

Pain Experience among Patients Receiving Cancer Treatment: A Review

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Abstract

Background: The unique challenges of working in the field of pain management, including the need to work with cancer clients who can have very complex needs, have been identified.

Purpose: To review and analyze a recent research articles that studied the experience of cancer-related pain in order to understand the factors that affect pain experience.

Methods: A literature review was conducted using the electronic databases of CINAHL, EBSCO, MEDLINE/ PubMed, and Cochrane of systematic reviews, for articles published between 2005 and 2012. Articles were systematically compared for common concepts to recognize similarities and differences in scope and findings across the studies. The sample sizes in this reviewed studies ranged from 11 to 560 adult cancer patients aged between 18 and 82 years.

Results: Among (14) studies identified, the results that demonstrated the experiences of pain among cancer patients. Most of the dimensional aspects of pain experience were discussed. Cancer related pain has been described as interrelated dimensions that are confirmed by research findings.

Conclusion: The multidimensional aspect of the pain phenomenon among cancer patients is correlated with various kinds of the pain intensity, duration and quality of life. Cancer pain requires a comprehensive, integrated and multifaceted model of care such as including cognitive based programs that build self management capacity among those who experience cancer pain.

Keywords: Pain; Cancer; Multidimensional experience

Introduction

Pain is the most frightening and distressing of all cancer symptoms for patients and their families [1,2]. Cancer-related pain is a challenging for oncology nurses and other health care providers in terms of lack of knowledge and assessment of pain that leads to inadequate pain management [1]. Advances in cancer-related pain management and improvements in radiological and surgical treatments were reported, however, it has been shown that many patients with cancer continue to experience high levels of pain. American Cancer Society reported that 50%-70% of cancer patients are experiencing some degree of pain and less than half get adequate relief of their pain, which negatively impacts their quality of life. It has been reported that 44% of cancer patients were experiencing moderate to severe pain [3].

Research Studies reported that the prevalence of cancer-related pain was high: 64% in patients with metastatic or terminal disease, 59% in patients on anticancer treatment and 33% in patients who had been cured of cancer [4]. Approximately 95% of cancer patients could be in pain free if that pain were managed appropriately.

Findings confirmed that cancer pain is a multidimensional symptom that consists of feelings of hopelessness, helplessness, emotional distress, and have a negative impact on coping mechanism. Cancer pain was also described as a complex phenomenon which is associated with physiologic, psychosocial consequences, cognitive, behavioral, and socio-cultural dimensions [4,5]. There are many other factors affecting cancer related pain such as type of cancer, stage of disease, type of treatment received and location of cancer [6].

Research findings have raised the importance to study the experience of cancer related-pain in a comprehensive approach using the multidimensional aspects of cancer pain experience. The purposes of this literature were to review and analyze recent research articles that studied the experience of cancer-related pain to understand the factors that affects the cancer-pain experience to promote the quality of life among cancer patients.

Theoretical Framework

The perception and interpretation of pain were viewed as a subjective experience known only to the cancer patients who suffers pain. Pain was also considered as a multidimensional experience and response consisting of physiologic, sensory, affective, cognitive and behavioral components. This paper will be guided by Roy's Adaptation Model (RAM) [7].

Roy's Adaptation Model focuses on individuals' adaptation to changeable environment and guides the assessment of individuals' adaptation. The four adaptive modes of RAM (physiologic, the self-concept, the role function, and the interdependence mode) have been utilized appropriately in pain experience studies. This paper used the multiple dimensions of the cancer related-pain experience and correlates them with the four adaptive modes of Roy Adaptation Model.

Methodology

In order to review the body of knowledge related to pain experience among patients receiving cancer treatment, a comprehensive literature review was conducted using the electronic databases of CINAHL, EBSECO, Medline, and Pub Med, for articles published between 2005 and 2012. The following key words were used to search the electronic

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databases: pain experience, cancer pain, pain management, pain symptoms.

