Chronic Pain: Nurse Practitioners' Attitudes and Interventions in Primary Care

Brenda Kay Thornton Coggins

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CHRONIC PAIN: NURSE PRACTITIONERS' ATTITUDES AND INTERVENTIONS IN PRIMARY CARE

by

Brenda Kay Thornton Coggins

A Thesis
Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Nursing in the Division of Nursing Mississippi University for Women

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CHRONIC PAIN: NURSE PRACTITIONERS' ATTITUDES AND INTERVENTIONS IN PRIMARY CARE

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Abstract

Chronic pain is a widespread problem affecting millions of people. Research has shown that attitudes and beliefs toward pain influence actions and reactions of both the person experiencing pain and the health care provider. Research has also shown that some health care providers have negative attitudes and erroneous beliefs about pain. This descriptive study was undertaken to explore and describe attitudes of nurse practitioners in primary care settings in Mississippi toward chronic pain and their subsequent interventions for chronic pain. Travelbee's Human-to-Human Model was utilized as the theoretical framework for this study. The two research questions asked in this study were: (1) what are nurse practitioners' attitudes toward chronic pain, and (2) what are nurse practitioners' interventions for chronic pain? A convenience sample of N = 161 Family Nurse Practitioners, Adult Nurse Practitioners, and Gerontological Nurse Practitioners registered with the Mississippi Board of Nursing was surveyed using a researcher designed questionnaire, the Coggins Chronic Pain Questionnaire (CCPQ). Descriptive statistics describing current attitudes of nurse practitioners toward chronic pain and interventions for chronic pain were generated. Demographic data regarding age, gender, area of certification, site of practice, and personal pain history of the participants were obtained. Responses to the
instrument were analyzed using frequency distributions and percentages. Varying attitudes toward chronic pain were revealed. As chronic pain has been noted to be a widespread problem, nurse practitioners must examine their personal beliefs and attitudes toward chronic pain and their clients who complain of chronic pain in order to identify possible barriers to treatment. This study did not look at patient satisfaction or outcomes. Further research is recommended examining the relationship of the variables of patient satisfaction, patient outcomes, and patient perceptions of caring with nurse practitioner attitudes.
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Chapter I
The Research problem

Pain is a sensation every human being has experienced. Pain is also the most common complaint of all persons seeking health care (Gilliland, 1993). As the costs of medical care in the United States continue to skyrocket, the issue of chronic pain and its management has come under the close scrutiny of those responsible for the distribution of health care dollars. Simultaneously, the issues surrounding nurse practitioner standards of care, prescriptive privileges, hospital admitting status and referral patterns have emerged (American Nurses Publishing, 1995). As nurse practitioners shoulder responsibility for more and more patient management in primary, secondary, and tertiary care sites, these providers will be assuming critical roles in pain management, both of the acute and chronic nature.

Establishment of the Problem

Chronic pain may be defined as any pain that is not self-limiting and persists for longer than six months (Anderson, Anderson, & Glanze, 1994; Gilliland, 1993; McCaffery & Beebe, 1989; Wallace, 1992). Chronic pain is a widespread problem affecting many people, which is both difficult and costly to treat. Owens and Ehrenreich (1991)
note that millions of dollars are spent for treatment of chronic pain annually. According to Slater and Good (1991) 50 million people in the United States are partially or totally disabled by chronic pain and account for over 40 billion dollars in health services, drugs, compensation payments, and lost work days. Sullivan, Turner, and Romano (1991) report that almost three billion days of work are lost yearly due to back pain, joint pain, and headache pain. No other class of health problems causes this level of disability. The focus of this study was to extend this research to include nurse practitioners who diagnose and treat chronic pain.

Large numbers of people seen frequently in emergency rooms and clinics are experiencing chronic pain. Dickerman (1994) suggests that there is a chronic pain personality and that these patients use pain for secondary gains of obtaining pain medication, disability payments, or financial settlements. These patients also use pain to rationalize the need for supportive care and attention. Although there are those who misuse the system, many do have legitimate complaints. Due to the chronicity of their problem, they are a tremendous drain on the health care system in terms of disability and insurance reimbursements (Chase, 1992).

Treatment interventions vary from no treatment to undertreatment or overtreatment. Pain clinics offer some successful treatment, but this treatment is very costly (Wheeler, 1995). Other interventions range from the use of
pharmacological agents, physical therapy, exercise, and applications of heat and cold to various alternative interventions such as music therapy, touch therapy, and relaxation techniques (Gilliland, 1993; McCaffery & Beebe, 1989; Owens & Ehrenreich, 1991; Wheeler, 1995).

Research has shown that attitudes and beliefs toward pain influence actions and reactions of both the person experiencing pain and the health care provider. Steeves, Kahn, and Benoliel (1990) found that nurses' responses to patients' pain and suffering were a form of suffering also, separate and different from that the patient experienced, but suffering nonetheless. Research has also shown that many health care providers have erroneous beliefs and/or negative attitudes about pain (McCaffery & Beebe, 1989; Wakefield, 1995; Weissman & Dahl, 1990). Saylor (1990) stresses the need for health care providers to have a thorough understanding of the potential for bias and possible stigmatizing responses to patients with chronic problems as this type of response reduces the potential for effective intervention. McCaffery and Beebe (1989) report that many members of the health team have misconceptions about assessment of patients who indicate they have pain. One misconception is that when a person reports pain relief from a placebo it may be concluded that he is either a malingerer, there is no physical reason for his pain, or he is easily duped or is neurotic. Culture has also been identified as a factor that influences a person's reaction
to and expression of pain (Villarruel & de Montellano, 1992). Nurse practitioners in primary care settings are treating clients with chronic pain. In Mississippi, the nurse practitioner follows written management protocols and does not have prescriptive rights for scheduled analgesics. There is a wide range of treatment options available for the practitioner, yet little is known about pain management preferences at large and no studies have been done of this nature regarding nurse practitioners. Research has shown that one's culture and beliefs affect attitudes about pain, which in turn affect one's actions and reactions to pain (Strong, Ashton, & Chant, 1992; Travelbee, 1971; Williams & Thorn, 1989). As such, personal attitudes toward chronic pain may possibly affect nurse practitioner choices of management modalities. Yet little, if any, empirical data are available regarding how nurse practitioners manage chronic pain, much less what their attitudes are toward chronic pain. Therefore, the focus of this study, the attitudes of nurse practitioners in primary care settings in Mississippi toward chronic pain and their interventions for chronic pain, emerged.

Significance to Nursing

According to Donnelly (1993), nurse practitioners play a vital role by understanding, negotiating, and incorporating the patient/family perspective of chronic illness into plans of care, research, and theory development. Nurses, especially nurse practitioners, should
be cognizant of personal beliefs and attitudes as these shape responses to and care for patients (Saylor, 1990). Nurse practitioners should incorporate theories such as Travelbee's (1971) that emphasize the importance of attitudes and beliefs and awareness of personal biases that may hinder care. McCaffery and Beebe (1989) assert that although personal values and intuition may serve us well in our social lives, they do not constitute a professional approach to the patient with pain. Putting aside personal values so that the highest quality of care can be provided is not always easy. Nursing schools should emphasize the use of theorists' models that stress the importance of attitudes and beliefs in planning patient care.

Theoretical Framework

Travelbee's Human-to-Human Relationship model (1971) was used as the theoretical framework for this study. The model focuses on the relationship between the nurse and the patient, as each moves through stages of communication and interaction until rapport is established. The nurse assists the individual, the family, or the community to prevent or to cope with the experience of illness or suffering, and to find meaning in the experience if necessary (Travelbee, 1971).

The major nursing paradigms addressed by Travelbee (1971) are as follows: "Nursing" is a profession that helps an individual, a family, or a community to prevent or cope with illness. "Person" is a unique human being who is
continuously evolving and changing. "Health" is the absence of disability or disease, or how a person perceives health. "Environment" is not specifically defined but can be inferred to include life experiences the person encounters including suffering, hope, pain, and illness.

According to Travelbee (1971), nursing achieves its purpose through human-to-human relationships, utilizing both a disciplined intellectual approach and therapeutic use of self. Two major factors in the delivery of nursing care are the nurse's beliefs and values. These factors then influence the way patients are perceived. A patient's treatment is the direct result of the nurse's attitude toward that patient, bearing out Travelbee's assertion that "as a nurse thinks and believes so will she act" (p. 32).

Travelbee (1971) also asserted that "the term 'patient' is a stereotype and a category. There are no patients . . . only individual human beings in need of the care, services, and assistance of other human beings." (p. 32). The person's beliefs, values, culture, and the nature of the illness affect personal response to the illness, to the nurse, and to any subsequent treatment plan.

According to Travelbee (1971), the human-to-human relationship is an experience or series of experiences shared simultaneously by the nurse and by the person being cared for. The purpose of these experiences is to meet the nursing needs of the person or family. The human to human relationship is established when the nurse and the person
being cared for have, through communication, passed through the phases required to establish rapport. These phases defined by Travelbee are: the original encounter, emerging identities, empathy, and sympathy.

