situations (B.R. Ferrell & B.A. Ferrell, 1996). Existing research concerned with the differences in pain between ethnic groups has been limited in scope and thus has provided little empirical evidence to support the theoretical relationship between ethnicity and pain (Villarruel & Montellano, 1992; B.R. Ferrell & B.A. Ferrell, 1996).

The majority of studies in relation to pain and ethnicity have been directed toward identifying differences in pain responses among ethnic and cultural groups. Many studies use the terms ethnicity and culture interchangeably. These efforts have yielded diverse findings in the identification of differences between ethnic/cultural groups in such pain responses as pain behavior (Weisenberg & Caspi,

1989), pain tolerance (Lawlis, Achterberg, Kenner, & Koepte, 1984), pain awareness (Sternback & Tursky, 1965), postoperative analgesic use (Flannery, Sos, & McGovern, 1981), and words used to describe pain and pain intensity (Gaston-Johansonn, Albert, Fagan, & Zimmerman, 1990). These findings can be partially explained by the myriad methodologic challenges involved in the identification, measurement, and interpretation of culture-specific pain responses.

In addition, there has been no conclusive delineation of specific pain responses for any ethnic group. Reports of previous research have not established links between pain behaviors and corresponding cultural tenets. Thus, while pain perceptions may be universal, meanings and attitudes associated with pain (which determine if and when these behaviors are expressed) may be different across ethnic groups. Therefore, the elderly African American and Caucasian population must be studied to get a better assessment of their pain perception. Also, knowledge of ethnic/cultural meanings of pain is an important component in the design of culturally competent and relevant nursing care for people experiencing pain (Villarruel & Montellano, 1992; B.R. Ferrell & B.A. Ferrell, 1996).

Although pain is expressed in a wide variety of ways, and hence is very complex, the complexity should not prevent nurses from attempting to evaluate pain in all individuals

as completely as possible. This is because assessment is the foundation for all interventions. If pain among different ethnicities is not fully assessed or understood, nurses may not be able to manage pain effectively. Therefore, it is essential to understand pain among different ethnic groups, particularly among elderly African Americans and Caucasians, which are the groups least studied and compared. Upon fulfillment of this goal, nurses will have a higher degree of confidence in their assessment and management of pain in these groups.

CHAPTER II

REVIEW OF LITERATURE

Melzack and Chapman (1973) defined perception as the way in which one experiences the world of objects, people, and events. Pain perception occurs as a result of the processing of the original stimulus by the central nervous system. Melzack (1973) contended that this process is modified by cultural and psychological variables. This chapter will discuss the historical and contemporary research related to (a) the cultural influences on pain perception; (b) the elderly and pain perception; (c) the association of pain perception to past experiences; and (d) the meaning of pain.

The Cultural Influences on Pain Perception

The majority of research conducted with regard to the influence of cultural variables depict variations in pain response. Zborowski (1952) conducted a classical study in which 103 respondents were interviewed on pain perception (87 hospital patients experiencing pain and 16 healthy subjects). Zborowski also observed and interviewed family and hospital staff in the same study. The respondents were classified as "Old Americans," Italians, Jews, and others. The members of the Old American group were typically born in the United States. They were White and Protestant. They attempted to remain nonexpressive and tried to minimize pain in order to avoid sympathy or pity. In contrast, the

Italians and Jews were found to "over-react" to pain. They complained excessively of low tolerance to pain. Zborowski's major thesis was that pain perception varies by cultural groupings.

Similarly, Chapman and Jones (1944) evaluated the pain perception to radiant heat stimulation of 18 Southern Negroes in comparison to 18 Americans of North European ancestry. The subjects were matched by age and sex. It was found that Negroes had a lower pain perception and reaction threshold than the North Europeans. In the same study, 30 Jewish and Italian subjects were found to have a pain tolerance level which corresponded closely to the Negroes. Chapman and Jones concluded that the differences in pain sensitivity and tolerance were due to ethnic factors.

Subsequent research has produced adverse findings. Winsberg and Greenlick (1967) investigated the pain perception and intensity of the pain experience of Negro and White women in childbirth. Physicians, nurses, and aides evaluated the cooperation, degree of pain, and pain perception in 365 women during normal, spontaneous deliveries.

The design of Winsberg and Greenlick (1967) resulted in 365 successive normal spontaneous deliveries being included in the sample. Of these births, 207 (56.7%) were to White mothers and 158 (43.3%) to Negro mothers. The age distributions were similar although the Negro mothers were

slightly younger. The mean age of the White mothers was 23.9 years and the median 22.0 years; the Negro mean age was 22.4 years and the median 21.0 years.

The distribution of personnel completeness of the questionnaire showed that the physicians completed 87.7% of all questionnaires, the nurses 79.5% and the aides only 38.4%. The patients responded to 74% of their questionnaires. Both a physician and a nurse's evaluation appeared on 74.5% of the questionnaires. The completion rates were approximately equal by race. Statistical tests (chi-square) were applied to each set of data where any differences could possibly be surmised, but no statistically significant differences could be discerned (Winsberg and Greenlick, 1967).

The results indicated that there were no significant differences in pain perception between Negroes and White patients of similar social class. The similarity of attitude scores between Negroes and Whites, according to Winsberg and Greenlick (1967), may have been due to cultural contamination between these groups.

The pain perceptions of patients in a dental clinic were examined by Weisenberg, Kreindler, Schachat, and Werboff (1975). Twenty-four Whites, 25 Blacks, and 26 Puerto Ricans were interviewed regarding their attitudes toward pain. The attitudinal tool was composed of eight items of attitudes and included avoidance of dealing with

pain, denial, or getting rid of pain. Following the dental procedure, the dentists were asked to describe the amount of pain and discomfort and the degree of reaction of each patient to the procedure. The responses to the eight items were added to produce a total score which represented a tendency toward avoidance of pain. The analysis of variance of the total scores was significant ($F = 37.18$, $df = 2,69$, $p < .0001$). Analysis by the Duncan New Multiple Range Test demonstrated that Black ($\bar{X} = 16.32$) and White ($\bar{X} = 15.50$) patients differed from Puerto Ricans ($\bar{X} = 22.38$), but not from each other. The Puerto Ricans were found to have a greater tendency to deny their pain than did Whites or Blacks. No significant differences were obtained between the groups on the dentists' ratings with regard to the amount of pain or the number and type of symptoms the patients reported.

Hospital personnel hold stereotypes about certain ethnic groups in terms of the way they will react to pain. They expect patients with a South European or Latin-American background to be more sensitive to pain and more expressive of their feelings. African Americans come under the same stereotype, with the specific feature of "over- reaction" to the sight of needles. On the other hand, patients of Oriental or North European extraction were expected to be more stoical and less sensitive to pain (King, 1962).

There are also other studies that indicate that cultural background does appear to have an effect on pain perception, that is, when people first report feeling pain. An interview was conducted by Zola (1966) on 200 patients (100 men and 100 women) between the ages of 18 and 50 while they waited in an ear, nose, and throat clinic. One hundred Italians emphasized that pain was their main problem, whereas the one hundred Irish felt that pain was not a problem to them. There was a different attitude towards illness among the two groups. The main concern of the Italians was that the condition of their illness interfered with their social lives, whereas the main concern of the Irish was that it interfered with work.

It is also important to recognize that general descriptions pose major risks to patients by stereotyping their reactions solely as a function of cultural history. In considering individuals, one must examine the unique personal backgrounds and cultural contexts in which patients live. Pilowsky and Spence (1977) observed that Greek patients consulting a general practitioner in Australia displayed more hypochondriacal attitudes, disease conviction, and a preference for somatic rather than psychological explanations of their symptoms than patients of Anglo-Saxon background. However, Greek patients who had become acculturated to Australian customs provided evidence of changing towards the values and beliefs of the dominant

Anglo-Saxon culture. They stood intermediate to the above-named groups on the various measures, and discrimination between them and the Anglo-Saxon patients became difficult. Pilowsky and Spence (1977) suggest that any differences which exist among cultural groups, in regard to their pain perceptions, may be due to their immigrant status and the difficulties they experience in adapting to the majority culture. Therefore, the immediate social situation may influence cultural patterns.

Two studies were conducted by Bellville, Forrest, Miller, and Brown (1971) and Meinhart and McCaffery (1983). Their studies indicated that Jews and Italians presented the same outward reactions to pain situations, such as, loudness, complaining, unashamedly crying, yelling, moaning, and groaning. However, the reasons for this behavior differ. The Jews were mainly concerned with their future and the implications that pain might have. On the other hand, the Italians were only interested in getting rid of the pain immediately. The Irish were stoic and stubbornly holding on to the pain. The older generation Americans tried to act like "good Americans", minimizing the expression of pain in front of others.

Overall, Americans considered pain to be feared, avoided, and a product of evil and weakness. The other cultures did not view pain in this manner but rather encompassed it in rites and practices of primitive times.

In some twentieth century cultures, the practice of self-mutilation still prevails.

In American culture, a dichotomy exists for some people; the practice of self-inflicted pain is seen in professional and amateur sports activities. Equally significant is that an older person does not perceive himself as old until he experiences bodily discomfort such as aches and pains. When these manifestations do occur, it becomes a rite of passage into perceived old age (Bellville et al., 1971; Meinhart & McCaffery, 1983).

The evidence that pain perceptions are highly reactive to situations has further implications. Those differences between cultural groups that have been reported do not necessarily represent enduring qualities of individuals. They can be characterized as the collective, optimal adjustment to the immediate demands of the situation for the group studied. For example, for reasons of ethnic rivalry, minority groups may choose to present themselves as relatively stoical when assessed by a member of the majority culture (Poser, 1963). Thus, individuals in pain may present themselves as capable of substantially different levels of discomfort if the situational and social context changes.

It is also not unusual for patients from minority cultures to be fearful of describing the psychological impact of their pain for fear of being labeled 'crazy'.

Typically, these patients are nervous about psychometric testing and unwilling to be open about their reading abilities. It is not only necessary for clinicians to feel comfortable with (and respectful of) other cultures, but also to make efforts to include minority care-givers on their treatment staffs (Craig & Wyckoff, 1987).

Pain perception is also influenced by the sex of an individual. In an attempt to clarify ethnic and sex influences on pain perception and measurement, Lawlis, Achterberg, Kenner, and Koepte (1984) studied sixty chronic spinal pain patients who were involved in an inpatient treatment program. Tests were administered during the patients' hospital admission screening evaluations. Over a six-month period, data were collected for all new admissions, until researchers obtained an equal number of men and women in each ethnic group. Ethnic groups studied were White, Black, and Mexican American, though the method of determining race was unspecified. The subjects were either in the middle or upperclass. Medical histories revealed no differences among groups in terms of prior surgeries.

An anxiety score derived from the 16PF was used to indicate psychological predisposition to pain response; all groups were equivalent on these variables. Three types of pain measures were administered. First, an ischemic pain test was administered by tying a tourniquet above each

subject's elbow to interfere with circulation. Then, subjects were asked to squeeze a ball and to designate when the pain equalled their back pain. The second measure was a self-rating of back pain intensity on a 100-point scale. Finally, patients were rated by two physical therapists involved in their treatment in terms of their pain behaviors.

Results showed significant differences in pain perception between sexes and across ethnic groups. Mexican Americans reported higher estimates of pain, but this was not consistent with observation by therapists. Whites expressed significantly less spinal pain and also showed lower pain tolerance on the ischemic tests. Blacks, when sex was accounted for, in contrast to other studies did not show consistent differences from other groups on any of the tests for pain. On the numerical pain estimate, no ethnic differences were reported. Thus, Lawlis et al., (1984) concluded that findings were inconsistent across pain measures. The observed differences between ethnic groups were probably more a reflection of the manner in which pain was measured rather than of real ethnic differences. The authors further speculated that language differences between groups may also relate to apparent inter-ethnic differences in pain perception and tolerance. Unfortunately, there has been little, (if any), research in this area.

In another study, conducted by Flannery, Sos, and McGovern (1981), there were no significant differences found in pain perceptions of Black, Italian, Jewish, and Anglo-Saxon Protestant patients. The study was conducted in a metropolitan hospital in an eastern American city. In this study, seventy-five subjects who had just delivered babies were interviewed, their behaviors were observed, and they were given self-report measures. These self-report measures assessed the meanings patients attached to their pain, attitudes about their pain, awareness of pain, report of episiotomy pain, and urogenital anxiety (anxiety over the return of normal biological functioning following delivery).

Subjects were drawn from a sample of 1500 mothers between the ages of 17 and 40 years. Fifteen subjects were randomly selected from each ethnic group. The criteria for selection were as follows: Old American Protestants for whom Anglo-Saxon identity was traced for three generations; Irish, Italians, and Jews whose parents had migrated to the United States (U.S.); and Blacks who were Protestants and whose ancestors were born in the U.S. in the rural South. All of the subjects' parents had to be from the same ethnic background.

Subjects were approached forty-eight hours after delivery. The Old Americans served as the control group with whom the other four groups were compared. No statistically significant differences were found on the

self-report or behavioral scales. Interestingly, a significant difference was found between Blacks, Italians, and Old Americans on the urogenital anxiety scale. Blacks and Italians reported more anxiety than Whites.

