Article 5

Nurses’ Personal Pain Experiences and Their Pain Management Knowledge

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ABSTRACT. This study examined nurses’ personal experiences with pain and whether nurses’ personal pain experiences were associated with initial pain management knowledge and ability to learn more about pain management. This descriptive correlational study was a secondary analysis of a study that used a one-group pre-test-posttest design to examine the effect of a pain management education program on nurses’ pain management knowledge. The sample consisted of 177 nurses who answered yes to having had a personal pain experience requiring treatment. Nurses reported 13 types of pain, with pharmacological interventions comprising 94.4% of the pain treatments. Nurses’ previous personal pain experiences were negatively related to their initial pain management knowledge ($r = -0.23$, $p < .01$). Nurses’ personal pain experience may impact their learning of pain management knowledge and should be considered when designing pain management education.


Pain management continues to challenge nurses and other health care providers, despite advances in pain management knowledge and technology. Adequate pain management knowledge by nurses is critical for effective pain relief for patients. Improvements in pain management education have led to improved pain relief for patients (Super, 1996). Identifying factors that affect the learning and clinical application of pain management knowledge may suggest ways to tailor pain management education for even more effective use by nurses. One factor that could affect nurses’ current pain management knowledge and their ability to learn more, is nurses’ previous experiences with their own pain (personal pain experiences).

Personal pain experiences were defined in this study as any reported experience with pain that required nurses to take medication or seek treatment. The purposes of this study were to:

- Describe nurses’ personal pain experiences.
- Describe nurses’ experiences with family and friends in pain, and professional experiences with pain.
- Examine the relationship between nurses’ personal pain experience and their pain management knowledge.
- Examine the relationship between nurses’ personal pain experience and their ability to learn pain management knowledge.

Minimal research has focused specifically on nurses’ personal experiences with pain, and the ways in which personal pain experiences relate to practice. Three studies examined the effects of nurses’ personal pain experiences on assessment of patients’ pain. Holm, Cohen, Dudas, Medema, and Allen (1989) found that assessment of patients’ pain was influenced significantly by the intensity of nurses’ past personal experiences with pain. Nurses who had a higher intensity level of pain experiences were found to be more sympathetic to patients in pain. The assessment of the degree of patients’ psychological distress from a pain experience also was found to be higher when the nurses assessing the patients had higher levels of intensity with their own personal pain.

Contrary to these findings, Ketovuori (1987) reported that nurses with post personal experiences of postoperative wound pain estimated their patients had lower pain intensity than nurses with no previous personal pain experiences. It also was found that neither group assessed their patients’ pain correctly. The discrepancy in findings may be related to the instruments used to measure the personal pain experiences for the nurses. Holm et al. (1989) used an in-depth questionnaire about nurses’ personal pain and then compared responses to the Standard Measure of Inferences of Suffering Questionnaire by Davitz and Davitz (1980). Ketovuori (1987) considered only that nurses had experienced some postoperative wound pain. There was no indication of the intensity of the pain these nurses experienced. Pain intensity may impact nurses’ pain assessments of patients. For example, nurses who experienced mild pain from their postoperative wounds may forget the pain experience easily. Nurses who remember a personal experience with severe pain may be.

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better able to understand patients’ perspectives regarding pain.

A third study (Dalton, 1989) examined the influence of nurses’ personal experiences with pain on their pain assessments. Three groups of nurses, one with previous experience with cancer patients, one with no experience with cancer patients, and one group of oncology nurses who were members of the Oncology Nursing Society (ONS), were questioned about their personal pain experiences. The most commonly reported types of pain were headaches and menstrual cramps. The most common initial treatment for the pain was with pharmacological interventions. All three groups reported using distraction and relaxation in conjunction with medication for pain management. A majority of nurses from each group stated their personal feelings about pain affected their pain assessment of patients. Forty-two percent of the ONS members reported making behavioral changes, such as obtaining medication sooner for patients, because of personal feelings about pain (Dalton, 1989).

Nurses’ descriptions of their own personal pain experiences show how individual pain experiences affect individual nurses’ pain management practices. For example, Trotter (1992) wrote about her experience with bilateral glossopharyngeal neuralgia. With this syndrome, she experienced sharp pain in her throat, tongue, jaw, and ear and underwent three corrective surgeries. After a long hospital stay and drug withdrawal, she decided to resume taking oral morphine to have some pain-free moments in her life. Now, she is a strong believer in patients’ rights to make their own decisions regarding pain control. She believes nurses should help facilitate these decisions.