The original encounter begins the phases of establishing a human-to-human relationship. During this phase, the nurse and patient initially perceive each other in a stereotypical manner. The goal for this phase is for each to recognize the other as a unique human being. This recognition leads to the phase of emerging identities, during which the patient and the nurse begin to perceive how the other thinks and feels. At this point, a bond is established. The nurse practitioner who is able to form this bond with the patient can be more effective when treatment goals and plans are formed. Barriers to this phase are the inability of the nurse to perceive the patient as a human being rather than a category of illness, and/or the inability of the nurse to be consciously aware of how he or she is actually perceiving the patient (Travelbee, 1971).

The phase of emerging identities leads to empathy. Empathy is a conscious process characterized by the ability to comprehend the psychological state of another and thus predict the behavior of the other person. Empathy, however, is a neutral process as it does not imply that the individual take any action based on the comprehension gained. However, sympathy goes beyond empathy and occurs when the nurse feels warmth and caring and then desires to
assist the other person. Helpful nursing action is the outcome of sympathy (Travelbee, 1971).

When the nurse and the patient have progressed through the preceding phases and have established a human-to-human relationship, rapport is achieved. Rapport is characterized by nursing actions that alleviate distress (Travelbee, 1971).

Travelbee's theory can be used in any nursing encounter with individuals, families, or communities (Marriner-Tomey, 1994). Travelbee's model stresses the interrelatedness of the patient's and the nurse's beliefs and perceptions in setting mutual goals to meet the needs of the patient (Travelbee, 1971). Because of this emphasis on beliefs and attitudes, it is an especially appropriate framework on which to base this current study in which nurse practitioners' attitudes toward chronic pain are being assessed. The sympathy and empathy factors are important not only in the nurse practitioners' attitudes but also in the consideration of the many avenues of management which may be utilized with chronic pain. The concept of the nurse/patient growing and emerging relationship, the idea of the nurse eventually comprehending how the patient feels, and thus formulating more effective treatment modalities is of particular importance in nurse practitioner management of a subjective symptom such as pain. Because of these ties to the model, Travelbee's Human-to-Human Relationship Model was chosen as the theoretical framework for this study.
**Assumptions**

There are several assumptions which served as principles upon which this research study was based:

1. The human-to-human relationship between a nurse and a patient is established for the purpose of meeting the needs of the patient (Travelbee, 1971).

2. Nurse practitioners have attitudes about chronic pain that can be quantified.

3. The attitudes of nurse practitioners have an impact on nursing management decisions.

4. Nurse practitioners in Mississippi manage chronic pain according to legal protocol.

5. There are a variety of management techniques for chronic pain which are available for nurse practitioners.

**Statement of the Problem**

What the caregiver believes to be true about pain and suffering will affect how this individual approaches care planning and pain management (Greipp, 1992). Therefore the problem addressed in this study was the attitudes of nurse practitioners in primary care toward chronic pain, and types of nurse practitioner interventions for clients experiencing chronic pain.

**Purpose of the Study**

Nurse practitioners in primary care settings are treating clients with chronic pain. No research has been found that addresses the issue of nurse practitioners' attitudes toward chronic pain, and there is little empirical
data about what treatment interventions are utilized by nurse practitioners. The purpose of this study was to explore and describe attitudes of nurse practitioners in primary care settings toward chronic pain and their interventions for chronic pain.

Research Questions

The research questions that guided this study are:

1. What are nurse practitioners' attitudes toward chronic pain?
2. What are nurse practitioners' interventions for chronic pain?

Definition of Terms

The terms used in this study were defined as follows:

1. **Chronic pain:**
   a) Theoretical definition: Chronic pain is any pain that is not self-limiting and persists for longer than six months (McCaffery & Beebe, 1989).
   b) Operational definition: Personal definition of nurse practitioners who responded to the Coggins Chronic Pain Questionnaire (CCPQ, see Appendix A).

2. **Nurse practitioners:**
   a) Theoretical definition: "Nurse practitioners were registered nurses prepared through a formal, organized educational program that meets guidelines established by the profession" (American Nurses Publishing. 1995, p. 3) and whose functional role is that of an Adult, Gerontologic, or Family Nurse Practitioner by the state of Mississippi.
b) Operational definition: For the purposes of this study, the nurse practitioners were any registered nurses whose names appeared on the current Mississippi Board of Nursing list of certified Adult, Family, or Gerontologic Nurse Practitioners.

3. Attitudes:
   a) Theoretical definition: "a manner of acting, feeling, or thinking that shows one's disposition, opinion, or mental set" (Neufeldt, 1988, p. 88).
   b) Operational definition: Responses of nurse practitioners on the CCPQ to the attitudes portion of the instrument.

4. Nurse practitioner interventions:
   a) Theoretical definition:
   Measures to promote health, protect against disease, treat illness in its earliest stages, manage chronic illness, and limit disability by providing prompt treatment...direct nursing care, prescription of medications or other therapies, and consultation with or referral to other health care providers (American Nurses Publishing, 1995, p.7).
   b) Operational definition: Nurse practitioner interventions are responses of nurse practitioners on the CCPQ to the interventions portion of the instrument.

Summary
Chronic pain is a difficult, costly problem that affects millions of people (Owens & Ehrenreich, 1991; Slater
& Good, 1991). Previous research has shown that many health care providers have erroneous and/or negative attitudes toward pain and patients experiencing pain (Wakefield, 1995; Weissman & Dahl, 1990). Travelbee (1971), among others, asserts that a patient's treatment is the direct result of the caregiver's attitude toward that patient. These findings, coupled with the growing importance of the work of the nurse practitioner, gave weight to the need for identifying the attitudes of nurse practitioners in primary care toward chronic pain.
Chapter II

Review of the Literature

A review of the literature concerning chronic pain revealed a wealth of information on pain and pain management. Numerous studies have been done examining patients' beliefs and attitudes toward pain (Morse, Bottorff, & Hutchinson, 1995; Pellino & Oberst, 1992; Williams & Thorn, 1989; Yates, Dewar, & Fentiman, 1995). No research was found regarding attitudes of nurse practitioners toward chronic pain. However, studies were found in which health care providers' beliefs and attitudes toward pain and clients experiencing pain were explored, and will be reviewed. Travelbee's Human-to-Human Relationship model stresses the interrelatedness of the patient's and the nurse's beliefs and perceptions in setting mutual goals to meet the needs of the patient (Travelbee, 1971). This chapter provides a basis for the current study regarding nurse practitioners' perceptions and beliefs toward pain and interventions for chronic pain.

Wakefield (1995) examined perceptions and beliefs of nurses regarding pain and pain management. The purpose of the study was to determine the pain management strategies the practitioners felt were appropriate within an acute
general surgical setting.

The researcher conducted a series of one hour interviews with five nurses who worked on general medical surgical wards. During the interviews, the nurses were encouraged to discuss their ideas regarding how postoperative pain should be managed in order to render it more effective as an aspect of patient care.

Wakefield (1995) explored these ideas, in Aristotelian and Cartesian terms, revealing some of the attitudes and beliefs of the nurses towards current pain management practices. Aristotelian concepts were utilized to reveal that the nurses gained their knowledge regarding pain from a process of deductive reasoning. Cartesian concepts identified adoption of cause and effect ideologies, in which pain must have an identifiable cause to be treated as a real phenomenon. When adopting such principles, it was assumed that pain could, and should, exist only in the presence of an identifiable cause. For example, if the patient had undergone major surgery, pain was recognized as being inevitable, but only for a prescribed amount of time.

Pain medication was frequently regarded as adequate to suppress pain for the pre-ordained 4-hour period that health care providers are accustomed to prescribing. If pain occurred before the chronologically determined fourth hour, the whole experience was dismissed as a deception or human error (the patient's). In this context, the staff perceived pain only as a psychological aspiration of the individual's
imagination. The concept that patients exhibited public pain behaviors as an immoral means of securing additional doses of pain medication was also assumed. Both immoral and imaginary status of the pain experiences were appraised by the nursing staff as imperfect pain responses styles. Therefore, pain brought to their attention in either context were regarded as an "untruth" which was frequently disregarded and treated in the same manner as hallucinatory behavior might be in psychiatry.

Several nurses had erroneous beliefs regarding pain medication. When pain was recognized and acknowledged, pain medication was often reported to be withheld as a result of fear of initiation of addiction. Injectable medication was felt to be more addictive than PO medications. The oral route was advocated as early as possible post surgery in order to decrease the amount of injectable medication taken.

Wakefield (1995) also noted how the nurses' knowledge regarding pain and pain management influenced the way in which they managed postoperative pain. The higher the level of knowledge, the more intuitive regarding pain assessment, and creative the nurse was in terms of pain management. The researcher concluded that the staff interviewed had adhered to empirical rote response features, although each patient required an individualized treatment process more in keeping with the creative intuitive response feature.

Radical changes in philosophy are needed. Wakefield (1995) suggests that pain and pain management should be
given a greater emphasis in the curricula of physicians' and nurses' initial educational programs.

While the current study focuses on beliefs and attitudes toward chronic pain, Wakefield's (1995) findings emphasize the negative attitudes and erroneous beliefs held by many health care providers toward pain.

Research has shown that cancer pain is frequently undertreated. Cancer victims often suffer needlessly because physicians have inadequate assessment and treatment skills and are overly concerned about addiction and side effects of opioid analgesics. Physicians are also afraid they will come under regulatory scrutiny if they prescribe opiates too frequently. Weissman and Dahl (1990) studied the attitudes of first-year medical students regarding cancer pain and its management.