Lipton and Marbach (1984) conducted a study that adequately examined variation in pain perceptions within ethnic groups as well as inter-ethnic group differences. A pool of 476 facial pain patients from a large metropolitan hospital was categorized into seven ethnic groups based upon race and country of origin. The categories were Black, Irish, Italian, Jewish, Puerto Rican, and White. A thirty-five item scale which utilized statements representing the physical experience, behaviors, and attitudes associated with pain, as well as behaviors used to obtain relief, was developed and administered to subjects.

Groups were then subdivided by sociodemographic background, social and cultural assimilation, and level of psychological distress or comfort with ethno-cultural status. Sociodemographic background represented age, sex, position in family, and years of education completed. Ethnicity was identified through self-report. Social assimilation was the extent to which the patient socialized with members of the dominant culture and was primarily measured in terms of an individual's social network differing from his or her national origin. Cultural assimilation referred to the extent to which patients

identified their own values, language, and life-style with those of the dominant culture, and was measured by using affective, behavioral, and cognitive scales taken from Suchman's (1964) work.

To determine whether inter-ethnic differences existed in pain expression, the investigators conducted an analysis of variance of thirty-five pain response items. A Duncan's Multiple Range Test was used to determine those ethnic groups which significantly differed. Then, an analysis of covariance was performed on those pain perception items for which significant inter-ethnic differences were found. Covariates consisted of variables which previous studies indicated were related to pain perception, such as symptom history, signs elicited on physical, radiographic, and laboratory examinations, as well as social, cultural, and psychological variables. Through multiple regression, the most influential variables on intra-ethnic variation were uncovered.

Results indicated that the pain perception reported by Black, Italian, and Jewish patients were most similar and that Puerto Rican patients appeared relatively distinct from the other groups. Moreover, results indicated that specific variables which most influenced intra-ethnic variability differed according to ethnic groups. The degree of medical acculturation (operationalized as degree of familiarity with the social roles, behaviors, and expectations associated

with medical institutions and settings, and health knowledge) and social assimilation were most influential for Blacks. The degree of social assimilation was most important for Irish patients. The duration of pain was most important for Italian patients, while the level of psychological distress was the most distinguishing factor for both Jewish and Puerto Rican patients. There appears to be as much variability within groups as there is between groups, and awareness of these differences should enable more efficient and accurate clinical interactions with these patients.

Greenwald (1991) conducted a study on interethnic differences in pain-perception. In the study, 536 subjects were interviewed who were recently treated for different forms of cancer known to cause significant pain. Pain was assessed using standard, well validated instruments, including Graphic Rating Scales anchored in several alternative time-frames and the McGill Pain Questionnaire.

The study took place in an area with a low proportion to recent immigrants and only small concentrations of distinct ethnic minorities. The study sample consisted of the following number of subjects who were from various geographical areas: (254) England, Scotland & Wales; (155) Germany; (141) Ireland; (95) Scandinavia; (56) France; (38) Eastern Europe; (14) Italy; and (9) Jewish.

No statistically significant differences were observed between ethnic identity and measures of pain sensation. However, pain described in affective terms according to the McGill Pain Questionnaire did vary among ethnicities. This observation suggests that cultures associated with specific ethnic identities still condition individual expression of pain despite the high degree of assimilation that has occurred among ethnic groups in the United States.

Reid (1992), in a careful investigation of pain, personality, and ethnicity, studied 108 female subjects and tested their responses to immersion of an extremity in a cold water bath (cold pressor test). Reid tested the relationship between ethnicity and pain expression and the relevance of race and interpersonal impact of the experimenter.

It was found that there was a significant racial difference in pain tolerance, with Whites showing a higher pain tolerance than did African Americans ($P < 0.001$). The findings also indicated that education was a powerful predictor of pain tolerance. Data suggested that study subjects who found the experimenter to be friendly showed greater tolerance to pain than did those who found the experimenter to be dominant and hostile. When the experimenter was of the same race as the subject, the experimenter was perceived as being more friendly than when the experimenter's race differed from that of the subject.

It was concluded that interpersonal impact has a powerful influence on the expression of pain and on the meaning of the pain to the patient (Reid, 1992).

Calvillo and Flaskerud (1993) conducted a study which explored the evaluation of the pain response by Mexican American and Anglosaxon American women and their nurses. The investigators examined the differences between ethnicity and pain by asking three major research questions. The first question asked whether there was a significant difference in Mexican American women's and Anglosaxon American women's response to cholecystectomy pain. Secondly, the nurses' attribution of pain to each of the two ethnic groups was compared. Finally, the patient's evaluation of the pain being experienced was compared to the nurse's evaluation of the pain the patient was experiencing.

The sample consisted of 60 subjects and 60 nurse responses. Data were collected at two major teaching hospitals in Southern California. The subjects' pain was measured by using the McGill Pain Questionnaire, amount of analgesics, and three physiological measures. The nurse's assessment of patient pain was measured using the Present Pain Intensity scale. MANOVA was used to analyze differences between the two ethnic groups on all measures of pain (Calvillo & Flaskerud, 1993).

The results indicated that no significant differences were found between the two ethnic groups on any of the pain

measures. However, there were significant differences in the nurses' evaluation of the pain response of these two ethnic groups on the Present Pain Intensity Scale (PPI). Anglosaxon American patients were assessed by nurses as experiencing more pain ($F=4.16$; $d.f.=1.57$; $p<0.05$). Using the PPI, significant differences were also found between nurses' evaluation of pain and the patients' evaluation of pain ($t=6.63$; $d.f.=1.57$; $p=0.0001$), with patients assessing pain as more severe than nurses (Calvillo & Flaskerud, 1993).

Neill (1993) conducted a study of ethnic pain styles in patients with acute myocardial infarction (AMI). The study was conducted in seven hospitals in a large Mid-Atlantic City. The population consisted of 151 male patients who had experienced AMI within three weeks of the study. The research design used for the study was an exploratory meta-analysis. Data were combined from two descriptive studies of AMI patients conducted in 1984 and 1986 through 1988. The patients were classified into five ethnic groups, which were the Irish, Italian, Jewish, Yankee, and Black. The patients had been interviewed from 2 to 21 days after AMI. Measures included a demographic and illness form, the McGill Pain Questionnaire (Melzack, 1975), the Visual Analogue Pain Scale (Huskisson, 1974), the Ethnic Identity Questionnaire (Clinton, 1982), and one of two psychological measures, which was the Jenkins Activity Survey (Jenkins, Zyzanski, &

Rosenman, 1979), or the Eysenck Personality Inventory (H. Eysenck & S. Eysenck, 1968).

One-way analysis of variance revealed no differences on pain dimensions across ethnic groups. Pearson correlations indicated that strength of ethnic affiliation (SEA) was unrelated to the pain dimensions, but SEA was positively related to evaluation of pain for the Black patients. Generational status (GEN) was unrelated to pain dimensions for the total group, but when taken separately, GEN was positively related to sensory scores for the Yankee and negatively related to affective scores for the Irish patients. Chi-square analysis revealed that proportionately more Black patients displayed shortness of breath than the other four groups.

In summary, various studies concluded that pain perception varied among cultural groupings and that the difference in pain sensitivity and tolerance were due to ethnic factors. Other research studies concluded that there were no significant differences in pain perception among ethnic groups. Therefore, studies relating pain perception among various cultural groups are inconclusive.

The Elderly and Pain Perception

Pain disables and distresses elderly people more than any single disease entity. Because of the increased incidence of chronic illnesses in the elderly, pain becomes a constant companion for many. Research indicates that

anywhere from 70 to 80% of elderly people experience pain at any one given time (Herr & Mobily, 1992; Ferrell, B.R. & Ferrell, B.A., 1990; Harkins, Kwentus, & Price, 1990). Pain can be emotionally and physically crippling, severely threatening the older person's functional abilities. The consequences of pain in the elderly can be far reaching; depression, anxiety, decreased socialization, impaired mobilization and increased health care costs are all associated with pain. It appears to be an understatement that pain markedly affects the quality of life for this population.

Nurses spend more time with the elderly in pain than any other member of the health care team. They therefore have the opportunity to make a significant contribution toward increasing the patient's comfort and relieving their pain (Herr & Mobily, 1992).

Much clinical evidence reveals that the elderly do not feel pain as intensely as the younger people. Several internal diseases of the aged do not seem nearly as painful to the elderly as they would to younger adults. Minor surgery can often be performed on the elderly without inflicting severe pain; also, coronary thrombosis can occur often without the agony found in young people. However, subjective sensory complaints are very common among the elderly (Botwinick, 1984).

Yoshikawa and Norman (1987) suggest that the elderly frequently exhibit atypical presentations of pain. Silent myocardial infarctions as well as silent abdominal emergencies suggest that the elderly may have decreased pain perception. However, the research findings of Harkins, Kwentus, Price (1984), Bonica (1990), and Harkins (1996), reveal that elderly persons may have either increased or decreased pain perception when compared to younger people.

Many illnesses with pain as an integral component are persistent in the elderly, lasting about three months. Not only are the elderly more susceptible to chronic illnesses, they are frequently at considerable risk for depression, which is often a companion to many chronic illnesses. Herr and Mobily (1992) and Williamson and Schulz (1992) estimate that up to 89% of elderly with chronic illnesses experience diagnosable symptoms of depression. Chronic illnesses such as arthritis, rheumatism and cardiovascular disorders still account for the majority of painful conditions in the elderly (Foley, 1994; Egbert, 1991; Ghose, 1985; Harkins, Kwentus, & Price, 1990).

Elderly patients often do not have the extra reserve to utilize in case of high stress and demand situations, such as may occur with pain. Without accidents, major stresses, and disease, most elderly function quite well into extreme old age. However, if illness or disease does occur, the ability to deal with the illness and still cope with daily

activities is considerably lessened. There does not appear to be a general consensus in the literature regarding the elderly patient's tolerance to the pain experience. Woodrow, Friedman, Siegelaub, and Collen (1972) found that pain tolerance tends to decrease as age increases. Other researchers have noted that there were no statistical differences in pain tolerance levels between the elderly and those under 60 (Kwentus, 1985). However, when treating the elderly's pain, it is wiser not to over-estimate their tolerance in order to prevent needless discomfort (Kwentus, 1985).

Because pain is such an individual experience, a multidimensional approach to assessment is required (AHCPR Clinical Practice Guidelines, 1992). Assessment should include physical, psychosocial and functional dimensions. The elderly may present special problems in obtaining an accurate pain history due to memory impairment, depression, and cognitive impairment. Under reporting of symptoms may result because elderly persons expect pain associated with aging and disease. Elderly may not report their pain because they fear the meaning of the pain (B.R. Ferrell & B.A. Ferrell, 1996). Also, they may fear taking medications or feel that the pain cannot be relieved (B.R. Ferrell & Schneider, 1988; Hofland, 1992). Therefore, the importance of family and caregivers as a source of information for the pain assessment should be highly emphasized (B.A. Ferrell, &

B.R. Ferrell, 1989; AHCPR Clinical Practice Guidelines, 1992; B.R. Ferrell & B.A. Ferrell, 1996).

Some elderly patients confront pain with stoicism, particularly if they were raised in a culture where people believed it was not acceptable to demonstrate pain and that to express feelings of pain may indicate signs of weakness. Conversely, the patient may demonstrate behavior intended to detract attention from the pain, rather than have others acknowledge it. If they do choose to talk about it, they may only speak to select people at select times (B.R. Ferrell & B.A. Ferrell, 1996).

Herr and Mobily (1991) indicate that elderly patients may demonstrate cultural patterns of pain expression more readily than younger patients due to the higher emphasis on family and cultural values. Nurses must be aware of common cultural values in order to individualize a plan of care for controlling pain. It is also important to emphasize to the elderly patient that feeling pain is a normal occurrence for whatever condition one has or procedure one has gone through (Herr & Mobily, 1991).

The strive to be a "good patient" presents a further block to accurate pain assessment. Patients very quickly learn which behaviors are rewarded within the health care system. Health caregivers inadvertently reward patients with quiet and stoic behavior, rather than the patient who persistently asks for analgesia and complains of pain.

Elderly patients must be made aware that the health team's efforts to control pain depends entirely on honest and accurate communication (Herr & Mobily, 1991).

Although not exclusive to the elderly population, a primary block to pain assessment and management is fear or intimidation felt by the knowledge and authority attributed to the health provider. Elderly patients may feel that their input is not necessary, as doctors and nurses know better than they do. They may also play this passive role with family members as well. Family members are given the authority over the pain experience, particularly if the elderly patient is experiencing sensory or cognitive impairments, therefore decreasing their confidence in the ability to express pain. It is helpful for nurses to remember that "pain is whatever the elderly patient says it is" in order to minimize passivity (McCaffery & Beebe, 1989; AHCPR, Clinical Practice Guidelines, 1992; B.R. Ferrell & B.A. Ferrell, 1996).

Inherent in these beliefs about the authority of the health care team are trust and respect. Elderly patients may tend to trust older physicians and nurses due to the belief that they have greater knowledge and authority. Tied in with this is the tendency to show more respect to physicians and nurses dressed in the traditional manner. Today's nonconventional dress may cause some confusion in elderly patients and reluctance to express their health

concerns. It is difficult to eliminate these beliefs; however, it is important to attempt to modify them by demonstrating respect and concern for the elderly's pain experience (Herr & Mobily, 1991).

