Role of the Nurse Practitioner in Managing Patients with Pain

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Abstract

This study explored Nurse Practitioners' (NP) roles in managing patient with pain in primary care settings. Data were collected through interviews with 23 NPs who practiced in two different state jurisdictions. Data analysis was accomplished through the constant comparative methodology and dimension analysis of grounded theory. Analysis revealed two facets that influenced the role of the NPs in managing patients with pain, pain consciousness and practice climate. Pain consciousness was the NP's awareness of and sensitivity to pain as a problem patients brought to the clinical setting. Practice climate was the regulatory atmosphere or environmental tone in which the NP functioned. NPs used strategies to manage patients with pain that differed according to both the regulatory environment and the NPs awareness and sensitivity to pain.

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INTRODUCTION

Pain is one of the most common reasons that patients seek help from health care providers. However, published information on primary care nurse practitioners' roles in pain management, particularly pharmacological management, is virtually nonexistent. A search of Medline's database (1996-2004) yielded 23,529 citations on pain, 4,609 on nurse practitioners, but only 32 citations in which pain and nurse practitioner were the key variables.

Despite the paucity of literature on NPs and pain management, the clinical journals and publications devoted to pain, hospice programs, pain clinics, and national and international pain meetings and organizations attest to the interest in pain management by nurses, physicians and other health providers.[1,2] Even with the attention to pain management, however, many practicing nurses, nursing students, and faculty have inaccurate information on pain management.[1,3,4,5] Medical students[6,7] and physicians hold similar misconceptions.[8,9,10,11,12] To compound the problems, patients also lack accurate and current knowledge of effective pain management strategies.[9,13,14,15]

Thus, the misconceptions about pain management identified earlier by McCaffery and Beebe[1] still continue. The most common are these: (a) most patients receive adequate treatment for pain; (b) routes other than oral are preferred for narcotic administration; (c) pain relief is not an expected treatment goal; (d) patients over report their pain; and (e) p.r.n. administration of narcotics minimizes the chances of addiction.

The pain management literature has focused primarily on patients with chronic pain who are receiving care in acute care hospitals or at home under the auspices of organized home health services. Relatively little attention has been paid to patients in pain, in primary health care settings.

The number of states granting prescriptive authority to nurse practitioners has increased since 1994, reflecting a trend toward fewer restrictions on nursing practice. Currently, all but four states grant some type of prescriptive authority, including controlled substances, to nurse practitioners.[16] In many states, however, the conditions under which nurse practitioners may prescribe are narrowly specified. This qualitative study examined the role of the nurse practitioner in managing patients with pain, in hopes of illuminating factors surrounding this significant aspect of primary care.

METHODS

SETTINGS AND RESPONDENTS

The study was conducted in two states, located in two different geographical areas of the United States. One setting

was in a predominately rural area of an eastern seaboard state. The other was in a metropolitan coastal area of a western state. The study used a convenience sample of a total of 23 nurse practitioners (NPs), seven of whom were from the western state. All provided some type of primary care to patients of all ages in a variety of settings including private physician practices; college student health services; an university health science center; out-patient clinics, health departments; and health management organizations. All but two of the NPs were female. Their ages ranged from 32 to 55 years with a mean of 45 years. Twelve were prepared as NPs in continuing education certificate programs; nine in master's programs; and two in postmaster's certificate programs. Two thirds (16) had worked as a NP for more than 10 years.

DATA COLLECTION AND ANALYSIS

Semi-structured interviews lasting 45 minutes - one hour were conducted with respondents in negotiated locations including homes, offices, and college classrooms. The interviews were audio recorded and transcribed verbatim. The interview guide included questions on: patients with pain in the NP's practice; major problems for patients with pain; approaches used in assessing patients' pain; pain management strategies; and barriers encountered in managing patients with pain.

Data were analyzed using the operational guidelines of grounded theory.[17,18,19, 20] In addition, the researcher used Schatzman's dimensional analysis, [21, 22,23,24] a method informed by the core ideas and practices of grounded theory. Dimensional analysis provides a matrix for framing research findings that permits the researcher to designate dimensions in terms of perspective, context, condition, action/processes, and consequences. The constructed matrix provided the logic for organizing the study's dimensions according to their relative salience and permitted construction of an account of the role of NPs in managing patients with pain.