The purpose of the study was to identify negative attitudes about pain held by students prior to entry into medical school. A survey design utilizing a questionnaire was employed to gather data. The sample consisted of 317 entering medical students at the University of Wisconsin-Madison and the Medical College of Wisconsin for the 1988 to 1989 school year. During an orientation session, the students were given a questionnaire consisting of eleven multiple choice questions that assessed attitudes about cancer pain and its treatment and eight questions that provided demographic data.

Most of the students appropriately believed that cancer
patients frequently have pain that is of long duration (79%) and that the patient is the best judge of the severity of the pain (83%). The researchers detected several erroneous and negative attitudes of the students about cancer pain and its treatment. Negative attitudes expressed included the belief that drug doses should be dependent on prognosis. Forty-four percent of the students felt that maximal drug doses should be reserved for patients with a prognosis of three months or less. Fifty-seven percent of students believed wrongly that dependence or addiction to narcotic analgesics occurs frequently or very frequently. Only 20% of the students correctly thought increasing pain was due to disease progression rather than drug tolerance. A lack of appreciation for the fact that cancer pain is often undertreated was found. Only 34% of the students felt cancer patients were undermedicated. The demographic characteristic that most affected attitude was age. Older students had more positive attitudes (p=0.03) than younger students. Weissman and Dahl (1990) concluded that the negative attitudes toward cancer pain and treatment identified indicated a need to change medical school curricula to include courses that emphasize cancer pain and its treatment.

The current study was similar to Weissman and Dahl (1990) in that a self-report questionnaire dealing with attitudes and beliefs about pain was utilized. The subjects of the current study, however, were nurse practitioners in
primary care rather than students.

Camp and O'Sullivan (1987) conducted a study which compared patients' descriptions of pain and nurses' documentation of pain assessments. The purpose of the study was to determine the degree of congruence (general agreement) between pain as described by medical, surgical, and oncology patients, and the attendant registered nurses' documentation of the pain assessment. The researchers hypothesized that (1) descriptions of pain based on eight categories of pain assessment (location, quality, pattern, intensity of pain, what increases pain, verbal and non-verbal response, and related symptoms of pain) would differ for medical, surgical, and oncology patients; that (2) across types of patients, there would be no difference in the percentage of documentation and congruent documentation of pain assessment found in the nursing notes; that (3) for each type of patient, the nurse would document less than 50% of the patient's description of pain to the researcher; and (4) that the nurse documented description of pain would be less than 50% congruent with the patient's description to the researcher.

The Camp and O'Sullivan (1987) study was conducted on five oncology, seven medical, and seven surgical units in a large teaching hospital in a metropolitan area in the southeastern United States. The sample was a convenience sample of 84 patient-nurse dyads which consisted of 30 oncology patients and nurses, 30 surgical patients and
nurses, and 24 medical patients and nurses. No dyad was included more than one time. All nurses were registered nurses, the majority were baccalaureate prepared and had less than 5 years experience. After a patient reported pain and a nurse had completed a pain assessment, the patient was interviewed by a researcher who then assessed the patient's pain by eliciting information in the eight categories. The McGill Pain Questionnaire was used by Camp and O'Sullivan (1987) as a guide. Pain assessment information was then compared with the attendant RN's documentation.

For each dyad a ratio was calculated to determine the number of categories documented by the nurse as compared to the number of categories described by the patient. Another ratio was calculated to compare the number of categories documented by the nurse that were congruent with what the patient described. Both ratios were converted to percentages. No differences were noted in the pattern of response to the eight categories of pain by the different types of patient. Therefore, hypothesis 1 was not supported.

Kruskal Wallis analysis of variance of ranks revealed no significant differences across the types of patients for the percentage of documented data ($X^2 = 1.61, P = 0.44$) and of congruently recorded data ($X^2 = 0.75, P = 0.69$). Thus hypothesis 2 had tentative support. In the Camp and O'Sullivan (1987) study, nurses did not appear to document differently as a result of patient type.

Camp and O'Sullivan's (1987) third hypothesis which
concerned the average level of nursing documentation compared to a standard 50% of the patient's description of pain, was supported ($P < 0.01$). Hypothesis 4 also was supported as nurses in the study documented congruently less than 50% of the assessment information that a patient was able to support ($P < 0.01$).

Camp and O'Sullivan (1987) concluded that nurses documented significantly less than 50% of what the patient reported despite the fact that patients described their pain in areas that should be included and documented in pain assessment. The researchers asserted that it appears that nurses have not found pain sufficiently important to merit complete assessment and documentation. In light of this, it is possible that nurses are not using documentation to assist in planning pain management protocol. Suggested future studies included determining nurses' attitudes toward pain and documentation, and determining if nurses have a pharmacological knowledge deficit affecting documentation. The Camp and O'Sullivan (1987) study was significant to the current study because it pointed out the disparity between patients' descriptions of pain and subsequent documentation of pain assessments by nurses. These differences may have been attributable to how the nurses perceived the patient in pain.

A study by Bondestam, Hovgren, Johansson, Jern, Herlitz, and Holmberg (1987) compared assessments by patients and nurses in the early phase of acute myocardial
infarction. The purpose of the study was to compare the patient's assessment of pain with that made by the nurse and to relate these assessments to analgesic treatment. The researchers also wanted to evaluate the pain relieving effect of varying doses of morphine. The assumptions that guided this study were that health care professionals tend to infer lesser levels of pain in patients than the patients themselves say they experience and that total relief of pain is not a goal among most nurses. Subjects were 47 patients admitted to the coronary care unit (CCU) at a hospital in Goteborg, Sweden, with the diagnosis of acute myocardial infarction (MI). Criteria for inclusion in the Bondestam, et al. (1987) study were suspected MI and the ability to communicate verbally. Patients who did not have an MI were retrospectively excluded from the analysis.

Pain was assessed according to a numerical rating scale (NRS), graded from 0-10, where 0 = no pain and 10 = the most severe pain the patient could imagine. A simultaneous but independent rating of pain intensity on the NRS, by the nurse and by the patient, was carried out on 127 occasions. A positive correlation between these recordings was observed (r = 0.76, P < 0.001). The nurse underestimated the patients' pain on 23% of the occasions, and overestimated it on 20% of the occasions. Over-estimation was primarily found when the heart rate and blood pressure increased.

Bondestam, et al. (1987) also sought to determine the
relationship between the patient's assessment of pain and the frequency of morphine administrations by the nurses within 15 minutes of pain scoring was studied. The percentage of assessments resulting in morphine administrations increased with increasing pain score. However, in a high proportion of patients with scores >5 on the NRS, no pain relieving treatment was administered. When the patient's pain rating reached 5-6 analgesic treatment was given in 50% of the cases. When the pain reached 7-8 on the NRS 20% of the patients remained untreated. The doses of morphine varied from 5 and 15 mg. In 37% of the cases there was no pain relief at all or pain score declined by 1 scale unit only.

The patient's scoring of his pain was concealed from the recording nurse. Her assessment of pain was based on her own observations and on verbal communication with the patient. Many patients in this study were not completely pain free during the first 24 hours in the CCU.

Bondestam, et al (1987) offered several possible explanations for the fact that on several occasions patients did not receive treatment despite fairly severe pain, (such as the nurse may believe that narcotics should be given only for severe pain, or that the nurse may wait until the patient asks for analgesics or reports significant pain upon questioning). Another reason offered was that nurses working for extensive periods of time in acute pain situations may become hardened to complaints of pain, thus
creating even greater problems with pain assessment and treatment. This study also indicated that the traditional treatment of pain in suspected MI needs to be reconsidered. The negative actions and erroneous assessments revealed by this study further emphasize the need to identify the attitudes and beliefs of nurses in advance practice.

Research has also shown that a patient's personal beliefs about pain are frequently diametrically opposed to information given to them by health care professionals regarding their pain. This difference has been shown to affect compliance with treatment modalities. Williams and Thorn (1989) identified three core factors of pain belief from previous studies: whether the pain was constant or intermittent, the projected duration of the pain, and self-blame. Their study attempted to "demonstrate the empirical relationship between pain beliefs and subjective pain, treatment compliance, and psychological indices of distress and attributions concerning health care" (Williams & Thorn, 1989, p.352).

Subjects for this study consisted of 87 industrially injured workers who were referred to a six week multidisciplinary rehabilitation center. All were experiencing chronic pain and receiving workman's compensation. The mean age of the group was 37.6 years with various races and marital status represented.

Subjects completed a pain beliefs and perceptions inventory (PBAPI), a subjective pain intensity survey, a
Rosenberg Self-Esteem Scale (RES), the Multidimensional Health Locus of Control Scale (MHLC), and a self-blame questionnaire. In addition, the MMPI was given at the center prior to undergoing treatment and six weeks post treatment. Compliance ratings were obtained from the primary therapists working with each client in four different areas during the third week of the program.