Distrust may also emerge from a condescending attitude on the part of the physician and/or nurse. Overly familiar use of the elderly patient's name, instead of Mr. or Mrs. may result in perceived condescension. Also, hugging, touching or kissing may be seen as inappropriate, precluding further information sharing. Many elderly are very sensitive to sharing and discussing issues and concerns they consider extremely private. The nurse needs to be aware and sensitive to the elderly patient's feeling in this regard and not overstep boundaries set in place (Herr & Mobily, 1991).

Many elderly patients have a significant fear that if they complain of pain they will have to undergo further tests and procedures. Copp (1990) named intubation and spinal taps as two of the most feared procedures. Further tests and procedures also result in lengthy hospital stays which further strain the elderly patient's financial resources. It is vital to explore these possibilities openly and honestly with the elderly patient (Copp, 1990).

Age associated changes in pain perception have been a topic of interest ever since elderly people have been clinically observed in displaying unusual manifestations of

acute illness. For example, older patients often have painless intra-abdominal catastrophes (Bender, 1989; Norman & Yoshikawa, 1983). Harkins, Kwentus, and Price (1984) concluded that a consensus does not exist in the literature regarding age-associated changes in pain perception due to differences in methodology and subject selection. Thus, age-related changes in pain sensitivity and tolerance remain difficult to document and are of questionable clinical significance since induced pain may not be analogous to the clinical experience of pain (Harkins et al., 1984; B.R. Ferrell & B.A. Ferrell, 1996).

It is well documented throughout the literature that the elderly population is at higher risk for experiencing pain and discomfort. Ferrell (1991) reported that in a survey of 500 randomly selected households in Ontario, Canada, 16% of the total population (all ages) reported a particularly painful experience. The survey indicated that residents age 60 and over reported twice as many incidences of experiencing pain. In nursing home residents the incidence were even higher - at times even approaching up to 80% of the population (Foley, 1994). Many physiologic, psychosocial, and lifestyle changes occur with aging which can increase the elderly patient's susceptibility to pain.

It should be noted that acute pain has a well defined onset following bodily injury, and the duration is limited to the period of healing (American Pain Society, 1987).

Despite technological advances, pain remains a subjective experience that is difficult to measure. According to McCaffery and Beebe, "pain is whatever the experiencing person says it is, existing whenever the experiencing person says it does" (1989, p. 7).

Many patients with acute pain have some anxiety (related to uncertainty) about the duration of their pain, and consequently fear inadequate pain relief. Also, elderly patients often fear that pain will result in loss of independent living (Nelson, Taylor, Adams, & Parker, 1990).

Just as in the demography and epidemiology of pain, the nature of acute pain in the elderly has received scant attention. Laboratory studies reveal that pain sensitivity does not change with age (Harkins & Chapman, 1976, 1977; Harkins, Price, & Martelli, 1986), increase with age (Woodrow, Friedman, Siegelaub, & Collen, 1972), or decrease with age (Clark & Mehl, 1971; Sherman & Robillard, 1960, 1964). Kaiko (1980) and Kaiko, Wallenstein, Rogers, Grabinski, and Houde (1982) reported age-related increases in total pain relief and duration. Although Melzack, Abbott, Zackson, Mulder, and Davis (1987) reported that older patients had more persistent pain postoperatively and that analgesics were less effective, Faherty and Grier (1984) and Portenoy and Kanner (1985) found that elderly patients had less analgesic medication administered than younger patients.

Crowley (1979) conducted a study on subjects over the age of sixty and reported that they were able to tolerate pain more than those under the age of sixty. Meinhart and McCaffery (1983) concluded that behavior changes or manifestations, such as confusion or restlessness, may be the only indications of painful stimuli in the elderly. Because of these results, nurses must adequately assess specific cues with the elderly, such as guarding a part of the body, wincing, or favoring certain movement patterns.

Shahady (1990) estimates that approximately 50% of elderly patients have special characteristics and beliefs that need to be dealt with in order for an accurate assessment to be obtained. It is crucial for the nurse to acknowledge these attributes so that appropriate pain management can take place.

For many elderly in North America, English is not a first language. For those who immigrated from European or Asian countries, difficulties may arise in expressing their feelings and health concerns. They may have words in their own native language for pain. Therefore, it is essential through a translator that the health care provider recognize and utilize their terminology. Also, even elderly who speak English may have other terms for pain, such as hurt, discomfort, stiffness, soreness, ache, etc. These terms need to be identified so they can be communicated to other

members of the health team during pain assessment and treatment regimes (Gueldner & Hanner, 1989).

Some elderly patients may simply deny pain and refuse analgesia rather than attempt to express their pain experience in a language they do not have a firm understanding. Interpreters are vital to prevent this from occurring (Gueldner & Hanner, 1989).

Assessment tools may need to be revised in the patient's own language, particularly if the elderly patient is unable to read or write (AHCPR, Clinical Practice Guidelines, 1992). Gueldner and Hanner (1989) report that institutionalized elderly have significantly lower education levels than those living at home; therefore, special consideration of this group is important.

Much research has shown that smaller doses of analgesia are given to older patients even though the effect of age on pain perception is ambiguous (Loan & Morrison, 1967; Parkhouse, Lambrechts, & Simpson, 1961; Pilowsky & Bond, 1969). Bellville, Forrest, Miller, and Brown (1971) discovered that older patients reported more pain relief as a result of analgesics than younger patients. Also, it is well documented in the literature that the elderly consistently receive less postoperative pain medication, although there exists no conclusive evidence that they, in fact, perceive less pain (AHCPR, Clinical Practice Guidelines, 1992).

Harkins, Kwentus, and Price (1984) performed a comprehensive review of the phenomenon of acute pain in the elderly. They noted that studies on pain perception and the amount of pain analgesics taken by the elderly to relieve pain do not exist. Accordingly, they suggest that the stereotype that the elderly feel less pain than younger individuals be eliminated from the literature (Harkins et al., 1984).

Whether due to increased medication use, cognitive changes, or illnesses impacting on coordination, accidents pose an additional hazard commonly encountered by the elderly (Melding, 1991). Cumming and Klineberg (1990) estimate that at least 30% of those over 65 fall at least once per year. Because of the extended healing time necessary, the pain experience is frequently prolonged.

The loss of one's spouse, job, independence, and friends are frequently major reminders of one's increasing age. With those losses, elderly patients often suffer from loneliness, boredom, and depression resulting in a decreased capacity to cope with the pain. Elderly patients often hesitate to report psychosocial experiences such as depression to the health care provider because of the attached stigma (Parmelee, Smith, & Katz, 1993). Health care providers must be cognizant of these issues and respond effectively to the elderly patient who is lonely or depressed. Conversely, coping with chronic pain often

results in drastic changes in lifestyle, such that the elderly patient's social and family relationships are interrupted with social isolation and loneliness often follow (Thomas, 1990; B.R. Ferrell & B.A. Ferrell, 1996).

Elderly persons may elect to suffer silently with their pain or attempt to relieve the discomfort with inadequate measures due to the high cost of health care, particularly medications. Consultations with physicians, necessary diagnostic tests, cost of equipment and hospitalizations may well be luxuries that the elderly may not be able to afford. Health care professionals must be sensitive to these issues in order to prevent needless suffering (Thomas, 1991; B.R. Ferrell, & B.A. Ferrell, 1996).

In summary, various studies concluded that the elderly population does not feel pain as intensely as the younger generation. Other studies suggest, however, that subjective sensory complaints are very common among the elderly. Nevertheless, other studies have concluded that the elderly may have increased or decreased pain perception compared to younger people. Therefore, studies focusing on the elderly and pain perception are inconclusive. Much research is still needed in this particular area.

The Association of Pain Perception to Past Experiences

One of the variables considered to have a significant influence on pain perception is the individual's past experience with pain. Melzack and Chapman (1973), for

instance, cited early conditioning as a factor affecting the pain experience. McCaffery (1979) also acknowledged that past experience is a psychological determinant of pain behavior.

A more detailed empirical study of the relationship between pain perception and past experiences with pain was done by Collins (1965). Collins (1965) examined the relationship between childhood experience and sensitivity to experimentally induced pain. Sixty-two soldiers were asked to rate themselves on the Childhood History Questionnaire. Following the questionnaire, they received electrical stimulation to determine their pain threshold and tolerance. The degree of childhood protection was positively related to pain threshold (r = .67, p < .001) and pain tolerance (r = .38, p < .01). The degree of independence a subject had as a child was not related to both pain measures (pain threshold, r = -.50, p <.001; pain tolerance, r, = -.32, p < .01). In summary, Collins data indicated that individuals protected from painful experiences during childhood perceive their pain as less than those who are allowed more independence.

Pillard and Fisher (1970) studied the impact of past history on pain perception using dental patients. They administered to 272 dental clinic patients the Dental Clinic Questionnaire while they were awaiting examination. However, no relationship was found between recollections of

pain suffered in previous dental procedures and present anxiety about the procedures.

In summary, past experience was recognized as a major psychological determinant of pain behavior. Collins (1965) supported the fact that individuals who were protected from painful experiences during childhood perceived their pain less than those who were allowed more independence. Although Melzack (1973) did include past experience as a component of the cerebral processes in the Gate Control Theory, there is limited research substantiating the assertion that past experience with pain influences current pain perception.

The Meaning of Pain

The word "pain" has been defined and interpreted in different ways. The interpretation of pain varies vastly from one individual to another.

Existing research on pain and pain management suggests that the meaning attached to pain-producing situations greatly influences the quality and degree of pain perceived. Beecher (1956) compared the pain perceptions of men with war-time casualties to male civilian patients with comparable surgical wounds. All of the subjects were mentally alert and were not in shock. Beecher found that 32% of the soldiers complained of enough pain to require Morphine Sulfate. In contrast, 85% of the civilians wanted narcotics for pain. There was no correlation between the

incidence of pain and the size of the wound, the age of the patient, the anesthetic used, or the history of acute or chronic disease. Beecher (1956) concluded that the difference between the two groups was the significance of the wound to the patient. The soldiers perceived the war wound as meaning the end of combat and return to safety, while the civilians perceived the surgical wound as a depressing, calamitous event.

A very broad definition of pain was given by Copp (1974). She interviewed 148 patients (in all stages of pain perception) in five hospitals. Some of the meanings attached to the perceived pain were as follows: (a) 16 patients (11%) viewed pain as a challenge and believed that emotional and spiritual benefits would result, (b) 33 patients (22%) viewed pain as a struggle and a fight, (c) 15 patients (10%) perceived pain as a personal weakness, (d) 19 patients (13%) viewed pain as punishment with some redeeming aspects, (e) 4 patients (3%) viewed pain as a loss, and (f) 39 patients (26%) reported value in the pain experience. In conclusion, the previous studies noted that the meaning of pain influences the quality and degree of pain perceived.

In summary, the previous discussion has focused on research related to cultural influences on the pain perception, studies on the elderly and pain perception, association of pain perception to past experiences, and the meaning of pain. These factors were identified by Melzack

(1973) as components of the cerebral processes in the Gate Control Theory. The extensive literature review reveals that a difficult aspect of pain management is understanding what the pain means to the person experiencing it. Since the phenomenon of pain is subjective, the meaning of the pain experience often is misunderstood. Repeated studies suggest that patients tolerate and express pain differently depending on their own psychological make-up, cultural background, and life experiences.

Limited studies conducted on African Americans also suggest that there is a need for this population to be more defined in the area of their pain perceptions. Accordingly, an understanding of pain perception among elderly African Americans and Caucasians is of utmost importance. With this understanding, better care for these populations may be achieved.

CHAPTER III

METHOD

In order to gain as much insight as possible into the characteristics of pain perception of elderly African American and elderly Caucasian subjects, a comparative, descriptive survey research design was used in this study. The following research questions were explored: (1) What are the characteristics of pain perception described by elderly African American and elderly Caucasian subjects?; (2) What are the differences in pain perception described by elderly African American and elderly Caucasian male and female subjects? and (3) What is the strength of the relationship between the Present Pain Intensity (PPI) and the Pain Rating Index (PRI) for each of the two ethnic groups? This chapter discusses the setting, sampling procedures, a profile of the final sample, protection of human subjects, instruments, mode of data collection and the statistical procedures involved in the analysis of data.

Setting

This study was conducted in the southern region of the United States with subjects attending a public health clinic. The clinic provides medical and educational services to a wide variety of men and women, of various ages and backgrounds, serving approximately 250 clients monthly. Twenty-three percent of the clients served are over 60 years of age.

Sample

The target population for this study consisted of a quota sample of 32 elderly African American and 32 elderly Caucasian subjects, males and females, over the age of 60, who had the ability to recall the characteristics of their pain perceptions. The sample size (64) was chosen based on the power analysis, where power is the probability that a statistical test, employed in a study, will detect a significant difference that exists between groups (Cohen, 1977). Given an alpha level of .05 and the power level of 80%, the sample size of 64 was enough to detect an effect size of 50% between the two populations under study (See Cohen, 1977, p.37). The subjects included in the quota sample exhibited a score of 0 - 2 errors on the Short Portable Mental Status Questionnaire and were able to describe their pain perceptions within the past six months.