Snyder (1994) described the chronic pain she suffered after surgery for a cerebral aneurysm. Pain management was difficult for her because physicians did not believe her, and she was labeled an addict. After finding a physician to treat her pain and regaining parts of her life taken away by her chronic pain, she learned that patient, nurse, and physician communication, as well as adequate pain management education, was the key to the liberation of chronic pain.

Mitchell (1994), an RN from Texas, was diagnosed with an aneurysm. After enduring painful attempts at a lumbar puncture, this nurse gained a new respect for her pediatric patients undergoing lumbar punctures on her unit. She struggled through many painful and sleepless nights, because of noise generated by nursing staff at the desk. She felt her headache would have been less severe had she simply been able to ask the nurses to stop making excess noise. Mitchell believed eliminating excess noise could result in increased comfort. The few studies that have been conducted on nurses’ personal pain experiences, together with the self-reports of personal pain experiences, suggest these unique personal pain experiences affect nurses’ assessment of patients’ pain.

Without sufficient pain management knowledge, adequate relief of patients’ pain is less likely. Investigating the relationship between nurses’ personal pain experiences and nurses’ pain management knowledge may suggest ways to improve pain management education.

Methodology

This descriptive correlational study was a secondary analysis of a one-group pretest-posttest study. The primary study examined the impact of educational interventions on nurses’ knowledge and attitudes regarding pain.

The sample consisted of 177 (64.5%) of 220 RNs employed at a university medical center in the northeastern United States who answered yes to having had a past personal pain experience that required medication or treatment. Nurses from each specialty area (e.g., medical, surgical, neonatal intensive care, special care nursery, obstetrics and gynecology, psychiatric, substance abuse, bone marrow transplant, operating room, post-anesthesia care, emergency room, pediatric, adult intensive care units) completed the questionnaire.

An explanation of the primary study will precede the procedure for the current study. Human subjects’ approval was obtained prior to the beginning of the primary study. Informed consent was obtained from all nurses participating in this study. The Nurses’ Knowledge and Attitudes Survey Regarding Pain, developed by Ferrell and colleagues at the City of Hope National Medical Center, Duarte, California, in 1987 (Ferrell, Grant, Ritchey, Ropchan, & Rivera, 1993), was used to collect data on nurses’ knowledge of pain management prior to formal education classes and after they attended one to seven pain education seminars. The instrument contained 22 true or false questions, 13 multiple choice questions, and 2 short case studies with 2 questions each. Content for the instrument was derived from pain management standards published by the American Pain Society, the World Health Organization, and the Agency for Health Care Policy and Research (Ferrell et al., 1993), establishing some content validity. The Nurses’ Knowledge and Attitudes Survey Regarding Pain was tested and found to discriminate between nurses with differing levels of pain management expertise. A test-retest reliability of .80 has been established, along with an internal consistency reliability of .70 (Ferrell et al., 1993).

A 6-month to 9-month period existed between the pretest and completion of all the posttests in the primary study, with the exception of a few neonatal intensive care nurses who posttested at 12 months. The original research design included a consistent 6-month delay between the pretest and posttest across all specialties. However, the demands of the individual clinical specialties sometimes required a delay in educational sessions and, consequently, a delay in the posttest. Within these 6 to 9 months, seven educational
seminars were presented, none of which were mandatory. At least one session must have been attended to complete the posttest. The educational interventions included:

- Nursing Grand Rounds on Pain presented by Neil Schecter, MD, a renowned pediatric pain specialist.
- Small discussion groups on patient vignettes representing pain situations specific to the nurses’ clinical practice.

Some patient vignettes were based on scenarios generated by the Wisconsin Cancer Pain Initiative. The remaining vignettes were developed specifically for each specialty area by a clinical nurse specialist in that specialty and were evaluated prior to implementation by three pain experts.

Following the completion of the Nurses’ Knowledge and Attitudes Survey Regarding Pain pretest and posttest, a participant questionnaire designed by the researchers of the primary study was used to collect demographic data and information regarding nurses’ personal, family, and professional experiences with pain. The personal pain questions included:

- Have you personally had any experiences with pain which required that you take pain medication or seek treatment? Please describe briefly.
- Have you had any personal experiences with pain (e.g., family or friends)? Please describe briefly.
- Have you had any professional experiences or events related to pain which left an impression on you in a negative or positive way? Please describe briefly.