Data from the Williams and Thorn (1989) study were analyzed utilizing a three factor solution model. The three scales (TIME, MYST, and S-B) which represent duration, pain as a mystery, and self-blame were all found to possess satisfactory reliability estimates or good internal reliability. A positive association between the belief that pain was enduring and subjective pain intensity was found (r = 0.21, p<0.05), while no relationship between actual duration and intensity was found (r = 0.00). The predictive value of the PBAPI scales for treatment compliance was determined by using multiple regression analysis. Lower physical therapy compliance was found to be associated with the beliefs that pain was enduring and perceived as a mystery. The belief that pain was enduring was associated with poor health psychology interventions.

A significant correlation between low self-esteem and the MYST and TIME scales of the PBAPI (r = 0.22, p<0.05, r = 0.38, p<0.001 respectively) were determined using Pearson product-moment correlations. The association between the PBAPI scales and attributions of control of
health and self-blame were also determined by using Pearson product-moments correlations. The MHLC had a negative relationship to the TIME and S-B scales \( (r = -0.23, p<0.05) \) for each, while it approached significance with the MYST scale \( (r = -0.20, p<0.06) \) (Williams & Thorn, 1989).

Williams and Thorn (1989) concluded that pain beliefs identified by their tool, the PBAPI, had predictive value for several aspects of the pain experience. Further research utilizing the PBAPI to assess pain beliefs at critical points of treatment was recommended. The current study also attempted to identify pain beliefs as advance practice nurse need to be aware of pain beliefs and their effect on pain management and compliance.

Pellino and Oberst (1992) were interested in how a person with chronic low back pain views the pain/illness situation and how a perception of internal control over pain affects their outcome. The researchers hypothesized that those persons who appraised their pain situation as harmful or threatening would have more pain and more mood disturbance than those who did not appraise the situation as harmful or threatening, and that those persons who perceived they had more personal control over the pain would have less pain and less mood disturbance than those who believed they had little personal control of the pain.

The sample consisted of 20 males and 20 females recruited from a population of patients being followed by an orthopedic surgeon on an outpatient basis in a Midwestern
Participants had an average of 81 months of pain (range 6 to 360 months). The majority of patients had a diagnosis of herniated disc, had at least one surgical procedure, had a work-related injury, and had terminated employment due to pain. Twenty-one persons were receiving workmen's or disability compensation.

Pellino and Oberst (1992) utilized a self-report questionnaire which included demographic characteristics and information regarding the length, cause, and treatment of the patient's back pain. Appraisal of illness was measured by the Appraisal of Illness Scale (AIS), a 70-item self-report instrument developed by Oberst (1988). The response format is a 5-point Likert scale.

General locus of control was measured by the Levensen Locus of Control Scales. Internal locus of control is the belief that one's outcomes are a direct result of one's behavior or characteristics. External locus of control is the belief that one's outcome is the result of powerful others or of fate or chance.

Situational control expectancies (perception of control of pain) were measured by a 25 item perception of pain control scale adapted from the Headache Locus of Control (HLOC) Scale and the Medical Cure and Pain Control subscales of the survey of Pain Attitude Scale. The three scales measure perception of internal control of pain, health care professionals externality, and chance externality. Each scale consists of five items in a 6-point Likert format.
Perceived emotional support was measured by items from the Solicitude subscale of the Survey of Pain Attitudes (SOPA). The scale consists of 10 items using a 5-point Likert format.

Mood was measured with the 37-item adjective checklist short form of the Profile of Mood States (POM-S). Pain rating was done on a visual analog scale. Patients rated the average amount of pain they had experienced over the past week. Possible scores could range from 0 to 100.

Overall, subjects scored high for general locus of control (mean = 4.77), with men scoring higher than women (p< .02). Patients reported a high average pain level. Although patients appraised their pain situation as involving harm and threat, positive and challenging aspects of the situation also were reported. Pain rating was negatively correlated with perception of internal control of pain and challenge appraisal and positively correlated with negative appraisal. Years of education was the only variable that accounted for a significant portion of variance in the perception of internal control of pain. The more highly educated patients tended to believe they had more control over pain. A perceived lack of emotional support was predictive of a negative appraisal of the situation. Increasing length of pain was associated with more internal control of pain and less mood disturbance.

Pollino and Oberst (1992) concluded that duration of a stressor is a causal antecedent in the coping process and
that over time, through coping, one may deal better with a stressor such as chronic illness. The person's perception of control of the pain may have a direct or indirect effect on pain rating. Although patients were the subjects in this study instead of health care providers, this study serves to emphasize the role that perceptions of pain play in the overall picture of chronic pain, and lends credence to this current investigation in which nurse practitioners perception of pain is germane.

A study by Yates, Dewar, and Fentiman (1995) examined the perceptions that elder persons living in a long-term residential setting had toward pain. The purpose of the study was to provide an in-depth account of the beliefs, attitudes, and perceptions of elderly people toward pain. The researchers also were concerned about misconceptions that health care providers have regarding pain and the elder person. Yates, et al (1995) believed that an examination of older persons' beliefs and attitudes could enhance caregivers' awareness of factors that may influence individual responses to pain, and increase their sensitivity to the needs of elder people in pain.

Group interviews were conducted in five large residential care homes in Brisbane, Australia over a 6 month period. Each group had from 5 to 9 participants, each over 65 years of age and able to speak English. A total of 29 males and 35 females participated. Each interview was one hour in length and tape recorded. Moderators utilized an
interview guide comprised of open-ended questions. The data yielded from each of the recorded focus group interviews were transcribed, analyzed and categorized based on the recurrent themes and patterns that emerged.

Three central categories of beliefs and attitudes held by older people toward pain emerged from the Yates, et al (1995) study. The dominant belief was the expectation that it is usual for elderly people to simply have to "put up" (p. 670) with their pain. Many of the residents expressed the belief that pain was a common and expected problem for older people.

The attitude of ambivalence about taking any action to relieve their pain was noted. Many did not believe that pain medication would take the pain away completely, and that it was possible to become immune to the effects of the medication. The most common pain relieving strategy reported was distraction techniques. The predominant attitude that emerged was the belief that despite interventions, eventually the elder person would generally have to endure his/her pain.

The final category that emerged was the issue of who the elders talk to about their pain. The respondents frequently reported a reluctance to discuss their pain with significant others or with other residents for fear of worrying them or being perceived as a complainer. They were less reluctant to talk to the nursing staff about their pain but felt that often the nurses were too busy and didn't want
to be bothered. A frequent complaint was that the nurse would ask if anything was needed as she walked out the door without waiting for a reply. The residents did feel, however, that some of the nurses really cared and did try to help them. One of the most important things the residents revealed that they wanted from the nursing staff was empathy and kindness (Yates et al, 1995).

This research study concluded that there are many misconceptions and negative attitudes and beliefs about pain and pain control among elders. One of the most important implications of an individual's beliefs is the effect these beliefs have on response to pain. This research, as well as the current study, illustrates the importance of identifying the salient beliefs and attitudes of different groups toward pain and pain management.

Villarruel and de Montellano (1992) explored cultural factors that influence attitudes associated with pain. Culture has long been recognized in nursing research and practice as a factor that influences a person's reaction to and expression of pain. The researchers contended that attitudes and reactions to pain are learned early in childhood, within the context of culture group membership. Children learn how to respond to pain, to whom the pain should be reported, and measures that are helpful in relieving pain.

The purpose of the study was to use ethnohistory as a method to discover cultural meanings associated with pain.
There are many health and illness related beliefs that exist in modern Mesoamerican areas that can be directly traced to ancient times. In order to better understand the pain experience of the current Mexican-American population, this study sought to discover meanings associated with pain in Mesoamerican cultures prior to and near the time of the Spanish Conquest.

Primary and secondary sources concerned with Aztec and Mayan civilizations were selected for study. Six themes associated with pain beliefs emerged.

Pain was accepted as a necessary, inevitable part of life. Man had an obligation to endure pain and fatigue as part of his debt to the gods for creating and sustaining him. The ability to endure pain stoically was brave and pious. The gods predetermined how much pain each man was to endure. Pain was a consequence of doing evil. Specific methods of pain elimination were directed toward maintaining balance between man and the surrounding environment.

Modern Mexican-American culture responses to pain fell into the themes that were identified. For example, the belief that pain is a consequence of wrongdoing parallels pain as a punishment from the gods. Treating "hot" ailments with "cold" remedies parallels the maintaining of balance beliefs. The practice of enduring pain stoically is a behavior seen in modern Mexican-American adults and children. Villarruel and de Montellano (1992) concluded that knowledge of cultural meanings of pain is an important
aspect of culturally competent nursing care for people experiencing pain. As one's own culture, as well as that of clients, affect attitudes and beliefs, the nurse practitioner's culture will affect attitudes. This study attempted to identify attitudes of nurse practitioners.

Management of pain and societal response to an individual's expression of pain may also be culturally determined. Calvillo and Flaskerud (1993) compared the pain responses of 22 Mexican-American women and 38 Anglo-American women, all post cholecystectomy. The sample consisted of 60 patient subjects and 60 nurse responses. Data were collected at two major teaching hospitals in southern California. Patient pain was measured 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. Multiple analysis of variance (MANOVA) using the Hotelling-Lawley Trace measure was used to examine differences in the two patient groups on each measure of pain. No significant difference was found in the pain responses of the two groups (P <0.05).