The subjects selected were those individuals who experienced pain at intervals (short term pain) due to some type of unpleasant sensation associated with actual or potential tissue damage, for example, acute rheumatoid arthritis. Subjects were asked if they could read, write, speak and understand English. Those subjects having the ability to read, write, speak and understand English were included in the study. Also, the subjects must have completed grade school, a minimum of 4th grade.

Subjects were excluded from the study if they (a) were not oriented to time and place, based on a score of 3 - 10 errors on the Short Portable Mental Status Questionnaire (SPMSQ) (Appendix A); (b) had a major psychiatric disorder such as depression or schizophrenia; (c) were unable to read, write, speak, and/or understand English; (d) failed to complete the questionnaire for any reason; and (e) had a history of addiction to any medication.

The public health clinic was selected because it provided care to a large number of elderly clients. However, it served more female clients than male clients. A recent report conducted by the clinic during 1997 revealed those attending the clinic between the ages of 45 to 64 years were 1,248 females and 897 males. Those clients 65 years and over attending the clinic totaled 182 males and 365 females. Therefore, a representative sample of males and females were available to be selected for this study.

Protection of Human Subjects

In compliance with the current rules and regulations of the Louisiana State University Medical Center Institutional Review Board (IRB), the following steps were taken:

1. Prior to initiation of the study, permission was obtained from the Louisiana State University's Medical Center Institutional Review Board.

2. Prior to the collection of data, permission to review all participating subjects' clinic records were

obtained from the agency at the proposed location.

3. Prior to administration of the questionnaires, a consent form was given to all volunteering subjects to sign. The consent form included permission to review the subjects' clinic records for data collection and stressed confidentially of all subjects.

Instruments

The instruments used in the study were the Demographic Data Form, Short Portable Mental Status Questionnaire (SPMSQ) (Pfeiffer, 1975), and the McGill-Melzack Pain Questionnaire (Melzack, 1975). The Demographic Data Form was developed by this researcher (Appendix A). Permission was granted by the tool developers for use of the other two instruments (See Appendix B & C).

Demographic Data Form

Demographic data (for the sample description) was collected on the subjects (Appendix A). Items on the demographic data form included the subject's primary diagnosis, age, sex, marital status, educational level, and religion (which was obtained from the client's clinic records, with permission from the agency).

Short Portable Mental Status Questionnaire (SPMSQ)

The SPMSQ (Pfeiffer, 1975) was used as a screening tool to assess the mental status of the elderly population and was given as a screening tool for study participation. The SPMSQ (Pfeiffer, 1975) tested the subject's short and long-

term memory, the ability to relay information about current events, orientation, and the capacity to perform mathematical tasks (Appendix B). Following Pfeiffer's guidelines, sensory/perceptual deprivation is scored on the number of errors recorded in the subject's response to the items on the questionnaire. Pfeiffer's instrument and error categorization responses are as follows: (a) 0-2 errors, intact intellectual functioning; (b) 3-4 errors, mild intellectual impairment; (c) 5-7 errors, moderate intellectual impairments; and (d) 8-10 errors, severe intellectual impairments.

This study treated the scores as continuous rather than categorical and scores of 0-2 errors were considered to indicate that sensory/perceptual deprivation was not present. Subjects with scores of 0 - 2 errors were allowed to participate in the study and were considered alert. Scores of 3-10 errors indicated the presence of sensory/perceptual deprivation in the form of confusion and subjects with these scores were excluded. The higher the error score, the greater the degree of confusion.

Analysis of the Short Portable Mental Status Questionnaire (SPMSQ) (Pfeiffer, 1975) showed the following: ease of administration in delirious patients is excellent; it is very quick and simple to administer. The SPMSQ was developed as a rapid, gross measure of overall cognitive impairment. It was intended to improve upon the Mental

Status Questionnaire (MSQ) test (Fillenbaum, 1980), which was considered ill- suited for office and outpatient clinic populations. The SPMSQ retains the MSQ items of date, place, age, past and previous presidents, and date of birth, but eliminates some items and adds mother's maiden name, day of the week, street address, telephone number, and subtraction of serial sevens, for a total of ten verbally administered questions. Like the MSQ, with which it shows correlations of 0.88-0.97 (Fillenbaum, 1980), it was not designed to detect mild disorders, and is thus likely to show many false negatives. Given the simplicity of the test, interrater reliability is not a problem, and test-retest reliability is high: greater than r = 0.80 (Pfeiffer, 1975).

Initial validation of the SPMSQ was done on a huge community sample, providing very complete normative data that allowed scoring to take into account differences in education and culture. Validation as a classification instrument of organic brain syndrome was tested against psychiatric interviews (apparently made independently) and showed good percentage agreement (true positive and true negative rates of 88%-92%) when the SPMSQ was dichotomized into impaired or not impaired (Haglund & Schuckit, 1976; Pfeiffer, 1975). As a rating of cognitive severity, the SPMSQ has not been adequately validated, but has shown good agreement with the Bender-Gestalt test (r=0.60), and the digit span of the Wechsler Adult Intelligence Scale (WAIS)

(r = 0.66) (Wolber, Romaniuk, Eastman, & Robinson, 1984). Its correlations with functional capacity ratings have been moderate, although variable (r = 0.37-0.57), (Winograd, 1984; Wolber & Lina, 1981; Wolber et al., 1984).

A four-level classification for the results of the SPMSQ (intact, mild impairment, moderate impairment, and severe impairment) was not demonstrated to be valid in a study that used discriminant analyses (Smyer, Holland, & Jonas, 1979). When evaluated as a test of impairment against psychiatric diagnoses of organic mental disorder, sensitivity was only 0.55 (although specificity was over 0.90), equivalent to the MSQ (Fillenbaum, 1980). Another study found the SPMSQ to be insensitive as a screening test specifically for delirium, as it failed to sufficiently cover delirium's varying clinical symptomatology (Erkinjuntti, Sulkava, Wikstrom, & Autio, 1987). The Short Portable Mental Status Questionnaire has been successfully used in a wide variety of contests (for a review, see McDougall, 1990). Given its simplicity and good psychometric properties, it should probably be used more often than it is.

Instructions for Short Portable Mental Status Questionnaire. The subjects were asked questions 1 through 10 and all answers were recorded (See Appendix B). All responses were scored correctly if given by the subject

without reference to calendar, newspaper, birth certificate, or other aid to memory.

Question 1 was scored correctly only when the subject gave the exact month, exact date, and the exact year correctly.

Question 2 was scored correctly only when the subject gave the exact day of the week.

Question 3 was scored correctly if any correct description of the location was given. "My home", correct name of the town or city of residence, or the name of hospital or institution if subject is institutionalized, was acceptable.

Question 4 was scored correctly when the correct telephone number of the subject could be verified, or when the subject could repeat the same number at another point in the questioning.

Question 5 was scored correctly when the subject's stated age corresponded to the date of birth.

Question 6 was scored correctly only when the month, exact date and year were given by the subject.

Question 7 required only the last name of the President.

Question 8 required only the last name of the previous President.

Question 9 did not need to be verified. It was scored correctly if a female's first name plus a last name other

than the subject's last name was given.

Question 10 required that the entire series must be performed correctly in order to be scored as correctly. Any error in the series or unwillingness to attempt the series was scored incorrectly (Pfeiffer, 1975).

Scoring of Short Portable Mental Status Questionnaire(SPMSQ). The data suggest both education and race influence performance on the SPMSQ. They must accordingly be taken into account in evaluating the score attained by a subject. For purposes of scoring, three educational levels have been established: (a) subjects who have had only grade school education (4th or 8th grade); (b) subjects who have had any high school education or who have completed high school (11th or 12th grade); and (c) subjects who have had any education beyond the high school level, including college, graduate school, or business school.

For subjects with at least some high school education, but not more than high school education, the following criteria were established to describe mental status:

0-2 Errors	Intact Intellectual Functioning
3-4 Errors	Mild Intellectual Impairment
5-7 Errors	Moderate Intellectual Impairment
8-10 Errors	Severe Intellectual Impairment

Consistent with Pfeiffer (1975), one should allow one more error if subject has had only a grade school education, one less error if subject has had education beyond high

school, and one more error for Black subjects, using identical education criteria (Pfeiffer, 1975).

McGill-Melzack Pain Questionnaire (MPQ)

Melzack and Torgerson (1971) began the original work on the McGill Pain Questionnaire (MPQ) by grouping words used to describe pain and attempting to scale them on an intensity dimension (Appendix C). Their work resulted in the development of a multidimensional instrument for the measurement of clinical pain (Melzack & Torgerson, 1971).

The instrument has four parts, in addition to basic subject information. These parts determine the location of an individual's pain; evaluate the sensory, affective, and evaluative qualities of pain; assess how pain changes over time; and evaluate intensity using a scale ranging from 1 to 5 and the adjectives of Mild, Discomforting, Distressing, Horrible, and Excruciating. The intensity scale does not contain a zero.

On the basis of the data, the words are categorized into 3 major classes and 16 subclasses. The classes are: (1) words that describe the sensory qualities of the pain perception in terms of temporal, spatial, pressure, thermal and other properties; (2) words that describe affective qualities, in terms of tension, fear, and autonomic properties that are part of pain perception; and (3) evaluative words that describe the subjective overall intensity of the pain perceived.

Each subclass, which will be given a descriptive label, consists of a group of words that are considered by most subjects to be qualitatively similar. Some of these words are synonyms, others seem to be synonymous but vary in intensity, while many provide subtle differences (despite their similarities) that may be of importance to a patient who is trying desperately to communicate to a physician. The scores of the MPQ provide quantitative data that can be analyzed statistically (Melzack, 1975).

Since 1975, many investigators have applied the MPQ to a variety of measurement situations in attempts to refine it and clarify its reliability and validity. Reading (1983) tested reliability through repeated administrations of the questionnaire to cancer patients. A consistency index (average of the individuals' repeated scores) of 75% was obtained between the first two administrations. This index fell to 66% before finally increasing to 80% after a number of weekly testings. Reading's findings were similar to those of Melzack (1975) who found that the consistency of the word choices with cancer patients over 3 days showed a consistency index of 70%. While more factor analytical studies of the word groupings are needed to answer some of the questions related to the distinct differences of the word subscales (dimensions), a study by Prieto et al. (1980) demonstrated that three factors were evident and that the

Affective and Evaluative categories were distinctly different from each other.

A study with chronic pain patients reported by Kremer and Atkinson (1983) addressed the issue of construct validity. When the McGill Pain Questionnaire's affective dimension was compared with another measure of affective distress (Brief Symptom Inventory), they found that the two instruments were systematically related.

Reading (1979) administered the McGill Pain Questionnaire to 166 women attending gynecological clinics complaining of dysmenorrhea. Factor analysis of the responses with four dimensions/factors accounted for 38.3% of variance in factor one of items from the evaluative and affective dimensions and reflects the reaction component of pain. Factor two accounted for 20.2% of the variance and reflected traction pressure associated with tenderness. Factor three accounted for 11.1% of the variance and reflected the sensory qualities of the pain perceived in relation to the dullness of the pain. Factor four accounted for 10% of the variance and constituted an emotional/ distressing component of the pain perception.

The description of cramping was used by 62% of patients, but this did not load appreciably on any of the factors. Dysmenorrheic clients commonly used descriptors, and almost half of the sample checked words from the evaluative grouping alone. Dysmenorrhea has been associated

with emotional connotations. The results of this study indicated the significance of the emotional or affective aspects of the pain, which may reflect the negative attitude held by many women towards their menstrual pain.

Love, Loeboeuf, and Crisp (1989) also provided evidence for the stability of the McGill Pain Questionnaire (MPQ). They administered the MPQ to patients with chronic low back pain on two occasions (separated by several days) prior to receiving treatment. Their results showed very strong test-retest reliability coefficients (.85) for the MPQ pain rating indexes as well as for some of the 20 categories. The lower coefficients for the 20 categories may be explained by the suggestion that many clinical pains show fluctuations in quality over time, yet they still represent the same pain perception to the person (Love et al., 1989).

There are also many other studies of the validity of the 3-dimensional framework of the MPQ, which have recently been reviewed by Reading (1989). These studies revealed that the distinction between sensory and affective dimensions has held up extremely well, but there was still considerable debate on the separation of the affective and evaluative dimensions. However, several excellent studies by Reading (1979), McCreary, Turner, and Dawson (1981), and Prieto et al. (1980) have reported a discrete evaluative factor. The different factor-analytic procedures that were used account for the reports of four factors (Reading,

1979), five factors (Crockett, Prkachin, & Craig, 1977), or seven factors (Leavitt, Garron, Whisler, & Sheinkop, 1978). The major source of disagreement seemed to have been the different patient populations that were used to obtain data for factor analyses. The range included brief laboratory pains, dysmenorrhea, back pain, and cancer pain. In some studies, relatively few words were chosen, while large numbers were selected in others. Surprisingly, the factor-analytic studies based on such diverse populations have confused rather than clarified some of the issues.

The MPQ has been utilized in a number of clinical trials and information is available on both its concurrent and predictive validity. MPQ scores have been reported to be related to analgesia requirements (Reading, 1979) and recovery from oral surgery (Buren & Kleinknecht, 1979). In an experimental setting, MPQ scores for tolerance of noxious stimulation exceeded those for threshold (Klepac, Dowling, & Hauge, 1981).