The current study examined the personal experiences described on the questionnaire by nurse participants in the pretest only. Content analysis guided by Holsti (1969) was conducted by the first author on the personal pain items of the questionnaire. Each nurse's statement was reviewed to identify key words or phrases that described a type of personal pain. For example, pain following surgery was placed in the postoperative pain category. A similar procedure was followed for the content analysis of the personal pain treatments, experiences with families’ and friends’ pain, and professional pain experiences. Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) and included frequencies, means, and point biserial correlations.

Results
The average age of the nurses was 35.7 (SD = 8.06). One hundred and sixty-nine (96%) nurses were women. Nurses were predominantly White (n = 167, 94.4%), with five (2.8%) Black nurses and three (1.7%) Hispanic nurses. Educational backgrounds included 73 (41.2%) baccalaureate degrees in nursing, 49 (27.7%) diplomas, 34 (19.2%) associate degrees, 11 (6.2%) non-nursing baccalaureate degrees, and 8 (4.5%) master's degrees. The average number of years worked was 12.1, with a range of 0 to 36 years.

The nurses reported 13 sources for their personal pain experiences. The four most common pain sources included labor/gynecological, back/neck, postoperative, and dental (Table 1).

Table 1
Frequency of Sources of Pain Reported by Nurses (N = 177)

<table>
<thead>
<tr>
<th>Source of pain</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor/Gynecological</td>
<td>74</td>
<td>41.8</td>
</tr>
<tr>
<td>Back/Neck</td>
<td>35</td>
<td>19.8</td>
</tr>
<tr>
<td>Postoperative</td>
<td>32</td>
<td>18.1</td>
</tr>
<tr>
<td>Dental</td>
<td>31</td>
<td>17.5</td>
</tr>
<tr>
<td>Joints</td>
<td>21</td>
<td>13.6</td>
</tr>
<tr>
<td>Abdominal</td>
<td>19</td>
<td>10.7</td>
</tr>
<tr>
<td>Fractures</td>
<td>17</td>
<td>9.6</td>
</tr>
<tr>
<td>Headaches</td>
<td>15</td>
<td>8.5</td>
</tr>
<tr>
<td>Trauma</td>
<td>6</td>
<td>3.4</td>
</tr>
<tr>
<td>Infection</td>
<td>3</td>
<td>1.7</td>
</tr>
<tr>
<td>Renal</td>
<td>3</td>
<td>1.7</td>
</tr>
<tr>
<td>Muscle</td>
<td>3</td>
<td>1.7</td>
</tr>
<tr>
<td>Nerve pain</td>
<td>2</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Note: Some nurses identified multiple sources of pain.

Of the 177 nurses, 72 reported treatments used for their pain relief. There were nine types of treatment reported, ranging from narcotic analgesics to physical therapy. Sixty-eight (94.4%) nurses reported the sole use of pharmacological interventions, while four reported using nonpharmacologic methods for pain relief (Table 2). The pain experiences that 105 nurses reported with family and friends included 12 different causes of pain, ranging from cancer pain to headache pain. The most common pain experiences included cancer pain (n = 41, 39.0%), bone and joint pain (n = 14, 13.3%), and postoperative pain (n = 14, 13.3%). The most common relationship in this study was with parents (n = 37, 35.2%).

One hundred and twenty-six (71.2%) nurses reported professional experiences with pain that left an impression on them. The most common experience was undertreatment of patients’ pain (Table 3). The frequencies of these experiences are grouped as negative experiences, positive experiences, experiences with specific patient populations, and pain management beliefs.

Nurses' personal experiences with pain were examined to determine whether these experiences had any relationship with the initial pain management
knowledge of nurses and their ability to learn about pain management. Experiences with family, friends, or professional experiences were not included in these analyses. The mean score on the Nurses' Knowledge and Attitudes Survey Regarding Pain pretest was 24.9, (SD = 4.90), with a mean of 28.9 (SD = 4.70) on the posttest. The highest possible score was 39. The average score increase from the pretest to the posttest was 4.3 (SD = 4.9). Nurses with no previous personal pain experiences (n = 37) had a mean pretest score of 27.9 (SD = 4.56). A point biserial correlation was calculated between the dichotomous variable, previous personal experiences (yes = 1, no = 0), and the continuous pretest pain management knowledge score. Less pain management knowledge was associated with more personal pain experience (r[211] = -.23, p < .01). Nurses with previous personal pain experiences had lower mean pretest scores than nurses with no reported personal pain experiences (t[211] = 3.37, p < .001).