A nurse sample consisting of 32 nurses (with 60 nurse responses to the patients) was obtained. A significant difference was found in the pain responses of the two patient groups as assessed by the nurse. The Anglo-American patients were assessed as having more pain than the Mexican-American patients (F = 4.16; d.f. = 1.57; P <0.05).
Finally, using a dependent t-test, the researchers found significant differences between the nurses' evaluation of pain using the PPI and the patients' evaluation of pain \((t = 6.63; \text{d.f.} = 1.57; P = 0.0001)\). The mean for nurses was 0.75 and the mean for patients was 1.33 with patients assessing pain as more severe than nurses.

The findings of the Calvillo and Flaskerud (1993) study support the conclusions of Wakefield (1995), Camp and O'Sullivan (1987), and others that nurses assess pain as less severe than patients assess their pain. A major finding was that nurses are assigning more pain to Anglo and to "higher" social-class patients (i.e. more educated, had professional or skilled occupations, spoke English, and were born in the US). The findings of the study emphasize the need for healthcare providers to be more aware that their own values and perceptions may affect how they evaluate the patient's response to pain and ultimately how that pain is treated.

In conclusion, the review of the literature supports the need to explore attitudes of nurse practitioners in primary care regarding chronic pain. The need for practitioners to be cognizant of any erroneous beliefs and negative attitudes is important as researchers have shown that attitudes affect treatment (Camp & O'Sullivan, 1987; Strong et al, 1992; Wakefield, 1995). The current study sought to identify some of the attitudes and perceptions of nurse practitioners in primary care settings in Mississippi.
toward patients with chronic pain and to identify their interventions for chronic pain.
Chapter III
The Method

The purpose of this study was to explore attitudes of nurse practitioners in primary care settings in Mississippi and to identify their interventions for chronic pain. The empiricalization of the study is discussed in this chapter.

Design of the Study

A survey design was implemented for this descriptive study. A survey research design involves data collection from a sample of subjects to examine the opinions, attitudes, behaviors, or characteristics of the population. Data collection methods used in survey research include face-to-face interviews, telephone interviews, and written questionnaires (Polit & Hungler, 1995). A questionnaire was the instrument utilized to obtain information from nurse practitioners regarding their attitudes toward chronic pain, therefore, the study qualified as descriptive survey research.

Variables. For this study, the variables of interest included: (1) attitudes of nurse practitioners toward chronic pain, and (2) nurse practitioner interventions for chronic pain. Intervening variables may have been prior life experiences of the subjects and subsequent impact on
professional life, and honesty of responses. The control variables were that the subjects were Family, Adult, or Gerontologic nurse practitioners certified by the Mississippi State Board of Nursing, and that each subject was given the same questionnaire (CCPQ).

Setting, Population, and Sample

The setting for this study was the state of Mississippi. The target population was the 258 Family, Adult, and Gerontologic nurse practitioners currently listed with the Mississippi Board of Nursing. A convenience sample was utilized, with N = 161 nurse practitioners who met the criteria for inclusion in the study (Family, Adult, and Gerontologic nurse practitioners certified to practice in the state of Mississippi by the Mississippi State Board of Nursing) and who returned the survey.

Methods of Data Collection

Instrumentation. The instrument utilized for this study was the Coggins Chronic Pain Questionnaire (CCPQ, Appendix A). The CCPQ, developed by the researcher, was a survey form designed to obtain data regarding nurse practitioners' attitudes and interventions for chronic pain as well as certain demographic information. The CCPQ consisted of 26 items. Thirteen multiple choice questions assessed attitudes toward chronic pain. Subjects were asked to mark the response that most closely reflected their attitude. Examples are: how many clients with complaints of chronic pain have legitimate complaints, and how many
clients complaining of chronic pain are malingerers. Responses were marked by percentages, i.e.: less than 10%, 10% to 25%, 25% to 50%, 50% to 75%, or 75% to 100%. Two questions provided data about interventions for chronic pain. Subjects were asked to place a 1, 2, 3, etc. by interventions listed indicating first, second, or third line treatment modalities or a zero by interventions never used. Eleven questions provided demographic information such as type of nurse practitioner practice, years in practice, practice setting, gender, age, and personal history of chronic pain. Two open ended questions requested the subjects to indicate when their preceptor was consulted for scheduled analgesic and what in their personal experiences had brought them to their current attitudes regarding chronic pain. Each question was independent and analyzed separately. There was no total score. Face validity for the tool was determined by a panel of expert researchers. Clarity of content was assessed by a pilot survey of nurse practitioner peers. The questionnaire required approximately 15 minutes to complete.

Procedures. After institutional approval by Mississippi University for Women's Committee on Use of Human Subjects in Experimentation (see Appendix B), the questionnaire was mailed to all Adult, Family, and Geriatric Nurse Practitioners in Mississippi. The names were obtained from a master list from the State Board of Nursing. A cover letter (see Appendix C) was included to inform each
participant of the nature of the research, how the participants were selected, and how to contact the investigator. The participants were guaranteed confidentiality and were informed that voluntary completion and mailing of the survey implied consent to participate. A follow up postcard (see Appendix D) was mailed two weeks later to augment response.

**Methods of Data Analysis**

Descriptive statistics were used to examine the collected data. The data from each question on the CCPQ was then analyzed (Appendix E) using frequency distributions and percentages. All information was derived from the population itself. Thus, the data can be described as parameters. These parameters were calculated on the data given by the population. Since no inferences were made from these statistics, they were labeled as descriptive statistics (Polit & Hungler, 1995).

**Summary**

In this chapter, the design of the current study, the variables, limitations, and the setting, population, and sample were discussed. Instrumentation was explained in detail as well as the methods of data collection. Finally, the methods of data analysis were addressed. Chapter IV includes a presentation of the research findings, with a discussion of the findings and conclusions drawn from the research following in Chapter V.
Chapter IV
The Findings

The purpose of this study was to explore attitudes of nurse practitioners in primary care settings in Mississippi and to identify their interventions for chronic pain. A survey design was implemented for this descriptive study. A questionnaire was utilized to obtain information from nurse practitioners regarding their attitudes toward chronic pain and interventions for chronic pain. The data from each question were analyzed using frequency distributions and percentages. The findings from the study are presented in this chapter.

Description of Sample

The sample consisted of 161 nurse practitioners (NPs) who responded to the questionnaire. A total of 258 questionnaires were mailed to Family, Adult, and Gerontological nurse practitioners in Mississippi. The 161 who responded represent 62% of all Family, Adult and Gerontological nurse practitioners in Mississippi. The composition of the sample was 135 (83.8%) Family, 26 (16.1%) Adult, and 13 (8.0%) Gerontological nurse practitioners. The ages of the respondents ranged from 25 to 67 years with a mean age of 40.9 years. Figure 1 shows the distribution
of ages of the sample of NPs.

Figure 1. Distribution of nurse practitioner participants by age.
The total sample consisted of 12 (7%) males and 149 (93%) females.

The composition of practice settings of the participants was 92 (57%) primary care clinics, 10 (6%) emergency rooms, 42 (26%) physicians offices, and 26 (16%) other settings. The number of years in advanced practice for the sample ranged from 1 to 21 years with a mean of 4 years and a median of 2 years.

The respondents were asked about their clinical experience prior to becoming a nurse practitioner. The responses included 17 different areas of nursing. Those responses may be seen in Table 1.
Table 1

Composition of Prior Clinical Experience of NPs by Frequency and Percentage

<table>
<thead>
<tr>
<th>Type of Experience</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Surgical</td>
<td>34</td>
<td>21</td>
</tr>
<tr>
<td>Obstetrics</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Critical Care</td>
<td>18</td>
<td>11</td>
</tr>
<tr>
<td>Emergency Department</td>
<td>22</td>
<td>14</td>
</tr>
<tr>
<td>Home Health</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>Education</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Management</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Oncology</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Nephrology/Dialysis</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Surgery/Recovery</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Out Patient Clinic</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Health Department</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Orthopedics</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Physician's Office</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Nursing Home</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Note.  N = 161
The following data supply the answer to the research question regarding nurse practitioners' attitudes toward chronic pain. Of the total sample of NPs, 159 (99%) indicated that chronic pain is a valid complaint (question 1 on the CCPQ). Two respondents (1%) indicated that chronic pain is not a valid complaint.

The nurse practitioners were asked about personal experience with chronic pain. A total of 113 (70%) of the respondents had a family member or close friend who had experienced chronic pain. However, only 68 (42%) of the respondents reported having experienced chronic pain personally. The NPs were asked to indicate if they had experienced chronic pain in the past, now, both in the past and now, or never. A graphic analog of the participating nurse practitioners' personal experiences with chronic pain may be seen in Figure 2.

Figure 2. Number of NPs experiencing chronic pain.
Participants were asked to indicate the average number of patients seen per week with complaints of chronic pain (question 2 on the CCPQ). One hundred and thirty-nine (87%) of the NPs responded that 1 to 20 patients with complaints of chronic pain are seen per week, 16 (10%) NPs reported seeing 20 to 40 patients with complaints of chronic pain per week, 3 (1.8%) of the NPs indicate seeing 40 to 60 chronic pain patients per week, and 2 (1.2%) of the NPs report that over 60 patients with complaints of chronic pain are seen weekly.