Chen and Trede (1985) studied MPQ responses to two laboratory pain models reflecting tonic and phasic pain. They found that tonic pain was rated higher than phasic pain on the affective, sensory, and miscellaneous subscales, with a different pattern of sensory words emerging for both types of pain.

Correlations between MPQ-derived scores and verbal rating and visual analogue rating scales have also been

examined. Correlations have been reported of 0.39 and 0.10 between the total rank score for the MPQ and verbal and visual analogue rating scales (Reading, 1982).

Turk, Rudy, and Salovey (1985) conducted a study on the internal structure of the MPQ by using techniques that avoided the problems of most earlier studies and confirmed the sensory, affective, and evaluative dimensions. More recently, Lowe, Walker, and McCullum (1991) again confirmed the three factor structure of the MPQ, using statistical procedures and a large number of subjects. In addition, a paper by Chen, Dworkin, Haug, and Gerhig (1989) presented data on the consistency of the MPQ across five studies using the cold pressor task. Similarly, Pearce and Morley (1989) provided further confirmation of the construct validity of the MPQ using the Stroop color naming task with chronic pain patients.

Also, many studies have examined the discriminative capacity of the McGill Pain Questionnaire. One of the most important features of the MPQ is its potential value as an aid in the differential diagnosis among various pain syndromes. A study conducted by Dubuisson and Melzack (1976) was done to demonstrate the discriminative capacity of the MPQ. They administered a questionnaire to 95 patients suffering from one of the eight known pain syndromes: post-herpatic neuralgia, phantom limb pain, metastatic carcinoma, toothache, degenerative disc disease,

rheumatoid arthritis or osteoarthritis, labor pain, and menstrual pain. A multiple group discriminant analysis revealed that each type of pain was characterized by a distinctive constellation of verbal descriptors. Also, when the descriptor set (for each patient) was classified into one of the eight diagnostic categories, a correct classification was made in 77% of cases. This reliability was increased to 100% when additional information from the questionnaire, such as localization and sex, was included in the analysis.

Another study by Leavitt and Garron (1980), dealt with the discriminative capacity of the MPQ. They found that patients with physical organic causes used distinctly different patterns of words than did patients whose pain had no detectable cause and was labeled as functional. A concordance of 87%, based upon the patients' choice of word patterns from the MPQ, was found between established medical diagnosis and classification. Specific verbal descriptors of the MPQ also have been shown to discriminate between reversible and irreversible damage of the nerve fibers in a tooth (Grushka & Sessle, 1984), and between leg pain caused by diabetic neuropathy and leg pain arising from other causes (Masson, Hunt, Gern, & Boulton, 1989).

Melzack, Terrence, Fromm, and Amsel (1986) provided further evidence of the discriminative capacity of the MPQ to differentiate between trigeminal neuralgia and atypical

facial pain. Fifty-three patients were given a thorough neurological examination which led to a diagnosis of either trigeminal neuralgia or atypical facial pain. Each patient rated his or her pain using the MPQ, and the scores were submitted to a discriminant analysis. Ninety-one percent of the patients were correctly classified using seven key descriptors. To determine how well the key descriptors were able to predict either diagnosis, the discriminant function derived from the 53 patients were applied to MPQ scores obtained from a second independent validation sample of patients with trigeminal neuralgia or atypical facial pain. The results showed a correct prediction for 90% of the patients.

It should be pointed out, however, that the discriminative capacity of the MPQ has limits. Kremer and Atkinson (1983) found that high levels of anxiety and other psychological disturbances, which may produce high affective scores, may obscure the discriminative capacity. In addition, certain key words that discriminate among specific syndromes also may be absent (Reading, 1982). However, it is clear that there are appreciable and quantifiable differences in the way various types of pain are described, and that patients with the same disease or pain syndrome tend to use remarkably similar words to communicate what they feel.

Nonetheless, these studies indicate that the MPQ appears to be reasonably reliable, and a valid measurement of clinical pain for various patient populations. It may represent the most adequate and versatile instrument presently available to measure pain perception. Some situations in which it can be used include descriptive studies of the characteristics of pain caused by various disease processes, evaluations of pharmacologic and other interventions, simple assessments of patients' pain, and clarification of differences and similarities among various types of pain.

Another limitation of the MPQ is that it may not be easy to use in the clinical setting. It is relatively a long and complex questionnaire. It requires intense concentration from respondents, and takes at least 15 to 30 minutes to administer (Melzack, 1975). Patients may complete it themselves or have it read to them. In addition, some of the word descriptors (Rasping, Lacerating, Wretched) may not be easily understood by certain patient populations. Scoring of the questionnaire also takes several additional minutes. Despite the MPQ's ability to evaluate multiple aspects of pain perception, it is mostly appropriate for one time or sporadic use rather than repeated use to evaluate therapeutic interventions (Melzack, 1975).

Procedure

The 64 subjects (32 elderly African American and 32

elderly Caucasian subjects assessed and treated at the health clinic), who met the requirements outlined (under sample section) were asked to participate in the study. The potential subjects excluded were one Black female due to her ethnic origin as a native of Trinidad, and a Caucasian female due to scoring more than 2 errors on the SPMSQ. Three potential subjects refused to participate in the study indicating that they were either too busy or wanted to leave the clinic early. Most clients were quite willing to participate as revealed by such statements as, "You came to the right person" and "I can tell you a lot about pain."

The subjects received a detailed explanation of the study. A consent form was signed by all subjects volunteering to participate in the study. A demographic data sheet was completed on each subject participating in the study (Appendix A). Demographic information such as the subject's illness, age, sex, marital status, educational background, and religion was collected along with the descriptive information about the subjects. All of the above information was obtained from the subjects' clinic records, with permission from the agency. Demographic information was analyzed for correlations between response patterns and demographic data.

The Short Portable Mental Status Questionnaire was administered to 64 subjects meeting the sample criteria and who volunteered to be in the study (Appendix B). Subjects

must have scored 0 - 2 errors on the Short Portable Mental Status Questionnaire before qualifying to be in the study. Subjects who qualified to be in the study were given the McGill-Melzack Pain Questionnaire (Melzack, 1975) (Appendix C). Any information not clear to the subject participating in the study was explained by the researcher. Four elderly individuals, not participating in the study, reviewed the MPQ. They exhibited no problems in answering each section of the tool.

Data Analysis

Following the suggestions of Melzack and Torgerson (1971), Reading (1979, 1983), Melzack (1975), Kremer and Atkinson (1983), and Love, Loeboeuf, and Crisp (1989), the items (measuring the research variable) included in the questionnaire were derived from the McGill-Melzack Pain Questionnaire (MPQ) (Appendix C). That is, in this study, the items in the questionnaire were adapted from MPQ. These items measured pain perception, qualities of pain (sensory, affective, evaluative, miscellaneous), and present pain intensity.

Quantitative data analysis of the MPQ consisted of two areas. The first area was the Pain Rating Index (PRI) which consisted of 20 groups of words that described pain quality in the areas of sensory, affective, evaluative, and miscellaneous. Scoring in this area involved adding up the number values of the words the subjects chosed. The second

area was the Present Pain Intensity (PPI). Scoring in this area involved noting which words from this category most subjects chosed to describe their present pain intensity.

To answer research question #1 about the characteristics of pain perception described by elderly African American and elderly Caucasian subjects, descriptive statistics (e.g., the mean, the standard deviation and the variance) was used to summarize the data. The percentage of observations summarized were namely, age, gender, marital status, and educational level, among the two ethnic groups - African Americans and Caucasians.

To answer research question #2 about the differences in pain perception described by elderly African American and elderly Caucasian male and female subjects, a 2 x 2 ANOVA was used. A 2 X 2 ANOVA was used to determine if there was an interaction between gender of the subject and ethnic groups.

To answer research question #3 about the strength of the relationship between the PPI and the PRI (sensory, affective, evaluative and miscellaneous dimensions of pain perception) for each of the two ethnic groups, Pearson's Product Moment Correlation was used to demonstrate the strength of the relationship between the PRI and PPI.

CHAPTER IV

RESULTS

The principal objective in this chapter is to empirically assess the extent to which elderly African Americans and Caucasians differ in their pain perception. First, the demographic characteristics of the samples are reported. Second, the description of the characteristics of pain perception by elderly African American and elderly Caucasian subjects is presented. Third, pooled t-tests are used to compare the means and standard deviations of the pain dimensions for the two groups. In order to test the effect of gender and race (the interaction effect) on pain perception, the two-way analysis of variance (ANOVA) is used. Finally, Pearson's Product Moment Correlations among all the dimensions of pain perception and race are reported to demonstrate the strength of the relationship among all the variables.

As stated in Chapter I, the following research questions were addressed: (1) What are the characteristics of pain perception described by elderly African American and elderly Caucasian subjects? (2) What are the differences in pain perception described by elderly African American and elderly Caucasian male and female subjects? (3) What is the strength of the relationship between the Present Pain Intensity (PPI) and the Pain Rating Index (PRI) for each of the two ethnic groups? Before addressing these questions,

the demographic characteristics of the respondents will be described.

Demographic Characteristics of the Respondents

The sample consisted of 32 elderly African Americans and 32 elderly Caucasians who were clients at a public health clinic (May - July, 1997). The two groups were examined in terms of the following demographic characteristics: age, gender, medical diagnosis, marital status, education, religion, and Short Portable Mental Status Questionnaire (SPMSQ) scores.

Age

The age of the subjects ranged from 61 years to 92 years old. The mean age for African Americans was 69 years and 70 years for Caucasians (see Table 1).

Table 1

Age Distribution of the Subjects

Age Range	Ethnic Groups: African American (n=32)		Caucasian (n=32)	
	n	%	n	%
61 - 70	21	65.7	20	62.5
71 - 80	9	28.1	7	21.9
81 - 90	1	3.1	5	15.6
91 - 95	1	3.1	0	0

Gender

The total number of subjects in the investigation was N = 64. African American subjects were 34.4% males and 65.6% females; and Caucasian subjects were 31.2% males and 68.8% females as shown in Table 2.

Table 2

Gender Distribution of the Subjects

Gender	Ethnic Groups: African American (n=32)		Caucasian (n=32)	
	n	%	n	%
Male	11	34.4	10	31.2
Female	21	65.6	22	68.8

Types of Pain

All subjects interviewed experienced some type of pain at intervals (short term pain) due to some type of unpleasant sensation associated with actual or potential tissue damage, for example, acute rheumatoid arthritis. As can be seen in Table 3, 53.1% (N = 17) of elderly African Americans experienced some type of arthritis pain while 46.9% (N = 15) experienced other forms of acute pain. The elderly Caucasians also experienced arthritis pain 46.9% (N = 15) while 53.1% (N = 17) experienced other forms of acute pain. The other forms of acute pain experienced among both ethnic groups were pains in upper or lower extremities, stomach or chest pains, back and neck pains, lupus pain, gout pain, bilateral stump pain, pain from oral surgery, and breast pain.

Table 3

Types of Pain

	Ethnic Groups			
Types of Pain	African American (n=32)		Caucasian (n=32)	
	n	%	n	%
Arthritis Pain	17	53.1	15	46.9
Other Acute Pains	15	46.9	17	53.1

Marital Status

Among the two groups, 46.9% of the Caucasian subjects

were married, while only 18.7% of the African Americans were married (see Table 4). Both ethnic groups had the same percentage of widowed subjects (34.4%). The divorce rate among the African Americans was 25.0% while 15.6% Caucasians were divorced. Of all the 32 African Americans, 21.9% were separated, while only 3.1% of the 32 Caucasians were separated.

Table 4

Marital Status by Ethnicity

	Ethnic Groups			
Marital Status	African American (n=32)		Caucasian (n=32)	
	n	%	n	%
Married	6	18.7	15	46.9
Widowed	11	34.4	11	34.4
Divorced	8	25.0	5	15.6
Separated	7	21.9	1	3.1

Education

In years of education between the two ethnic groups, 96.9% (N = 31) African American subjects had a high school education or less and 3.1% (N = 1) had some college or trade school hours earned. The Caucasian subjects reported a 81.3% (N = 26) high school education or less and 18.7% (N = 6) having obtained a college degree or had some college

or trade school hours earned (see Table 5).

Table 5

Education by Ethnicity

Education	Ethnic Groups: African American (n=32) n	%	Caucasian (n=32) n	%
Grade School	22	68.8	15	46.9
HS Graduate (11th or 12th grade)	9	28.1	11	34.4
College or Trade School hours	1	3.1	5	15.6
College Degree	0	0	1	3.1

Religion

As reported in Table 6, the subjects were mostly Baptist. African Americans were predominantly Baptist (68.8%) with 18.7% Catholic. Caucasians were Baptist (59.4%), with 9.4% Catholic. There was only one elderly African American reported as Methodist, one reported of having no religion, and two reported as belonging to the Church of Christ.