DISCOVERIES

Analysis revealed two important facets that influenced the role of these NPs in managing patients with pain: pain consciousness, an in vivo code, and practice climate, an analytical derived code. Pain consciousness was the NP's awareness of and sensitivity to pain as a problem patients brought to the clinical setting. Practice climate was the regulatory atmosphere or environmental tone in which the NP functioned. Indeed, the level of pain consciousness and type of practice climate were consistently found to be conditions that held consequences for nurse practitioner roles in managing patient with pain.

PAIN CONSCIOUSNESS

Pain consciousness was a major factor in the NP's role in management of patients' pain. Three analytically derived dimensions provided the bases for categorizing the NPs' awareness and sensitivity to pain as a significant component of patients' problems: (a) their perceived prevalence of patients with pain in their practices; (b) their approaches to assessment of patients' pain; and (c) their strategies for pain management.

Perceived Prevalence of Patients with Pain. Some of the NPs discounted the patients' pain while others readily acknowledged that patients frequently presented with concerns about pain. When approached about participating in the study and given an explanation of the study, the NPs categorized as having low levels of pain consciousness frequently responded with “I don't see patients with pain” and referred the investigator to another clinician “who sees more patients with pain.” Several consented to participate only when asked, “Well, you see patients with headaches, sport injuries, dysmenorrhea, or arthritis, don't you?”

In contrast, NPs categorized as having high levels of pain consciousness when approached about the study offered the types of problems that prompted patients to seek care, e.g. back pain, abdominal pain, pelvic pain, and migraine headaches, and readily agreed to participate in the study. These NPs acknowledged the prevalence of pain with comments like this NP, who was in a general practice and related, “The practice saw a lot of menopausal women. So they are in menopausal age with various types of arthritis or something called fibromyalgia, which is pretty common in women.” A pediatric nurse practitioner (PNP) when learning that some NPs did not see pain as a problem in pediatrics replied, “Have you talked to other PNPs? Because, I can't imagine a PNP or someone in pediatrics saying that, because, that is often what drives a parent to bring a child in.”

Assessment Approaches. All respondents stressed the importance of systematic collection of both subjective and objective data in order to determine the etiology of the patient's pain. However, there were differences among the respondents in the emphasis placed on determining the etiology of pain.

Those NPs with low pain consciousness stressed that it was

essential to determine the cause of the pain in order to treat the pain. Their logic was that treating the cause would relieve the pain. NPs with high levels of pain consciousness, while not negating the importance of determining the etiology and treating the cause, said it was also essential to relieve the pain itself. The two groups of NPs differed remarkably in their approaches to evaluating the intensity of patients' pain. NPs with low levels of pain consciousness said that it was essential to determine whether the pain was "real' or not and they relied heavily on objective data in assessing pain intensity. They employed techniques as " I begin by observing the patient, how much guarding they do, how they hold themselves, how much stress they appear to be in." Those with high levels of pain consciousness indicated that the patient's evaluation of the pain determined the intensity and related techniques such as: "I use the smiley face scale for children and adolescents. Adolescents laugh, but they still get into it. For adults, I ask them to describe it in words, but also to quantify it on a one to five Likert type, five is the worse."

Management Strategies. All respondents used a variety of strategies to manage patients' pain, including: educating, prescribing, and referring. Respondents educated their patients about the cause of the pain and modes of self-care; prescribed pharmacological agents and non-pharmacological pain relief methods; and referred patient to other resources when, in their judgment, different approaches were in order. Although all respondents reported these strategies, the two awareness groups differed as to the priority placed on these strategies.

NPs with low levels of pain consciousness, who also stressed the importance of determining the etiology of the pain, felt that providing the patient with an explanation of the cause would alleviate or at least reduce the pain. These NPs stressed the importance of self-care methods and provided teaching about such methods, such as relaxation to relieve headaches. They placed considerable emphasis on non-pharmacological methods, e.g., ice and heat, and they tended to prescribe pharmacological agents as adjunctive strategies to self-care or non-pharmacological agents. When they did prescribe, the agents used most frequently were acetaminophen or non-steroidal anti-inflammatory agents, regardless of the severity of the pain. Many of these NPs talked about avoiding the use of "narcotics" entirely, or using them only in very unusual situations.

In contrast, the NPs with high consciousness of pain, those who relied on patients' subjective accounts of pain intensity, noted that it was essential to relieve pain and emphasized the need to use pharmacological agents potent enough to get the pain under control. These NPs were not reluctant to employ opioids for moderate to severe pain and they used non-pharmacological agents adjunctively to pharmacological strategies as illustrated by this NP's account:

I have noticed that when I do give pain medications or anti-inflammatories or muscle relaxants [before] getting them into physical therapy or exercise regimens they do a whole lot better, than trying to get them to do all that before you give them the pain medicine.