The NPs were asked to rank the order of frequency of which different types of chronic pain complaints (backache, headache, arthritis, or other) are seen in their areas of practice. Ninety-two (58%) of the participants reported that arthritis is the most frequently seen chronic pain complaint. The second most frequently seen complaint is backache (64 or 42%). Sixty-six (43%) NPs reported that headache is the third most frequently seen complaint. Ninety-seven (76%) of the NPs stated that other complaints (i.e., abdominal pain, leg pain, muscle pain) are the least frequently seen. Table 2 shows nurse practitioner responses for most frequently seen and least frequently seen complaints of chronic pain.
Table 2

Types of Chronic Pain Seen by NPs in Primary Care in Mississippi by Frequency and Percentage

<table>
<thead>
<tr>
<th>Pain Type</th>
<th>Most Frequently Seen</th>
<th>Least Frequently Seen</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Arthritis</td>
<td>92</td>
<td>18%</td>
</tr>
<tr>
<td>Headache</td>
<td>34</td>
<td>21%</td>
</tr>
<tr>
<td>Backache</td>
<td>29</td>
<td>18%</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>4%</td>
</tr>
</tbody>
</table>

Note. N = 161.

Questions 4, 5, and 6 of the CCPQ dealt with nurse practitioners' perceptions of clients with complaints of chronic pain. Question 4 asked the participants to indicate what percentage of chronic pain complaints are legitimate. Sixty-six per cent (105) of the NPs believed that complaints of chronic pain are legitimate 50% to 100% of the time; 34% (55) NPs believed that chronic pain complaints are legitimate less than 50% of the time.

Question 5 requested the participants to indicate what percentage of clients with complaints of chronic pain are drug seekers. Ninety-two per cent (148) NPs believed that
less than 50% of clients presenting with complaints of chronic pain are drug seekers; 8% (13) NPs believed that clients with complaints of chronic pain are drug seekers greater than 50% of the time.

Question 6 asked the NPs to indicate what percentage of clients with complaints of chronic pain are malingerers. Only 3% (5) of the respondents believed that clients with complaints of chronic pain are malingerers more than 50% of the time; 97% (156) NPs indicated that clients with complaints of chronic pain are malingerers less than 50% of the time.

Questions 7, 8, and 9 dealt with nurse practitioner perceptions of the adequacy of pain medication received by clients with complaints of chronic pain. The NPs were asked to indicate if they strongly agreed, somewhat agreed, were not certain, somewhat disagreed, or strongly disagreed with the statements that most clients with complaints of chronic pain receive adequate pain medication, receive more pain medication than necessary, or are undermedicated. Nine NPs (6%) strongly agreed, 61 NPs (38%) somewhat agreed, 28 NPs (18%) were not certain, 48 (30%) of the NPs somewhat disagreed, and 14 (9%) of the NPs strongly disagreed that most clients with complaints of chronic pain receive adequate pain medication. In response to the statement that most clients with complaints of chronic pain receive more pain medication than necessary, 15 NPs (9%) strongly agreed, 47 NPs (29%) somewhat agreed, 23 (14%) of the NPs were not
certain, 58 NPS (36%) somewhat disagreed, and 18 (11%) strongly disagreed. In response to the statement that most clients with complaints of chronic pain are undermedicated, 20 NPs (12%) strongly agreed, 49 NPs (30%) somewhat agreed, 29 (18%) of the NPs were not certain, 51 NPs (32%) somewhat disagreed, and 11 NPs (7%) strongly disagreed.

Question 10 asked the participants to rate the frequency psychological dependence or physical addiction to narcotics occurs as a result of narcotic prescriptions for clients with chronic pain. Fifteen NPs (9%) believed that addiction or dependence occurs very frequently (>1 in 10). Sixty-one NPs (38%) indicated that addiction or dependence occurs frequently (1:10 to 1:100). Seventy-two NPs (45%) said that addiction or dependence occurs occasionally (1:100 to 1:1000). Thirteen NPs (8%) indicated that addiction or dependence occurs rarely (<1 in 1000). None of the NPs said that addiction or dependence never occurs.

Question 11 was used to elicit information regarding the frequency with which the NPs believed an overdose of narcotics prescribed for chronic pain occurs. Two (1.2%) of the respondents said that overdose of narcotics prescribed for chronic pain occurs very frequently (>1 in 10). Thirteen (8%) of the NPs indicated that overdose occurs frequently (1:10 to 1:100). Sixty-two NPs (39%) believed that overdose occurs occasionally (1:100 to 1:1000). Seventy-nine NPs (50%) stated that overdose rarely (<1 in 1000) occurs, and 2 NPs (1.2%) believed that overdose never
occurs from prescribed narcotics.

The respondents were asked who they considered to be the best judge of pain intensity and 136 (84%) said that the client is the best judge. Eleven (6.8%) thought that the client's spouse, family, or significant other is the best judge. Twelve (7%) believed that others (including a combination of healthcare provider, family, and client) are the best judge. One practitioner said that the healthcare provider is the best judge of pain intensity.

Information regarding the degree of concern which NPs had regarding addiction if a family member is given a narcotic for chronic pain was requested in question 13. Fourteen NPs (9%) reported they would have no concern, 63 NPs (40%) said they would have mild concern, 57 NPs (36%) indicated moderate concern, and 23 NPs (15%) reported that they would have extreme concern about addiction if a family member was given a narcotic for chronic pain.

Participants were asked what they believed increasing requests for analgesics indicates. Twenty-eight (17%) of the respondents indicated that it is due to a worsening of the condition, 70 (43%) stated that tolerance to the analgesic has occurred, 19 (12%) believed that psychological dependence has developed, and 7 (4%) thought that physical addiction has occurred. Fourteen (9%) indicated that all of the choices could be a factor.

The practitioners were asked what per cent of the time chronic pain can be relieved with treatment. Two
respondents (1.2%) believed that chronic pain can be relieved 100% of the time, 61 (38%) thought that chronic pain can be relieved 75% of the time, 65 (40%) believed pain could be relieved 50% of the time, 26 (16%) believed that pain could be relieved 25% of the time, and 4 (2%) said that pain could be relieved <10% of the time.

Participants were asked to respond in question 26 regarding what, in their experiences with pain, has brought them to their present attitude toward chronic pain and their current treatment modalities. Six major themes were identified from the responses of the 138 subjects who answered the question: (1) personally experiencing chronic pain (24%), (2) having a relative or close friend experiencing chronic pain (9%), (3) personal philosophy regarding pain (12%), (4) patients with drug seeking or noncompliant behavior and fear of addictive properties of narcotics (12%), (5) clinical experience providing care for patients with chronic pain (36%), and (6) education regarding pain and treatment modalities (11%).

Some examples of responses to question 26 are as follows:

"After injuring my back at work, I can understand how frustrating chronic pain can be."

"My own pain [11 years] has made me more empathetic and understanding."

"My sister, who has rheumatoid arthritis...."

"My best friend has SLE [systemic lupus erythematosus]-
has experienced chronic pain--has experienced physical addiction...." 

"Pain is part of the human experience...."

"Pain is whatever the patient says it is."

"Pain is subjective but real."

"...I try to help patients steer away from narcotics as only adding to problem [of chronic pain]...."

"Fear of causing addiction...I want to help them and I can't."

"Known drug abusers using chronic pain such as back aches to get medications."

"Dealing with drug seekers and having to put up with them."

"All of my experience in health care."

"Working with cancer patients."

"Working with elderly clients suffering from arthritis."

"Continuing education programs [on pain]."

"Lectures in graduate school [regarding chronic pain and treatment modalities]."

The research question regarding nurse practitioners' interventions for chronic pain was answered by giving the participants a list of 15 treatment modalities and asking them to rank the interventions according to those used first, second, third, etc. with 1 = first line modalities, 2 = second line modalities, 3 = third line modalities, etc. Table 3 displays the findings.
Table 3

Nurse Practitioner Treatment Interventions for Clients With Complaints of Chronic Pain by Frequency and Percentage

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Preference Order</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st</td>
</tr>
<tr>
<td>Modalities</td>
<td>f %</td>
</tr>
<tr>
<td>NSAIDS</td>
<td>146 92%</td>
</tr>
<tr>
<td>Bedrest</td>
<td>66 47%</td>
</tr>
<tr>
<td>Phys/Therapy</td>
<td>34 24%</td>
</tr>
<tr>
<td>Heat/Ice</td>
<td>116 82%</td>
</tr>
<tr>
<td>Exercise</td>
<td>61 44%</td>
</tr>
<tr>
<td>Manipulation</td>
<td>6 4%</td>
</tr>
<tr>
<td>TENS</td>
<td>5 4%</td>
</tr>
<tr>
<td>Relaxation</td>
<td>69 49%</td>
</tr>
<tr>
<td>Pain Clinic</td>
<td>7 5%</td>
</tr>
<tr>
<td>Neuro Refer</td>
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</tr>
<tr>
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<tr>
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<tr>
<td>Anti-depressants</td>
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Note.  N = 161.
Respondents were asked at what point in managing clients with chronic pain they consult their preceptor for scheduled narcotics. Responses ranged from never (12%), after first and second line modalities fail (45%), after conservative modalities fail (23%), to immediately if patient appears in acute pain (21%).