Table 6

Religion by Ethnicity

Religion	Ethnic Groups: African American (n=32) n	%	Caucasian (n=32) n	%
No religion	1	3.1	2	6.3
Baptist	22	68.8	19	59.4
Caremedic	0	0	1	3.1
Catholic	6	18.7	3	9.4
Church of Christ	2	6.3	1	3.1
Jehovah's Witness	0	0	1	3.1
Lutheran	0	0	1	3.1
Methodist	1	3.1	0	0
Pentacostal	0	0	1	3.1
Protestant	0	0	2	6.3
Seventh Day Adventist	0	0	1	3.1

Short Portable Mental Status Questionnaire (SPMSQ) Scores

The SPMSQ scores indicates the number of errors a subject had to score in order to determine whether or not sensory/perceptual deprivation was present. Subjects with scores of 0-2 errors were allowed to participate in the study and were considered alert. Scores of 3-10 errors

indicated the presence of sensory/perceptual deprivation in the form of confusion and subjects with these scores were excluded. The higher the error score, the greater the degree of confusion.

The Caucasian subjects scored higher on the SPMSQ (84.4%) than elderly African American subjects (68.8%). African American subjects tended to score more on the second to highest score on the SPMSQ (25.0%) than Caucasian subjects (9.4%). Both ethnic groups had the same percentage for the lowest acceptable score on the SPMSQ which was 6.2% (see Table 7). Although the score on the SPMSQ among the two groups was not the same, all subjects in the investigation were oriented to time, place, and person. Only one potential subject was excluded who had more than two errors on the SPMSQ.

Table 7

Number of Errors on Short Portable Mental Status Questionnaire (SPMSQ) by Ethnicity.

	Ethnic Groups			
Errors	African American (n=32)		Caucasian (n=32)	
	n	%	n	%
0	22	68.8	27	84.4
1	8	25.0	3	9.4
2	2	6.2	2	6.2

Analysis of Research Questions

Research Question #1. The first research question to be addressed is: What are the characteristics of pain perception described by elderly African American and elderly Caucasian subjects? Table 8 reveals that there were differences among the two ethnic groups when each pain word and its relative intensity rating were examined. Only 22 of 77 words on the McGill-Melzack Pain Questionnaire were selected by the African American and Caucasian subjects. African American subjects chose the following three words more often: Nagging (81.3%), Mild (71.9%), and Exhausting (53.1%). Caucasians, on the other hand, chose Nagging (53.1%), and Tender (50.0%) more often. Altogether, the majority of the two groups chose the word Nagging; that is, Nagging was the word most frequently selected by subjects in both groups.

Words on the Pain Rating Index (PRI) and Present Pain Intensity (PPI) chosen most by elderly African American subjects were Throbbing, Boring, Sharp, Pulling, Aching, Tender, Exhausting, Miserable, Tight, Nagging and Mild. Words chosed more often by elderly Caucasian subjects were Sharp, Aching, Tender, Tiring, Exhausting, Wretched, Annoying, Nagging, and Mild.

Table 8

Words on Pain Rating Index (PRI) and Present Pain Intensity (PPI) Chosen by Subjects

Words	Ethnic Group: African American (n=32)		Caucasian (n=32)	
	n	%	n	%
(PRI)				
Throbbing	14	43.8	11	34.4
Boring	14	43.8	6	18.8
Sharp	15	46.9	1	46.9
Cramping	10	31.3	9	28.1
Pulling	13	40.6	3	9.4
Wrenching	4	12.5	12	37.5
Stinging	10	31.3	10	31.3
Hurting	10	31.3	3	9.4
Aching	13	40.6	14	43.8
Tender	15	46.9	16	50.0
Tiring	11	34.4	14	43.8
Exhausting	17	53.1	13	40.6
Sickening	12	37.5	11	34.4
Terrifying	10	31.3	3	9.4
Punishing	9	28.1	4	12.5
Wretched	9	28.1	14	43.8
Annoying	11	34.4	14	43.8
Miserable	13	40.6	9	28.1
Tight	13	40.6	11	34.4
Nagging	26	81.3	17	53.1
(PPI)				
Mild	23	71.9	13	40.6
Discomforting	7	21.9	10	31.3

Research Question #2. The second research question asked whether there are differences in pain perception described by elderly African American and elderly Caucasian male and female subjects? To address this question, data were analyzed in terms of present pain intensity (PPI) and pain rating index (PRI).

A two-way ANOVA was carried out to examine the impact of both ethnicity and gender on pain perception. Specifically, a two-way analysis of variance (hereafter, ANOVA) allowed assessment of the effects of ethnicity and gender as well as the interaction effects of combinations of values of ethnicity and gender. Analysis of Variance was performed on PPI and PRI.

There was a statistically significant difference between elderly African American and elderly Caucasian subjects in terms of the PPI ($F = 6.30$, $df = 1$, $p = .015$), establishing that these two ethnic groups actually differed in PPI (see Table 9). However, the respondents' gender did not significantly affect their PPI.

Table 9

ANOVA for Present Pain Intensity (PPI) by Ethnicity and Gender

Source	df	MS	F	P
Ethnicity	1	5.6266	6.30	0.015*
Gender	1	0.4437	0.50	0.484
Ethnicity x Gender	1	1.0147	1.14	0.291
Error	60	0.8934		

*Significant at .02

When a 2 x 2 ANOVA was performed on PRI, there was no statistically significant difference between the two ethnic groups (See Table 10).

Table 10

ANOVA for Pain Rating Index (PRI) by Ethnicity and Gender

Source	df	MS	F	P
Ethnicity	1	1.3	0.01	0.930
Gender	1	47.4	0.29	0.594
Ethnicity x Gender	1	12.8	0.08	0.782
Error	60	165.2		

Research Question #3. Next, the relationships between ethnicity, gender, PPI and PRI were assessed using Pearson's Product Moment Correlation. The intercorrelation coefficients among the variables [Ethnicity (E), Gender (G), Present Pain Intensity (PPI), and Pain Rating Index (PRI)] are reported in Table 11. Table 11 reveals that the only significant relationship was between Present Pain Intensity (PPI) and ethnicity ($r = .36$, $p = .01$), with a moderate correlation between PPI and ethnicity. All other variables show no significant relationship with ethnicity.

Table 11

Correlations for all Study Variables

	E	G	PPI	PRI
E				
G	-.03			
PPI	.36**	.08		
PRI	.00	-.07	-.22	

**Significant at the 0.01 level (2-tailed).

Summary/Conclusion

This chapter investigated the differences in pain perception between 32 elderly African Americans and 32 elderly Caucasians. Data were collected from these clients who responded to the McGill - Melzack Pain Questionnaire.

The statistical analysis was accomplished using (a) descriptive statistics, (b) 2X2 ANOVAs, and (c) Pearson's Product Moment Correlations. Overall, there was a statistically significant difference between the elderly African Americans and Caucasians in terms of PPI.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Throughout this study, the emphasis has been on three principal research questions: (1) What are the characteristics of pain perception described by elderly African American and elderly Caucasian subjects? (2) What are the differences in pain perception described by elderly African American and elderly Caucasian male and female subjects? and (3) What is the strength of the relationship between the present pain intensity (PPI) and the pain rating index (PRI) for each of the two ethnic groups? These questions formed the basis of this investigation because there were few studies on pain perception in elderly subjects, especially among elderly African Americans.

To answer the first question, words used to describe pain by elderly African American and elderly Caucasian subjects were tabulated. The study revealed that both groups chose Nagging most frequently to describe pain. Also, there were other words they chose to describe their pain. The three words chosen more often by elderly African American subjects were: Nagging, Mild, and Exhausting. The two words chosen the most by elderly Caucasian subjects were: Nagging and Tender.

In investigating the second question, it was found that there were differences in pain perception described by elderly African American and elderly Caucasian subjects.

Given the overwhelming empirical evidence that pain perception is also influenced by the gender of an individual (Crook, Rideout, & Browne, 1984; Davis, 1981; Edwards, Zeichner, Kuczmierczyk, & Bockowski, 1985; Keefe, Wilkins, Cook, Crisson, & Muhlbaier, 1986; Margolis, Zimny, Miller, & Taylor, 1984), a two-way ANOVA was carried out to examine the impact of both ethnicity and gender on pain perception. There was a statistically significant difference between elderly African American and elderly Caucasian subjects in terms of the present pain intensity (PPI) ($F = 6.30$, $df = 1$, $p = .015$), establishing that these two ethnic differed in PPI. However, the respondents' gender did not significantly affect their PPI.

In investigating the third question, the researcher found that there was a moderate correlation between present pain intensity (PPI) and ethnicity ($r = .36$). However, all other variables showed no significant relationship with ethnicity.

In terms of the Gate Control Pain Theory, which served as the theoretical basis for this study, the theory contributed in the conceptualization of what might have influenced pain perception beyond the physiological level. Even though these two groups of subjects had similar sensory, affective, evaluative, and miscellaneous input, they perceived their pain experience differently, especially in the area of present pain intensity.

The recognition of the psychological variables as an important function of pain, as asserted by the Gate Control Pain Theory, has been confirmed. However, it fails to explicitly delineate what and how psychological variables affect which activity with what results.

Discussion

One of the major findings of this study is that there were differences between these elderly African Americans and elderly Caucasians with regard to the kinds of words chosen to describe their pain. It was also discovered that more words were chosen by the elderly African Americans to describe their pain than by elderly Caucasians. Nonetheless, a comparison of research findings (in the literature) and speculations on pain perception among groups are often problematic because of different methods used to assess (measure) pain expressions, the social background variables, and the migration and immigration patterns within a society. In other words, in places where ethnic groups are less diverse or have become better assimilated, differences in pain perception and other health-related forms of perception and behavior may disappear.

Another argument developed here is that there are differences in pain perception described by elderly African American and elderly Caucasian subjects. In the area of present pain intensity (PPI), there was a significant difference between ethnic groups. These differences could

be attributed to the fact that elderly Caucasian subjects experienced more acute pains (53.1%) than elderly African American subjects (46.9%) as shown in Table 3. Another reason for these differences could be due to culture. For instance, Zborowski (1969) indicated that the meaning of pain and the response to it are culturally learned. Hence, the meaning of the pain between two ethnic groups may differ due to how they are culturally learned.

Other studies that supported this argument were studies by Chapman and Jones (1994) and Reid (1992). They also concluded that African Americans had a lower pain tolerance than Caucasians and that differences in pain sensitivity and tolerance were due to ethnic factors.

Recommendations

The findings of this study suggest some recommendations for nursing practice. On the basis of these implications, recommendations are offered for future research.

Recommendations for Nursing Practice

Although the results of this study are suggestive, they offer several implications for nursing practice. First, the differences and similarities in pain perception between elderly African American subjects and elderly Caucasian subjects shown in this study would be helpful in understanding and managing pain among these two ethnic groups. Since pain is a subjective experience and pain is the most frequent and compelling reason why people seek

assistance from health professionals, this self-reported pain experience in clinic settings would provide a most valid and valuable information about a person's pain perception.

Second, to better take care of their clients, the knowledge of pain perception in different cultural groups can be used by the nurses. The nurse learns that there are ways of responding to pain other than one's own. Also, the presence or absence of pain expressions does not necessarily indicate the same pain experience in people of different ethnic backgrounds. The knowledge of the various ethnic attitudes toward pain can assist the nurse in determining the significance of pain to the client. It is also recommended that when a nurse assesses an elderly individual who is unable to describe the pain, the nurse can use commonly selected words by asking whether the client has pain that is "Nagging," "Sharp," "Aching," "Tender," "Mild," or "Exhausting."

Moreover, professionals must be aware of their own attitudes and beliefs regarding aging and death, and how these views influence the delivery of care to elderly people. Because of the multitude and complexity of medical, psychological, and social problems affecting elderly clients, professionals must cooperate to provide a team approach in the care of these clients.

Recommendations for Nursing Education

Pain is only one aspect of culture and what people say about pain and how they explain it will depend on a variety of cultural and social factors. In order to understand pain in the cross-cultural context, one needs to understand the clients' beliefs, values, and practices reflecting their culture.

In discussing the relationship of culture to pain, two important points about viewing another in pain need to be considered. First, one's ability to sympathize with another person depends on an ability to identify imaginatively with the other person. Second, people are less concerned by hurt to individuals that they do not know. It is, therefore, important for nurses to be exposed to and become familiar with many different cultures early in their careers, preferably during their nursing education.

Looking at the trends of immigration in the last two decades, and considering the fact that nurses are working more directly with individuals from different cultures in hospitals and in clients' homes and communities, a different approach to nursing education and service is needed. It is recommended that transcultural nursing be an integral part of all undergraduate nursing education programs and nursing practice. Furthermore, it is strongly recommended that more humanities and social science courses, such as anthropology and sociology, be incorporated into nursing curricula in

order for nurses to have an open mind and properly understand clients' pain in the sociocultural context.

Recommendations for Future Research

This study suggests some directions for future pain research in nursing. Ethnicity should continue to be a concern for practitioners caring for clients in pain. Individuals with different ethnic backgrounds show differences in interpretation of pain. Differences in interpretation and expression of pain appear likely to continue as new groups become assimilated into the American mainstream. Effective treatment requires assessment of pain problems despite differences in the client's interpretation or expression of his or her problem. Ethnicity will remain a useful indicator in assessment of pain.

It is therefore recommended that this kind of research be replicated with the same measurement in different clinical settings to increase external validity. Further clinical research with more controls for demographic variations and with larger number of subjects are needed to improve our understanding of the cultural influences of pain perception.