Like the NPs with low consciousness of pain, these NPs also stressed the importance of patient education about pain management. Their patient education efforts, however, focused on teaching patients the importance of preventing pain by taking analgesics as prescribed rather than waiting until the pain intensified beyond tolerance. In addition, they stressed to patients that "addiction" was not a concern when the patient used medications as prescribed.

All respondents referred patients to other providers, including physical therapists, occupational therapists, and mental health providers, when this was deemed necessary. The NPs with low pain consciousness frequently referred to mental health providers to determine whether "narcotics" were really needed. These NPs were those who felt it was necessary to determine if the patient's pain was "real." NPs with high pain consciousness referred patients to mental health providers not to evaluate their need for opioids, but to obtain adjunctive methods to relieve the pain, or to treat disorders related to the patient's pain, e.g., depression. They referred to non-traditional providers e.g. herbalist, acupuncturist, more readily than the low pain consciousness group of NPs.

PRACTICE CLIMATE

The second major discovery regarding NPs role in managing patients with pain involved the environment in which they practiced. Although the NPs in this study practiced in two different states, NPs in both states could prescribe, "with some degree of physician involvement or delegation of prescription writing."[25 p.18] Despite this global similarity, there were variations in the prescriptive regulations of the two states. NPs in one state had obtained prescriptive authority for controlled substances (Schedule II-V) two years before the study. In order to prescribe controlled substances, they were required to obtain a DEA number. At the time of the study, the NPs in the second state had not yet

obtained prescriptive authority for controlled substances.

In the state with prescriptive authority that included controlled substances, the scope of practice was under the joint authorization of the Board of Nursing and Board of Medicine. In the second state, the scope of practiced resided solely with the Board of Nursing.

NPs in the two states reported very different views of their practice environments. NPs in the state, which authorized prescriptive authority for controlled substance, reported the practice climate as one of active enforcement of prescriptive regulations. In contrast, NPs in the state without prescriptive authority for controlled substances viewed enforcement of prescriptive regulations in a more relaxed manner. NPs in the two states, the active enforcement state (AES) and the relaxed enforcement state (RES) differed in their views of enforcement along the following dimensions: (a) implementation of regulations, (b) perceived surveillance by regulatory agencies, and (c) apprehensiveness regarding possible regulatory investigation.

Implementation of Regulations. NPs in the AES were very aware and familiar with the details and implications of prescriptive regulations. In contrast, NPs in the RES were relatively oblivious to regulatory requirements. In the AES where NPs had a high awareness for the regulations, they gave consistent non-conflicting accounts of the legal authorizations and requirements.

In the RES, NP respondents differed in their interpretations of the legalities governing their prescriptive practice. One NP indicated:

I write prescriptions for most . . . I can't think of a medication I haven't written a prescription for. I don't know if our pharmacies are just better about it or what. I write for Vicodan and Codeine and all of those things all of the time. There are places that have problems with pharmacies. I don't know if it is because the doctor I work with is really well established in the community. I am not sure what it is. But I have never had a problem with writing prescriptions.

In contrast, another NP in the same state indicated: “If patient require narcotic pain medications those of course come as prescriptions from the doctor.”

Perceived Surveillance. In the AES where NPs were highly aware of the regulations, they perceived that they were under close observation by highly suspicious and distrusting regulatory authorities. These authorities included governmental boards of pharmacy, medicine, and nursing. In contrast, the NPs who practiced in the RES gave varying accounts of the regulations and viewed the possibility of surveillance as very remote and highly unlikely.

Apprehensiveness About Possible Regulatory Investigation. Those NPs who perceived they were under close scrutiny by regulators also expressed fears about the possibility of regulatory investigation. Although only a few had actually been investigated, many had heard second or third hand accounts of the experience of other NPs and conveyed that such an event was very possible in their own situation. They were relatively uninformed about the outcomes of the investigations. In contrast, NPs in the RES who were relatively oblivious to regulations or surveillance viewed investigation of their prescriptive behavior as highly improbable. These NPs were unaware of any investigative activity in their region.