**Additional Findings**

An interesting note was that 55 nurse practitioners indicate that complaints of chronic pain are valid less than 50% of the time. Forty-one of this group reported never experiencing chronic pain personally. The group of nurse practitioners who believed that chronic pain complaints are legitimate more than 50% of the time had a significantly higher history of personally experiencing chronic pain. Figure 3 illustrates the difference in the personal pain history of the two groups.

![Figure 3](image)

Figure 3. Comparison of personal pain history of NPs who believed chronic pain is legitimate <50% and >50% of the time.
Treatment modalities (first, second, third, fourth, and those never used) of the NPs who indicated that chronic pain is legitimate <50% and >50% of the time were compared. The percentage of nurse practitioner responses for each modality is shown in Table 4.
Table 4

Comparison of Treatment Interventions of NPs Who Indicated Chronic Pain Complaints are Legitimate >50% and <50% of the Time by Frequency and Percentage

>50% = Percentage of NPs who felt that >50% of chronic pain complaints are legitimate

<50% = Percentage of NPs who felt that <50% of chronic pain complaints are legitimate

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<th>3rd</th>
<th>4th</th>
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<td>NSAIDS</td>
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<td>&gt;50%</td>
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<td>6%</td>
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<td>12%</td>
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</tr>
<tr>
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<td>5%</td>
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<td>49%</td>
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<td>Referral to Pain Clinic</td>
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<td>&gt;50%</td>
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*table continues*
## Treatment Preference Order

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<td>&gt;50%</td>
<td>11%</td>
</tr>
<tr>
<td>&lt;50%</td>
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</table>

Note. N = 161.
In summary, the data obtained from the CCPQ was described and analyzed to answer the research questions (1) What are nurse practitioners' attitudes toward chronic pain, and (2) What are nurse practitioners' interventions for chronic pain. The following chapter contains a summary and discussion of the data described in this chapter.
Chapter V
The Outcomes

Chronic pain is a widespread problem affecting millions of people. Research has shown that attitudes and beliefs toward pain influence actions and reactions of both the person experiencing pain and the health care provider (Strong et al, 1992; Travelbee, 1971; Williams & Thorn, 1989). Research has also shown that some health care providers have negative attitudes and erroneous beliefs about pain (McCaffery & Beebe, 1989; Wakefield, 1995; Weissman & Dahl, 1990). This descriptive study explored attitudes of nurse practitioners in Mississippi toward chronic pain and their subsequent interventions for chronic pain. Travelbee's Human-to-Human Model (1971) provided a framework for this study. The two research questions asked in this study were:

1. What are nurse practitioners' attitudes toward chronic pain?
2. What are nurse practitioners' interventions for chronic pain?

A convenience sample of 161 nurse practitioners (Family, Adult, and Gerontological) registered with the Mississippi Board of Nursing were surveyed using the Coggins
Chronic Pain Questionnaire (CCPQ). Descriptive statistics were generated to describe current attitudes of nurse practitioners toward chronic pain and interventions for chronic pain. Responses to the instrument were analyzed using frequency distributions and percentages.

Summary of the Findings

The sample for this study consisted of nurse practitioners who responded to the CCPQ that was mailed to 258 Family, Adult, and Gerontological nurse practitioners in Mississippi. A final sample of N = 161 was obtained. As the sample represented 62.4% of the population, the results of the study were representative of the attitudes and interventions of nurse practitioners in Mississippi; therefore, the research questions (1) what are nurse practitioners' attitudes toward chronic pain and (2) what are nurse practitioners' interventions for chronic pain were answered.

Discussion

An overwhelming 99% of the practitioners believed that chronic pain is a valid complaint and 84% indicated that the client is the best judge of the severity of pain. These statistics concur with Weissman and Dahl (1990), who found that 83% of the first year medical students surveyed believed that the patient was the best judge of the severity of pain. Conversely, only 66% of the practitioners indicated that most clients with complaints of chronic pain have legitimate complaints. These findings could lend
support to Camp and O'Sullivan (1987), who concluded that nurses document less than 50% of pain assessment information given to them by patients, and Bondestam, et al (1987), who concluded that nurses underestimated and undermedicated patients' pain.

Five per cent of the respondents strongly agreed and 38% somewhat agreed (38%) that most clients receive adequate pain medication. Forty-two per cent believed that most clients with chronic pain were undermedicated. This supports findings by Bondestam et al, (1987) and Weissman and Dahl (1990) that patients in pain are frequently undermedicated.

An interesting finding was that 92 (57%) of the practitioners surveyed had never experienced chronic pain. Only 25% of the practitioners who felt that complaints of chronic pain are valid less than 50% of the time had experienced chronic pain, while 53% of practitioners who felt that chronic pain complaints are legitimate had experienced chronic pain. Travelbee's theory (1971) postulates that attitudes have a major impact on practice as a patient's treatment is the direct result of the nurse's attitude toward that patient.

Many practitioners related that their educational experiences and clinical experiences dealing with clients who were experiencing chronic pain are the basis for their present attitudes regarding pain. Several subjects responded that the patient should always be listened to,
that many times the underlying problem could be discovered if a trusting, caring relationship was formed.

Many comments were made which revealed empathy with clients who have chronic pain. One practitioner related "after injuring my back at work, I can understand how frustrating chronic pain can be." Another wrote, "my own pain [11 years] has made me more empathetic and understanding." One comment was, "pain is real and must be treated as such." Another related, "I know how devastating chronic pain can be." Several stated, "Pain is what the patient says it is." Comments such as, "fear of causing addiction...I want to fix them and I can't", support Steeves, Kahn, and Benoliel (1990) assertion that nurses' responses to patients' pain and suffering are a form of suffering, also. Several listed the importance of "listening to the patient". A practitioner wrote, "[my] personal experience of [a] practitioner doubting that my pain is real, [made me realize] I have to trust what he/she [client] says". This comment and others supports the assertion that one's culture and beliefs affect attitudes about pain, which in turn affect one's actions and reactions to pain (Strong et al, 1992; Travelbee, (1971); Williams & Thorn, 1989).

This researcher asserts that the compilation of the literature and findings from this study indicate that practitioners need to examine personal beliefs and biases toward clients with complaints of chronic pain. The
utilization of Travelbee's model would assist practitioners to gain understanding, sympathy, and empathy for clients who are experiencing chronic pain. It is obvious from this study's findings that if, as the old saying goes, "you've walked a mile in my shoes" more empathy is felt.

Many practitioners reported that seeing family members suffer with chronic pain helped form their present attitude regarding pain. Often a family member had become addicted to narcotics as a result of treatment and this caused concerns regarding addiction. This supports assertions by Weissman and Dahl (1990) that healthcare providers undermedicate because of fear of addiction.

Several of the practitioners expressed skepticism and cynicism toward clients who complain of chronic pain. One practitioner wrote "...in my practice many people use chronic pain as an attempt to receive disability payments. I have gradually become much more skeptical in my treatment". Others responded, "...known drug abusers using chronic pain such as backaches to get medications". One commented, "...seeing patients that really hurt and the many just seeking drugs. I think often we may not medicate enough because of the patients we see seeking narcotics. Those patients make you very skeptical about giving pain meds". Comments such as these support assertions by Calvillo and Flaskerud (1993) and Villarruel and de Montellano (1992) that one's culture affects responses to pain and client experiencing pain. The drug abusers and
drug seekers certainly represent a certain culture. These comments may also reflect assertions by Bondestam, et al (1987) that nurses become hardened to complaints of pain. Another practitioner wrote, "my experience has been with acute pain and I am somewhat skeptical of chronic pain". One practitioner was very negative as revealed by this statement: "...dealing with drug seekers and having to put up with them...I have very little sympathy for folks who are too damn sorry to work when they are perfectly capable...". Another asserted, "my attitude has probably been soured by seeing a disproportionate number of drug seekers". The comments of these practitioners certainly support findings of Wakefield (1995) and Weissman and Dahl (1990) that many health care providers have negative attitudes toward people seeking pain medication.

This study did not show differences in treatment choices of nurse practitioners who felt that chronic pain is legitimate more than 50% of the time and those who felt chronic pain is legitimate less than 50% of the time. Nurse practitioners are, however, guided by protocols when treating pain. This study did not look at patient outcomes or patient satisfaction.

Limitations

The limitations in this study were internal and external. The greatest threat to generalization of this study's findings was a lack of randomization. Sample selection was restricted to the number of subjects who
responded to the survey. The sampling design was one of convenience, thus a true representation of nurse practitioners must be questioned. The instrument was researcher designed and had only face validity. This was the first time the instrument had been used in a study. One question in particular (15) was reported by several subjects to have an unclear meaning. The instrument was self-administered and data were not validated. Due to the nature of the survey, cause and effect conclusions could not be drawn.

In all cited limitations, the researcher was aware of lack of control for certain intervening variables. However, attitudes of nurse practitioners toward chronic pain have not been studied; thus the weaknesses were admissible given the application of the research as a pilot study and the constraint of time for research implementation.