The present study employed primarily closed-ended questions. As such, it might not have provided clients with an opportunity to elaborate upon various aspects of their experience. Nurses need to develop qualitative as well as quantitative studies of clients in pain with different

ethnic backgrounds. Thus, one can understand not only how much and what kind of pain they experience, but also explore the meaning of pain, medical care sought, and the behaviors and attitudes influencing the clients' pain.

Pain is a common problem among the elderly. Health care professionals need to understand the constellation of diseases, their interrelationships, and their influence on how older persons behave when they are ill.

To conclude, substantial research is needed to further our understanding of pain and its management among elderly persons. As the need for health systems for elderly people continues to grow, it is our most important obligation to provide comfort to the elderly and effectively control their pain.

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APPENDICES

APPENDIX A

DEMOGRAPHIC DATA

SUBJECT'S CLINIC NUMBER_____

DATE OF INTERVIEW_____

PATIENT'S AGE_____

ETHNIC GROUP_____

PRIMARY DIAGNOSIS_____

GENDER_____

MARITAL STATUS_____

EDUCATIONAL LEVEL_____

RELIGION_____

TYPE OF PAIN (Acute or Chronic)_____

ABLE TO READ AND WRITE_____

ABLE TO SPEAK AND UNDERSTAND ENGLISH_____

S P M S Q

PATIENT IDENTIFICATION

Initials ☐☐☐ | Date of Birth: month ☐☐ day ☐☐ year ☐☐ | code number ☐☐☐

PFEIFFER
SHORT PORTABLE MENTAL STATUS QUESTIONNAIRE

VISIT DATE ☐☐ ☐☐ ☐☐

INSTRUCTIONS: Ask the subject questions 1-10, record answer, and enter as "1" under appropriate column (correct/error). All responses, to be scored correct, must be given by subject without reference to calendar, newspaper, birth certificate or other memory aid.

	correct	error
1. WHAT IS THE DATE TODAY? Month _____ Day _____ Year _____ (Score correct only when the exact month, day and year are given correctly.)		
2. WHAT DAY OF THE WEEK IS IT? Day _____		
3. WHAT IS THE NAME OF THIS PLACE? _____ (Score correct if any correct description of the location is given: "My home", accurate name of town, city or name of residence, hospital, or institution (if subject is institutionalized) are all acceptable.)		
4. WHAT IS YOUR TELEPHONE NUMBER? (If none see 4A below) (Score correct when the correct number can be verified or when subject can report the same number as another point in questions.) # _____		
4A. WHAT IS YOUR STREET ADDRESS? (Ask only if subject does not have a telephone.) _____		
5. HOW OLD ARE YOU? AGE: _____ (Score correct when stated age corresponds to date of birth.)		
6. WHEN WERE YOU BORN? MONTH: _____ DAY: _____ YEAR: _____ (Score correct only when exact month, date and year are all given.)		
7. WHO IS PRESIDENT OF THE UNITED STATES NOW? (Only the last name of the President is required.) _____		
8. WHO WAS THE PRESIDENT BEFORE HIM? (Only the last name of previous President is required.) _____		
9. WHAT WAS YOUR MOTHERS MAIDEN NAME? _____ (Does not need to be verified. Score correct if a female name plus last name other than subject's is given.)		
10. SUBTRACT 3 FROM 20 AND KEEP SUBTRACTING 3 FROM EACH NEW NUMBER ALL THE WAY DOWN. ___ ___ ___ ___ ___ ___ ___ (The entire series must be performed correctly in order to be scored correct. Any error in series or unwillingness to attempt series to be scored as incorrect.)		
TOTAL NUMBER OF ERRORS		

* ADJUSTMENT FACTOR

SUBTRACT 1 FROM ERROR SCORE IF SUBJECT HAS HAD ONLY A GRADE SCHOOL EDUCATION -

ADD 1 TO ERROR SCORE IF SUBJECT HAS HAD EDUCATION BEYOND HIGH SCHOOL +

TOTAL ADJUSTED ERRORS

INFORMATION OBTAINED BY: DATE:

 Reference: E. Pfeiffer, A Short Portable Mental Status Questionnaire for the Assessment of Organic Brain Deficit in Elderly Patients. Journal of the American Geriatrics Society, Vol. 23: 433-441, 1975.

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September 11, 1996

Janice Marie Johnson-Umezulike, RN, MN
[redacted]

Dear Ms. Johnson-Umezulike:

I am writing to hereby grant you permission to use the Pfeiffer Short Portable Mental Status Questionnaire (SPMSQ) for a study to test elderly Black and Caucasian patients mental status prior to assessing their pain. A report of the journal article documenting the development of the SPMSQ is enclosed for your information. Also enclosed is a flier describing the availability of user pads of the SPMSQ, with a sample page of the pad.

I would greatly appreciate it if you would please share with us the results of any study or studies utilizing the Pfeiffer SPMSQ. I would also appreciate it if you would accurately cite the enclosed publication as the source of the SPMSQ.

[redacted]

Eric Pfeiffer, M.D.
Director

EP/kam

Enclosures

APPENDIX C

'atient's name: _____ Diagnosis. _____

'ain medication(s): Date: _____ Time: _____ a.m./p.m.

_____ Dosage. _____ Time Given. _____ a.m./p.m.

_____ Dosage. _____ Time Given: _____ a.m./p.m.

'RI: S _____ (groups 1-10) A _____ (groups 11-15) E _____ (group 16) M _____ (groups 17-20)

IWC: _____ (groups 1-20) Comments: _____

'PI: _____ PRI(T) _____

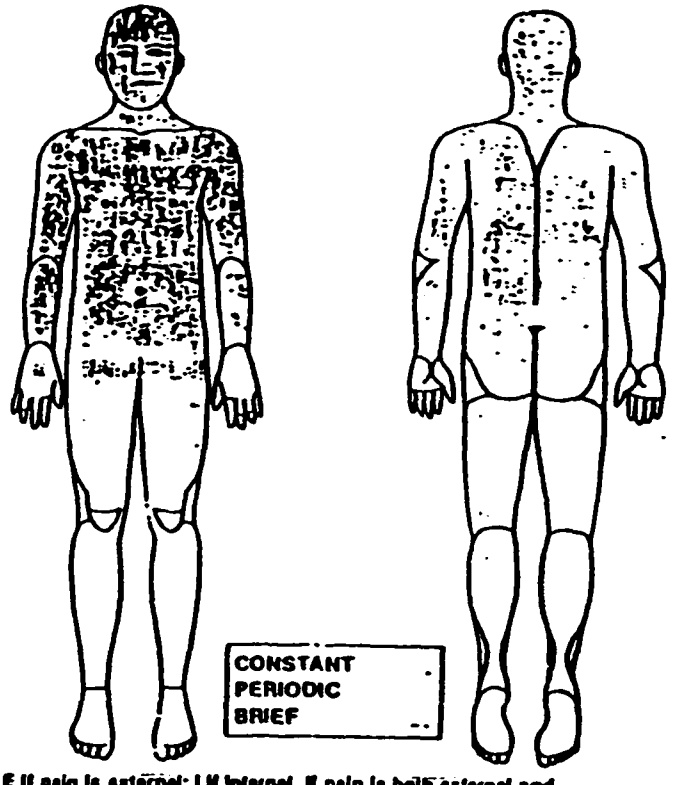
McGill-Melzack Pain Questionnaire

1	FLICKERING	_
	QUIVERING	_
	PULSING	_
	THROBBING	_
	BEATING	_
	POUNDING	_
2	JUMPING	_
	FLASHING	_
	SHOOTING	_
3	PRICKING	_
	BORING	_
	DRILLING	_
	STABBING	_
4	SHARP	_
	CUTTING	
	LACERATING	
5	PINCHING	
	PRESSING	_
	GNAWING	
	CRAMPING	
	CRUSHING	
6	TUGGING	
	PULLING	_
	WRENCHING	_
7	HOT	
	BURNING	
	SCALDING	
	SEARING	
8	TINGLING	
	ITCHY	
	SMARTING	_
	STINGING	
9	DULL	
	SORE	
	HURTING	
	ACHING	
	HEAVY	
0	TENDER	
	TAUT	
	RASPING	
	SPLITTING	

11	TIRING	_
	EXHAUSTING	_
12	SICKENING	_
	SUFFOCATING	_
13	FEARFUL	_
	FRIGHTFUL	_
	TERRIFYING	_
14	PUNISHING	_
	GRUELLING	_
	CRUEL	_
	VICIOUS	_
	KILLING	_
15	WRETCHED	_
	BLINDING	
16	ANNOYING	
	TROUBLESOME	
	MISERABLE	
	INTENSE	
	UNBEARABLE	
17	SPREADING	
	RADIATING	
	PENETRATING	
	PIERCING	
18	TIGHT	
	NUMB	
	DRAWING	
	SQUEEZING	
	TEARING	
19	COOL	
	COLD	
	FREEZING	
20	NAGGING	
	NAUSEATING	
	AGONIZING	
	DREADFUL	
	TORTURING	

PPI

1. MILD
2. DISCOMFORTING
3. DISTRESSING _
4. HORRIBLE _
5. EXCRUCIATING _



Mark E if pain is external; I if internal. If pain is both external and internal, mark B.

ACCOMPANYING SYMPTOMS

NAUSEA
HEADACHE
DIZZINESS
DROWSINESS
CONSTIPATION
DIARRHEA

COMMENTS:

SLEEP

GOOD
FITFUL
CAN'T SLEEP

COMMENTS:

FOOD INTAKE

GOOD
SOME
LITTLE
NONE

COMMENTS:

ACTIVITY

GOOD
SOME
LITTLE
NONE

COMMENTS:

McGill

Department of Psychology

Stewart Biological Sciences Building
1205 Dr. Penfield Avenue
Montreal, QC, Canada H3A 1B1

Département de psychologie

Pavillon Stewart des Sciences Biologiques
1205, avenue Dr. Penfield
Montréal, QC, Canada H3A 1B1

Tel : (514) 398-6100
Fax: (514) 398-4896

September 12, 1996

Janice Marie Johnson-Umezulike
[redacted]

Dear Ms. Umezulike:

It is a pleasure to give you permission to use the McGill Pain Questionnaire and the Pain Assessment Questionnaire. You can combine them any way you want. I suggest you just xerox all the copies you need in any format you consider appropriate for your particular research. You have my permission to do anything you need with these tools to carry out your research.

All the best of luck with your study.

Sincerely,

[redacted]

Ronald Melzack
Professor

HARRIS COUNTY HOSPITAL DISTRICT

DISTRICT ADMINISTRATION
8575 HOLLY HALL
HOUSTON, TEXAS 77054
746-8400

COMMUNITY HEALTH PROGRAM
2525 HOLLY HALL
HOUSTON, TEXAS 77054
746-8818

SERVICE CENTER
5656 KELLEY
HOUSTON, TEXAS 77026
636-5666

P.O. BOX 66769 - HOUSTON, TEXAS 77266

BEN TAUB GENERAL HOSP
1504 TAUB LOOP
HOUSTON, TEXAS 77030
793-2000

LYNDON B. JOHNSON GENERAL
5656 KELLEY
HOUSTON, TEXAS 77026
636-6000

QUENTIN MEASE COMMUNITY H
3501 N MACGREGOR WAY
HOUSTON, TEXAS 77004
942-3700

July 23, 1996

Janice Johnson-Umezulike
[redacted]

Dear Ms. Umezulike:

The Harris County Hospital District Research Committee has reviewed your proposal "Comparison of Pain Perception Between African American and Caucasian Elderly" and expects to be able to approve the study for implementation at the Baytown Community Health Center pending IRB approval and final review by Harris County Hospital District.

Sincerely,

[redacted]

Jean Dols, PhD, RNC
Chairperson
District Research
[redacted]

[redacted]

"Caring is what we do best"

HARRIS COUNTY HOSPITAL DISTRICT

DISTRICT ADMINISTRATION
2525 HOLLY HALL
HOUSTON, TEXAS 77054
746-6450

COMMUNITY HEALTH PROGRAM
2525 HOLLY HALL
HOUSTON, TEXAS 77054
746-6355

P.O. BOX 66769 - HOUSTON, TEXAS 77266

BEN TAUB GENERAL HOSPITAL
1504 TAUB LOOP
HOUSTON, TEXAS 77030
793-2000

LYNDON B. JOHNSON GENERAL HOSPITAL
5656 KELLEY
HOUSTON, TEXAS 77026
636-5000

QUENTIN MEASE COMMUNITY HOSPITAL
3601 W. MACGREGOR WAY
QUENTIN MEASE COMMUNITY HOSPITAL
3601 W. MACGREGOR WAY

April 23, 1997

Janice Johnson-Umezulike
[redacted]

Dear Ms. Umezulike:

The Harris County Hospital District Research Committee has reviewed your proposal, **"Comparison of Pain Perception Between African American and Caucasian Elderly"**. You may begin implementation of the study at the Baytown Community Health Center, your contact person is Irma Gonzales, Director, Baytown.