Table 2
Frequency of Treatments of Pain Reported by Nurses (n = 72)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narcotic analgesics</td>
<td>46</td>
<td>63.9</td>
</tr>
<tr>
<td>Nonsteroidal anti-inflammatory</td>
<td>19</td>
<td>26.4</td>
</tr>
<tr>
<td>Anti-inflammatory (unspecified)</td>
<td>4</td>
<td>5.6</td>
</tr>
<tr>
<td>Acetaminophen</td>
<td>4</td>
<td>5.6</td>
</tr>
<tr>
<td>Chiropractor</td>
<td>2</td>
<td>2.8</td>
</tr>
<tr>
<td>Physical therapy</td>
<td>2</td>
<td>2.8</td>
</tr>
<tr>
<td>Sumatriptan succinate</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Diazepam</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Muscle relaxants</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Cortisone</td>
<td>1</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Note: Some nurses identified multiple pain treatments.

The relationship of nurses' personal experiences with pain and their ability to learn pain management knowledge was calculated similarly, with the dichotomous personal pain experiences variable and the difference between the pretest and posttest scores. Previous personal experiences with pain were associated with greater learning of the pain management knowledge (r[157] = .19, p < .05).

Discussion
This study examined the association of nurses' personal pain experiences with nurses' pain management knowledge and ability to learn more about pain management. Nurses with more previous experiences with pain had less pain management knowledge. Caution should be exercised when interpreting the meaning of this correlation, with a reminder that cause and effect cannot be determined with correlational analysis. This finding suggests that nurses' pain management knowledge may be related to their own pain prevention. One plausible explanation is that nurses with less pain management knowledge may be hampered by their decreased knowledge of effectively treating their own pain. More specific investigation, such as a more detailed survey of how nurses treat their own pain and the outcome of their treatments, may clarify further nurses' knowledge and values regarding their own pain management. Groups of nurses with differing knowledge and values could be examined further for the effect of these factors on pain management decisions for their patients.

Table 3
Frequency of Professional Experiences with Pain (n = 126)

<table>
<thead>
<tr>
<th>Experience</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Negative Experiences</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undermedication</td>
<td>60</td>
<td>47.6</td>
</tr>
<tr>
<td>Patients do not appear to have pain but want medication</td>
<td>4</td>
<td>3.8</td>
</tr>
<tr>
<td>Patients appear to be in pain with complaints of pain and are not believed by caregivers</td>
<td>4</td>
<td>3.8</td>
</tr>
<tr>
<td>Feeling manipulated when addicted individuals complain of pain</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Nurses restricted by physicians orders</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Positive Experiences</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Better pain control with patient-controlled analgesia</td>
<td>4</td>
<td>3.8</td>
</tr>
<tr>
<td>Use of alternative methods is successful</td>
<td>3</td>
<td>2.4</td>
</tr>
<tr>
<td>Patients are successfully medicated</td>
<td>3</td>
<td>2.4</td>
</tr>
<tr>
<td>Morphine works well for postoperative cancer pain</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Epidural medication is successful, [with less] nausea and vomiting</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Working with people in pain increases assessment skills</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Specific Patient Populations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caring for patients with cancer pain</td>
<td>14</td>
<td>11.1</td>
</tr>
<tr>
<td>Caring for patients with postoperative pain</td>
<td>5</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Pain Management Beliefs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurses need to know pain is subjective</td>
<td>8</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Note: Although 126 nurses responded with descriptions of professional experiences, only responses greater than one were included.

Previous personal experiences with pain were associated with learning more about pain management.
Again, caution must be used when interpreting this correlation. Nurses who reported personal pain experiences had significantly lower pretest scores than the remaining nurses. The increased learning from the pretest to the posttest may reflect only that these nurses had more to learn about pain management. An alternative explanation is that nurses with previous personal pain experiences may have been more motivated to learn about pain management because of the personal relevance of the pain management knowledge. Adult learning theory would suggest this relationship (Knowles, 1980). A study could be developed to examine the effect of an intervention that assisted nurses to reflect on their own pain experiences prior to a pain management education program. A pretest-posttest experimental design with a control group could test this effect on consequent learning of pain management knowledge.

The nurses almost exclusively treated their own pain with medication. This result may have been affected by the wording of the question, which asked the nurses to report any pain experience that required medication or caused them to seek treatment. Dalton (1989) found that some nurses did use distraction and relaxation along with medication to treat their pain. In this study, the intention of the question was to avoid responses about minor pain. Reworking this question to ask nurses to report any problems with pain they considered significant may be a more valid way to elicit this information. Information regarding nurses' own pain treatment behaviors has important implications for patient pain management. Nurses who exclusively use medications with no adjunct pain treatments for their own pain treatment may be less likely to use adjunct pain treatments with their patients. A survey study examining nurses' own pain treatments and the pain treatments they use for their patients may clarify this association further.