Conclusions

The results of this study lead the researcher to conclude that there are varying attitudes among nurse practitioners regarding chronic pain and the clients who present with chronic pain. Additionally, the sample was sufficient to give an overview of attitudes and treatment modalities for practitioners in Mississippi. Lastly, Travelbee's (1971) theory was appropriate as a framework since this model focuses on the relationship between the nurse and the patient which is affected and determined by attitudes and beliefs.
Implications for Nursing

Implications for nursing may be applied to theory, practice, and nursing education. As attitudes and beliefs have been demonstrated to affect perceptions and treatment of clients, theories that include recognition and identification of attitudes and beliefs should be emphasized more in nursing practice and education through utilization of Travelbee's theory. Another implication for nurse practitioners would be to act as patient advocates who assist each patient who has chronic pain to find optimal relief and to identify personal coping skills in order to enable living as normal a life as possible. Hinton-Walker (1993) asserts that nurse practitioners have the potential to become "wise heroes" (a heroic balance of the medical model and tender loving care) of the chronically ill person. Nurse practitioners can utilize Travelbee's theory to identify problems and set mutual treatment goals with the client and be "wise heroes" for these patients.

This study shows that there are varying attitudes toward chronic pain. As chronic pain has been noted to be a widespread problem, nurse practitioners must examine their personal beliefs and attitudes toward chronic pain and their clients who complain of chronic pain in order to identify any possible barriers to treatment. This study did not look at patient satisfaction or outcomes. The researcher believes that research examining the relationship of the variables of patient satisfaction, patient outcomes, and
patient perceptions of caring, with nurse practitioner attitudes should be conducted.

Recommendations

Research

1. Replicate this study with different samples drawn from nurse practitioners throughout the country.

2. Repeat this study using a revised CCPQ that would allow comparisons to be made and statistical differences to be measured.

3. Conduct a study to determine if there are statistical differences in treatment modalities of nurse practitioners with varying attitudes toward chronic pain.

4. Investigate the relationship of patients' perceptions of nurse practitioner attitudes toward chronic pain and satisfaction with treatment modalities.

5. Investigate the relationship between nurse practitioners' previous experiences with pain and current attitudes toward pain.

Nursing

1. Utilize Travelbee's Theory as a framework for care by nurse practitioners in primary care.

2. Educate nurses, especially nurse practitioners, of the need to be cognizant of personal beliefs and attitudes as possible barriers to practice.

3. Incorporate theories such as Travelbee's that emphasize the importance of attitudes and beliefs in planning patient care.
4. Act as advocates for patients experiencing chronic pain by assisting each patient to find optimal relief and to develop coping skills that will allow each to lead as normal a life as possible.
References


Appendix A

Coggins Chronic Pain Questionnaire
Coggins Chronic Pain Questionnaire

This questionnaire is part of a study on nurse practitioner management of chronic pain. Your response to the following questions is greatly appreciated.

1. Do you feel that chronic pain is a valid complaint?
   Yes _____ No _____

2. Approximately how many clients do you see per week that have complaints of chronic pain?
   a) 1 to 20_____
   b) 20 to 40____
   c) 40 to 60_____ 
   d) if >60, approximately how many_____ 

3. Please indicate in order of frequency (1 = highest and 4 = lowest) the types of chronic pain complaint you see.
   Backache _____
   Headache _____
   Arthritis____
   Other___________________________________

For the following questions, please indicate the answer you most closely agree with.

4. How many clients with complaints of chronic pain have legitimate complaints?
   a) less than 10% _____
   b) 10% to 25% _____
   c) 25% to 50% _____
   d) 50% to 75% _____
   e) 75% to 100% _____

5. How many clients complaining of chronic pain are drug seekers?
   a) Less than 10%______
   b) 10% to 25% ______
   c) 25% to 50% ______
   d) 50% to 75% ______
   e) 75% to 100% ______

6. How many clients complaining of chronic pain are malingerers?
   a) Less than 10%______
   b) 10% to 25% ______
   c) 25% to 50% ______
   d) 50% to 75% ______
   e) 75% to 100% ______
   a) Strongly agree ______
   b) Somewhat agree ______
   c) Not certain ______
   d) Somewhat disagree____
   e) Strongly disagree____

8. Most clients with chronic pain receive more pain medication than necessary.
   a) Strongly agree ______
   b) Somewhat agree ______
   c) Not certain ______
   d) Somewhat disagree____
   e) Strongly disagree____

9. The majority of clients with chronic pain are undermedicated.
   a) Strongly agree ______
   b) Somewhat agree ______
   c) Not certain ______
   d) Somewhat disagree____
   e) Strongly disagree____

10. Psychological dependence or physical addiction to narcotics as a result of legitimate prescription to clients with chronic pain occurs:
    a) Very frequently (>1 in 10)_____ 
    b) Frequently (1:10 to 1:100)______
    c) Occasionally (1:100 to 1:1000)_____ 
    d) Rarely (<1 in 1000) _____
    e) Never _____

11. An overdose of narcotics prescribed for chronic pain occurs:
    a) Very frequently (>1 in 10)_____ 
    b) Frequently (1:10 to 1:100)______
    c) Occasionally (1:100 to 1:1000)_____ 
    d) Rarely (<1 in 1000) _____
    e) Never _____

12. The best judge of pain intensity is:
    a) the healthcare provider____
    b) the client____
    c) the client's spouse, family, or significant other____
    d) other____(please specify)
13. Your degree of concern about addiction if a family member is given a narcotic for chronic pain would be:

a) No concern _____
b) Mild concern _____
c) Moderate concern____
d) Extreme concern ____

14. Increasing requests for analgesics indicates:

a) Worsening of condition _____
b) Tolerance to the analgesic____
c) Psychological dependence ____
d) Physical addiction _____

15. Chronic pain can be relieved with treatment.

a) 100% of the time____
b) 75% of the time ____
c) 50% of the time _____
d) 25% of the time _____
e) <10% of the time____

16. Please indicate the treatment interventions you currently prescribe or recommend for clients experiencing chronic pain. (with 1 = first line modalities, 2 = second line modalities, 3 = modalities used next, etc. Place a zero beside modalities you never use.)

a) NSAIDS (nonsteroidal antiinflammatory drugs)____
b) Trial of bedrest____
c) Physical therapy____
d) Applications of heat or ice____
e) Exercise____
f) Manipulation (chiropractic or osteopathic)____
g) TENS unit____
h) Relaxation techniques____
i) Referral to pain clinic____
j) Referral or consult with neurologist____
k) Consult or referral with preceptor for scheduled analgesics____
l) Other nonscheduled pain relievers (ie, Fioricet, Ultram)____
m) Steroids____
n) Tricyclic antidepressants ____
o) Other (specify)_____________________________________

17. At what point in managing clients with chronic pain do you consult with preceptor for scheduled analgesics?
18. Please indicate your practice setting.
   a) Primary care clinic_____
   b) Emergency room ______
   c) Physician's office______
   d) Other (where?)________________________

19. Your sex. (Please check) M____ F___

20. Your age.______.

21. How many years have you been in advance practice?_____

22. Please indicate your area of certification:
   a) Family____
   b) Adult _____
   c) Geriatric____

23. What was your clinical experience prior to becoming a nurse practitioner?

24. Has a family member or close friend ever experienced chronic pain? Yes______ No______

25. Do you now, or have you in the past, experienced chronic pain?
   Now______. Past______.

26. What, in regard to your experiences with pain, has brought you to your present attitude toward chronic pain and your current treatment modalities?
Appendix B

Approval of Mississippi University for Women

Committee on the Use of Human Subjects in Experimentation
March 5, 1996

Ms. Kay Coggins
c/o Graduate Program in Nursing
Campus

Dear Ms. Coggins:

I am pleased to inform you that the members of the Committee on Human Subjects in Experimentation have approved your proposed research provided the following standard is met:

The doctor gives approval and parental consent is obtained where possible in the event any minor is chosen to participate.

I wish you much success in your research.

Sincerely,

Susan Kupisch
Vice President
for Academic Affairs

SK:wr

cc: Mr. Jim Davidson
Dr. Mary Pat Curtis
Appendix C

Cover Letter to Nurse Practitioner Participants
Dear Nurse Practitioner:

I am a registered nurse in the Graduate School of Nursing at Mississippi University for Women, Columbus, Mississippi. I am conducting a study that examines nurse practitioners' attitudes and beliefs toward chronic pain and their interventions for chronic pain. Your opinions and experiences are very important to me and are needed to give an accurate picture of nurse practitioner management of chronic pain in Mississippi. Would you please assist me in this study by filling out the enclosed questionnaire?

Your name was chosen from a list of nurse practitioners obtained from the Mississippi State Board of Nursing. Strict confidentiality will be maintained. Return of the questionnaire will indicate consent to participate. A postage-paid return envelope has been provided for your convenience. I hope that you will take a few minutes to complete and return the questionnaire to me -- it should take approximately 15 minutes. In order to analyze the information in a timely fashion, please return the questionnaire by May 1, 1996.

Thank you very much for your cooperation and assistance in this study. Results of the study will be available in September, 1996, upon request.

Sincerely,

Kay Coggins, R.N., B.S.N.
Appendix D

Follow Up Postcard
Message on follow-up postcard: Kay Coggins

Dear Nurse Practitioner:

Thank you for your participation in my research study "Chronic Pain: Nurse Practitioner' Attitudes and Interventions in Primary Care." If you have not returned the Coggins Chronic Pain Questionnaire, please do so by May 31, 1996. Your assistance is appreciated.

Sincerely,

Kay Coggins