CONSEQUENCES FOR NURSE PRACTITIONER ROLES IN MANAGING PATIENTS WITH PAIN

The two types of practice climates, designated as having either active or relaxed approaches to regulatory enforcement, provided the context for NPs roles in managing patients with pain. Moreover, NPs used strategies to manage patients with pain that differed according to both contextual and pain consciousness factors

Active Enforcement. Under conditions of active enforcement of prescriptive regulations, the AES, NPs with high levels of pain consciousness described a strategy of diligently and scrupulously adhering to prescriptive regulations. Through this adherence to regulations they used their own signatures to prescribe opioids for patients with moderate to severe pain.

In contrast, in the same practice climate, NPs with low levels of pain consciousness used strategies analytically designated as avoiding. Their avoidance had two forms: (a) prescribing non-opioid interventions; or (b) when, in their clinical judgment opioids were warranted, requesting an available physician to write the prescription.

Relaxed Enforcement. In the practice climate, characterized as relaxed enforcement, the RES, NPs were without prescriptive authority for controlled substances. NPs with high levels of pain consciousness used two different strategies, complying with or circumventing prescriptive regulations. If a physician was available on site, the NP, in compliance with regulations, obtained his or her signature on

the prescription for the controlled substance. However, if the physician was not on site, NPs circumvented regulations in order to provide patients with controlled substances. One of the main methods of circumventing regulations was use of pharmacies where staff would accept “called in” orders when the NP self-designated as a member of the physician's staff and not as a NP. Interestingly, none of the NPs in the study who practiced in the RES, managed patients with pain in a style reflective of low levels of pain consciousness.

DISCUSSION

Discoveries made in this study identified two factors that influenced the NP's role in managing patients with pain in primary health care. One factor was the NP's level of pain consciousness--the awareness and sensitivity to pain as a problem for patients. The other factor was the type of practice climate--the nature and enforcement of prescriptive regulations.

This study suggests that regardless of the type of prescriptive authority or enforcement policy, NPs with high levels of pain consciousness related strategies in managing patients with pain in accordance with recommended clinical guidelines. However, to provide the recommended level of care, the NPs' accounts indicated that they devoted time and labor in complying or circumventing regulations, notwithstanding the patient time in waiting and delay in pain relief and the physician's time in writing the prescription. In addition, the study's discoveries imply that providing NPs with prescriptive authority for controlled substances in absence of an NP awareness and sensitivity to the importance of pain as a problem is unlikely to result in a level of care that meets clinical guidelines.

Caution is warranted in generalizing the discoveries to other sites, due to the characteristics of the respondents and sites. The study was limited to a small number of volunteer NPs; consequently, how representative their accounts are of non-volunteers is unknown. How representative these NPs were of others practicing in the same jurisdictional area is also unknown. Data collection was limited to NPs' accounts and did not include observational data. Nevertheless, the study provides salient dimensions surrounding the NP role in managing patients with pain in primary care settings.

Given the descriptive purpose of the study and the relevant discoveries, further studies are needed. Studies of NPs in other jurisdictions particularly in Midwestern states are needed. This is especially important considering that the discoveries made in this study raise questions concerning the influence the regulatory environment may have on the practitioner's level of pain consciousness. Although, the study included a variety of sites, long-term care facilities were not represented and should be included in future studies. All of these studies should include an observational component with NPs, patients, and other providers.

The discoveries made in the study permit a beginning conceptualization of the role of the primary care NP in managing patients with pain. The study clearly points to the complexity of providing care under the variations in current regulatory policies. In addition, other providers, e.g. physicians, physician assistance, pharmacist may benefit from the conceptual insights outlined here.

Since this study suggest that NPs' awareness and sensitivity is a major factor that influences the quality of care patients receive, it follows that methods that promote and maintain such sensitivity need identification. Educational programs that include “consciousness raising” strategies are needed. Such programs must explore not only the cognitive aspects, but also the attitudes and values that influence NPs proclivity to employ or avoid the use of opioids. Such programs based on critical theory would provide additional depth and breadth to the many issues surrounding pain management. Not the least of these is a critical analysis of the powerful influence current statutory, regulatory, and judicial policies related to “drug abuse” hold for health care providers. While this type of educational approach is needed as continuing education, it is imperative that programs preparing NPs incorporate this within existing curricula. In addition, to educational efforts, primary care settings that intend to provide care according to recommended guidelines need to actively recruit NPs with high levels of pain consciousness. Queries during the interviews concerning the NP candidate's recognition, assessment, and management of pain would provide data on which to base employment decisions.

Calls for increased attention to pain management continue. It is essential that professional associations, educational institutions, and legal agencies respond to these calls and work to ensure that patients receive quality care

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