Continuing education nursing instructors may find it helpful to encourage nurses to discuss personal use of adjunct pain treatments. Eliciting reasons for the non-use of adjunct pain treatments may uncover barriers that consequently could be removed. Discussions with nurses who use adjunct pain treatments may encourage others to incorporate these treatments.

Sixty of the 126 nurses who reported professional experiences with pain that left a lasting impression reported a problem with undertreatment of patient pain. No nurses reported a problem with overmedication. The high incidence of reported undertreatment may reflect that patients suffering from inadequately controlled pain are more likely to influence and be recalled by nurses. The high incidence suggests that undertreatment remains a significant clinical problem. Organization-wide efforts to decrease patient pain have begun to demonstrate significant decreases in patient pain as a result of multidisciplinary efforts (Super, 1996). These organization-wide efforts need to continue across all health care organizations.

The high reported incidence of undertreated pain suggests that nurses may benefit from education in ways to communicate successfully with health care workers regarding more effective analgesia for their patients. Communication skills, called attuning strategies from Communication Accommodation Theory (Coupland, Coupland, Giles, & Henwood, 1988), include strategies such as selecting the topic; maintaining face (i.e., avoiding embarrassment); interpersonal control; providing an explicit, clear message; and role responsibility. Assisting nurses to employ communication skills such as these when talking with physicians about more effective pain management may benefit the patients, nurses, and physicians.

Increasing nurses' pain management knowledge is an important aspect of any multidisciplinary pain management effort. Findings from the current study suggest nurses' personal pain experiences may be associated with their pain management knowledge and ability to learn more about pain management. Incorporating nurses' personal pain experiences as a part of a pain management education effort may promote greater learning by nurses.

References
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Exercise for Article 5

Factual Questions

1. According to the researchers, is there much previous research that focused specifically on nurses’ personal pain experiences and how these experiences relate to practice?

2. The sample was drawn from how many medical centers?

3. What is the reported value of the test-retest reliability coefficient for the Nurses’ Knowledge and Attitudes Survey Regarding Pain?

4. What percentage of the participants had associate degrees?

5. Is the correlation between pain management knowledge and personal pain experience direct (i.e., positive) or inverse (i.e., negative)?

6. What was the most frequently cited negative professional experience with pain?

7. How many participants reported a professional experience of overmedication for pain?

Questions for Discussion

8. What is your opinion of the researchers’ definition of “personal pain experiences?” (See lines 15–17.) Would you have defined it differently? Explain.

9. In their literature review, the researchers summarize three self-reports of personal pain experiences. (See lines 85–121.) In your opinion, are these anecdotal reports as important as the research studies summarized in lines 29–84?

10. The researchers report a correlation coefficient of .19 between previous personal experiences with pain and learning of pain management knowledge. (See lines 291–294.) In your opinion, is this a strong correlation? Explain.

11. The researchers suggest that the wording of one of their questions may have influenced an outcome of this study. (See lines 336–347.) Do you agree? Explain.

12. If you were to conduct another study on the same topic, what changes in the research methodology (if any) would you make?

Quality Ratings

Directions: Indicate your level of agreement with each of the following statements by circling a number from 5 for strongly agree (SA) to 1 for strongly disagree (SD). If you believe an item is not applicable to this research article, leave it blank. Be prepared to explain your ratings.

A. The introduction establishes the importance of the study.
   SA 5 4 3 2 1 SD

B. The literature review establishes the context for the study.
   SA 5 4 3 2 1 SD

C. The research purpose, question, or hypothesis is clearly stated.
   SA 5 4 3 2 1 SD

D. The method of sampling is sound.
   SA 5 4 3 2 1 SD

E. Relevant demographics (for example, age, gender, and ethnicity) are described.
   SA 5 4 3 2 1 SD

F. Measurement procedures are adequate.
   SA 5 4 3 2 1 SD

G. All procedures have been described in sufficient detail to permit a replication of the study.
   SA 5 4 3 2 1 SD

H. The participants have been adequately protected from potential harm.
   SA 5 4 3 2 1 SD

I. The results are clearly described.
   SA 5 4 3 2 1 SD

J. The discussion/conclusion is appropriate.
   SA 5 4 3 2 1 SD

K. Despite any flaws, the report is worthy of publication.
   SA 5 4 3 2 1 SD