Sincerely,

[redacted]

Jean Dols. PhD, RNC
Chairperson
District Research
[redacted]
Houston, TX 77054

cc: I. Gonzales

Umezulikelt.doc#4A Jean

"Caring is what we do best"

LOUISIANA STATE UNIVERSITY
MEDICAL CENTER
433 Bolivar Street, Rm. 206
New Orleans, LA 70112-2223
Telephone: (504) 568-4060
Fax: (504) 568-8808

Institutional Review Board

MEMORANDUM

DATE: April 14, 1997

To: Mervell Bracewell, Dr. P.H.
Department of Nursing

From: LSUMC Institutional Review Board

RE: Institutional Review Board (IRB) Filing System

The LSUMC Institutional Review Board records, located in the Office of the Chancellor, are now filed by IRB identification numbers. When corresponding about an IRB Project, it is necessary to include both the title of the project and the IRB Identification Number. The study referenced below has received IRB approval and the study may now commence.

Identification Number 3470 has been issued for the project entitled:

A Comparison of Pain Perception Between Elderly African Americans and Caucasians

Please retain this identification number and refer to it when corresponding about this project.

If you have any questions, please call me at [redacted]

VITAE

JANICE MARIE JOHNSON-UMEZULIKE, RN, MN
[redacted]

EDUCATION BACKGROUND

Doctoral Candidate	Louisiana State University Medical Center, School of Nursing New Orleans, Louisiana
M.N. (Masters in Nursing)	Louisiana State University Medical Center New Orleans, Louisiana December 1989
B.S.N. (Bachelor of Science in Nursing)	McNeese State University Lake Charles, Louisiana May 1984

PROFESSIONAL EXPERIENCE

August 22, 1994 - Present	Nursing Faculty-Associate Degree Nursing Program (Medical/Surgical Area) Lee College Baytown, Texas
December 1994 - October 1995	Per-Visit RN Care One Home Health Agency Houston, Texas
January 6, 1992- July 29, 1994	Assistant Professor - Medical/Surgical Area Southern University School of Nursing Baccalaureate Nursing Degree Program Baton Rouge, Louisiana
September 23, 1992- July 29,1994	Staff Development Specialist, Global Management, Home Health Agency, Baton Rouge, Plaquemine, and Gonzales, Louisiana. Provide updated inservices to staff, consisting of LPN's, RN's and nurse aides.

March 27, 1991- July 29, 1994	Staff PRN Nurse, Orthopedics/Pediatrics, E.R., Medical Center of Baton Rouge Baton Rouge, Louisiana Responsible for coordination of care for 5-8 patients.
October 29, 1990 - October 9, 1991	Instructor - Medical/Surgical area Diploma Nursing Program Baton Rouge General Medical Center School of Nursing Baton Rouge, Louisiana
January 8, 1990 - October 29, 1990	Clinical Nurse Specialist Orthopedics/Neurology Baton Rouge General Medical Center Baton Rouge, Louisiana
	-Adjunct Clinical Nursing Instructor Baton Rouge General Medical Center School of Nursing Baton Rouge, Louisiana
April 1986- December 1989	Staff and Charge Nurse - Orthopedics Our Lady of the Lake Regional Medical Center Baton Rouge, Louisiana

PUBLICATIONS

March 1992	Johnson, J. M., Meeker, B., & Rodriguez, L. (1992, March). A Comprehensive Analysis of Preoperative Patient Education. Today's O.R. Nurse, 11-18.

Spring/Summer 1995

Johnson-Umezulike, J.M. (1995, Spring/Summer). Controlling the Pain: A Study of the Effects of Acute Pain Management Teaching on the Postoperative Pain Perception of Elderly African American Patients. The Nursing and Allied Health Journal for Minorities, 3(1), 22-25, 38.

LOUISIANA STATE UNIVERSITY MEDICAL CENTER IN NEW ORLEANS
INSTITUTIONAL REVIEW BOARD (IRB)
APPLICATION FORM

»»»INSTRUCTIONS ««««

COMPLETE THIS APPLICATION AND SUBMIT THE FOLLOWING TO THE IRB OFFICE, RESOURCE CENTER, 433 BOLIVAR ST., NEW ORLEANS, LA 70112: AN ORIGINAL AND ONE COPY OF THE APPLICATION FORM, TWO COPIES EACH OF AN EXPANDED PROTOCOL DESCRIBING THE RESEARCH PROJECT AND THE CONSENT FORM. DO NOT SUBMIT DOCUMENTS PRINTED ON BOTH SIDES, WITH THE EXCEPTION OF THE FULL PROTOCOL. COMPLETE ALL SECTIONS OF THE IRB FORM. IF ANY SECTION IS NOT APPLICABLE TO YOUR PROJECT MARK (N/A). IRB MEETINGS ARE HELD ON THE THIRD (3RD) WEDNESDAY OF EVERY MONTH. THE DEADLINE FOR RECEIPT OF APPLICATIONS IN THE IRB OFFICE IS THE LAST WORKING DAY OF THE MONTH PRIOR TO THE NEXT MONTH'S MEETING WITH NO EXCEPTIONS! ONLY TYPED APPLICATIONS WILL BE ACCEPTED. IF YOU HAVE QUESTIONS CALL 568-4060.

1. Project Title **A Comparison of Pain Perception Between Elderly African Americans and Caucasians**

2a. LSU Investigator's Name **Janice Marie Johnson-Umezulike**	2b. Degree **M.N.**	2c. Social Secur[redacted]: [redacted]
3b. Faculty Advisor (if applicable) **Dr. Mervell Bracewell**	3b. Degree **Dr. PH**	3c. Social Security No.: [redacted]

4. School **Louisiana State University Medical Center** **School of Nursing**	5. Department **Graduate Nursing Program**
6. Room and Building **School of Nursing Building, Room 4C6**	7. Phone(s) [redacted]

8. Performance Site(s) [eg. CHNO, Hotel Dieu, LSU Clinics, etc.]
Baytown Health Clinic, Baytown, Texas

9. Subject Category(s):

_____ Healthy Adult
__X__ Physically Impaired
_____ Others Incapable of Giving Informed Consent
_____ Emotionally Impaired
_____ Minors

10. If you feel your study should be either exempted or expedited, please designate the appropriate categories as described on page 4 of the application packet.

1,2,3,4 46.101 b or; _____ 46.110

11. INVESTIGATOR ASSURANCE: I agree to obtain informed consent of subjects who are to participate in this project; to report to the IRB any unanticipated adverse effects on subjects which become apparent as a result of the study and any corrective action taken; to obtain prior approval from the IRB before amending or altering the scope of the project, or implementing changes in the approved consent form; to maintain documentation of consent forms and progress reports as required by institutional policy and to follow guidelines of the IRB regarding child assent.

_____ _____
Signature of Principal Investigator Date

12a. Co-Investigator(s) **Janice Marie Johnson-Umezulike**	12b. Degree(s) **M.N.**	[redacted]	12d. Signature(s) _____ _____ _____ _____

13a. **Dr. Barbara C. Donlon** Department Head	13b. _____ Department Head's Signature

LOUISIANA STATE UNIVERSITY MEDICAL CENTER IN NEW ORLEANS
INSTITUTIONAL REVIEW BOARD (IRB)
APPLICATION FORM

14. Project Summary: Explanation in nonmedical terminology including rationale for the study, procedures, previous experience with treatment or test, risks to subjects, safeguards, alternatives, etc.

The purpose of this research study is to examine and compare the characteristics of pain perception between elderly African American and Caucasians.

Based on the review of literature, the majority of studies in relation to pain and ethnicity have been directed toward identifying difference in pain responses among ethnic groups. These efforts have yielded conflicting findings in the identification of differences between ethnic groups. In addition, there has been no conclusive delineation of specific pain perceptions for any ethnic group. Thus, while pain perceptions may be universal, meanings and attitudes associated with pain, which determine if and when these behaviors are expressed, may be different across ethnic groups. Therefore, the objective of this research study is to compare the characteristics of pain perception between elderly African American and Caucasian subjects. Knowledge of ethnic meanings of pain is an important component in the design of culturally competent and relevant nursing care for people experiencing pain.

A comparative, descriptive survey research design will be used in this study. Sixty-four subjects will be selected according to the following study criteria: (A) African-Americans or Caucasians; (B) over 60 years old; (C) able to read, write, speak and understand English; (D) experience frequent short term pain; (E) able to recall pain perception within the last six months; and (F) able to score 0 - 2 errors on The Short Portable Mental Status Questionnaire. The study will consist of administering the Short Portable Mental Status Questionnaire (SPMSQ) for screening purposes and the McGill-Melzack Pain Questionnaire individually to all subjects who meet the criteria to be in the study.

The subjects (assessed and treated at the health clinic), who meet the requirements outlined above (under sample selection), will be asked to participate in the study. The subjects will be informed about the study and will be asked to sign a consent form prior to participation. The Short Portable Mental Status Questionnaire will be administered individually to all subjects who volunteer to be in the study. A Demographic Data Form will be used to collect demographic data from the participating subjects' clinic record with permission from the agency, such as the subject's age, ethnic group, diagnosis, gender, marital status, educational level, and religion. Demographic information will be analyzed for correlations between response patterns on the McGill-Melzack Pain Questionnaire. Subjects participating in the study will be given the McGill-Melzack Pain Questionnaire and the Short Portable Mental Status Questionnaire. Any information not clear to the subjects participating in the study will be explained by the researcher.

Descriptive statistics, pooled t-test, 2x2 ANOVA and Pearson's Product Moment Correlation will be utilized to analyze the subjects' responses on the questionnaires.

This research study will involve human subjects. Confidentiality will be maintained at all times. The subjects may refuse to participate/withdraw from the study at any time without jeopardizing their medical treatment now or in the future.

The subjects will be informed that participation in the study involves no known risks.

The researcher has 12 years of experience in nursing and caring for adults and elderly patients.

LOUISIANA STATE UNIVERSITY MEDICAL CENTER IN NEW ORLEANS

CONSENT FORM

1. STUDY TITLE: A Comparison of Pain Perception Between Elderly African Americans and Caucasians

2. PERFORMANCE SITES: Baytown Health Clinic, Baytown, Texas

3. NAMES AND TELEPHONE NUMBERS OF INVESTIGATORS:

Louisiana State University
Medical Center School of Nursing Graduate Program
New Orleans, Louisiana

Dr. Mervell Bracewell
[redacted]

Janice Marie Johnson-Umezulike
[redacted]

4. PURPOSE OF THE STUDY:

This is a research study. The purpose of this research study is to describe and compare the characteristics of pain perception between elderly African American subjects and elderly Caucasian subjects. The subjects (clients visiting the health clinic) will complete a questionnaire about their pain: type and severity. The study is designed to investigate pain perception.

5. SUBJECT INCLUSION CRITERIA:

The subjects who will be chosen to be in this study will be:

A. African-Americans or Caucasians.

B. Over 60 years old.

C. Able to read, write, speak, and understand English.

D. Experiencing frequent short term pain.

E. Able to recall pain perception within the last six months.

F. Able to score 0 - 2 errors on the Short Portable Mental Status Questionnaire.

6. SUBJECT EXCLUSION CRITERIA:

Subjects will be excluded if they:

A. Are not oriented to time and place.

B. Have a diagnosis of schizophrenia or depression.

C. Fail to complete the questionnaire for any reason.

D. Have a history of addiction to any medication.

7. DESCRIPTION OF THE STUDY:

The subjects experiencing short term pain will be asked to complete a questionnaire about their pain. The questionnaire to be completed by the subjects is the McGill-Melzack Pain Questionnaire. This will take 15 - 30 minutes to complete. The subjects will also be asked to provide background information about themselves such as their age, diagnosis, marital status, educational level, and religion. Approximately 64 subjects will be asked to participate in this research study.

8. BENEFITS TO SUBJECT:

There are no benefits to subjects for participating in the study.

9. RISKS TO SUBJECTS:

There are no known risks to participating in this study. Participation in the study may involve unforseen risks.

10. ALTERNATIVES TO PARTICIPATION IN THE STUDY:

The subject could decide not to participate.

11. SUBJECT REMOVAL:

Subjects will be removed from this study if they fail to complete the questionnaire.

12. SUBJECT'S RIGHT TO REFUSE TO PARTICIPATE AND RIGHT TO WITHDRAW:

The subject understands that participation in this research study is voluntary. There are no penalties for failure to volunteer.

The study subject may refuse to participate or withdraw from the study at any time without jeopardizing, in any way, their medical treatment in the institution in the present or future. Should significant new findings develop during the course of the research which may relate to the subject's willingness to continue

participation, that information will be provided to the subject.

13. SUBJECTS RIGHT TO PRIVACY:

The results of the study will be released to Louisiana State University Medical Center School of Nursing Graduate Program. The results of this study may be published in nursing journals and presented at workshops. The privacy of subjects will be protected by publishing the results as a group, and individual subjects will not be identified in any way

14. RELEASE OF INFORMATION:

The information will be available only to the Department of Graduate Nursing at Louisiana State University Medical Center School of Nursing.

15. FINANCIAL INFORMATION:

Participation in this study will not result in any charges. The subjects will not be paid for participating in this study.

16. SIGNATURES:

The study has been discussed with me and all my questions have been answered. I understand that additional questions regarding the study should be directed to investigators listed on page 1 of this

consent form. I understand that if I have questions about subjects' rights, or other concerns, I can contact the Chancellor of LSU Medical Center, at [redacted]
I agree with the terms above and acknowledge I have been given a copy of the consent form.

Signature of Subject	Date
Signature of Witness	Date