Many articles obtained and reviewed, only 14 research articles that achieved the inclusion criteria for the purpose of this study. The inclusion criteria were the following: (1) it is a research-based study; (2) written in the English language; (3) investigated the pain experience among patients receiving cancer treatment; and (4) published article. Based on the inclusion criteria, a total of 14 articles published from 2005 to 2012 were selected and formed the basis for this review. Each article will be read and analyzed, to identify the main themes/findings of the studies. Articles will be systematically compared for common concepts to recognize similarities and differences in scope and findings across the studies. The articles that included in this study were quantitative and qualitative studies that published in peer reviewed nursing and medical journals. Countries within which the studies for this review were conducted include the United States, Australia, Japan, China, Israel, Greece, and Taiwan's.

The 14 studies composing this integrative research review were seven quantitative studies and seven qualitative studies. Although only 14 studies were included in this research review, a wide variety of instruments were used to measure concepts related to cancer pain experience. The most common questionnaires used in these studies are the Brief Pain Inventory, semi structured interviews, and BQII. The sample sizes in the 14 studies in this review ranged from 11 to 560 adult cancer patients aged between 18 and 82 years.

Finding

Cancer-related pain still uncontrolled worldwide and significant spread, this review aimed to explore pain experience among cancer patients and to identify the relationship between the multidimensional aspects of cancer-related pain that needs to be managed from a holistic perspective.

Despite advances in pain management, research studies confirmed inadequate pain management due to many factors such as poor assessment of pain by nurses and health care providers and not considering all dimensions of pain experience when planning for pain management [8].

A review of the available clinical literature regarding the experience of pain among cancer patients pointed to several factors such as cancer stage, bone metastasis, location of pain, and compliance to analgesic treatment, type of treatment, patient's beliefs about pain and the effects of personal characteristics. Also, the review focused on the interference of pain dimensions and its relatedness.

The physiologic dimension of the cancer-related pain experience involves the etiology of pain (i.e., bone metastases), the duration of the pain (i.e., acute or chronic), and the pattern of the pain (i.e., brief, momentary or transient, continuous, steady or constant) [9].

The occurrence of pain may be associated with the patient's stage of disease [6,10]. Three of the 14 research studies on cancer pain described the physiological experience of pain. The studies that included some physiological variables (i.e., disease process, stage of disease, duration and pattern of pain) found that a large percentage of patients reported pain experience was the most distressing problem that related to the disease process, stage of cancer and metastases pattern. Pain was described as moderate to severe level on a numeric pain scale where 0 indicate no pain and 10 indicate worst pain.

Alexopoulos et al. [8] used a descriptive cross-sectional design to

describe the pain experience among 134 patients in an advanced stage of cancer disease. Patients that included in the study suffered from various malignancies. Most frequent malignancies were lung (35), and breast (25) cancers. Patients were given 35 item questionnaires to assess their response to pain and its influence with function and their compliance to analgesic treatment. Numeric pain scale was used to assess the intensity of pain. The result indicated that more than (70%) perceived the intensity of pain as high or extremely high (scores 3 and 4), whereas 28% of the patients described the intensity of pain as moderate and low. Pain was predominantly located in the low back and spine (30%), followed by the abdominal (19%) and thoracic area (18%), lower extremities (11%) and pelvis (10%).

Also, the result indicated that pain influence the patient's physical and psychological functioning. Regarding the compliance to analgesic treatments, Non-compliance was observed in 15% of the patients, while 61% revealed negative attitudes and feelings toward the treatment; including the fear of side effects and fear of addiction. One important finding was 25% of patients reported not being informed about possible side effects of the analgesic treatment.

Findings confirmed that there is a relationship between sensory dimension (intensity of pain) and the physiological dimension (such as stage of disease, duration and pattern of pain). Thus, nurses should consider this interrelatedness between these dimensions in planning for pain management and to consider education about analgesics and side effects to enhance compliance to treatment regimen.

The sensory dimension of cancer-related pain experience composed of many variables such as intensity and location of pain. Two reviewed studies examined the pain intensity and its relation with other dimensions.

Vallerand et al. [11] conducted a cross-sectional study to examine the relationship between the sensory dimension (pain level) and patient's beliefs about pain. The researchers recruited 304 cancer patients, and identified two indicators to define the patient's beliefs regarding pain: knowledge of pain, and barriers to pain control. The researcher found that patient's pain level was positively related to increased distress, decreased perceived control over pain. It was also confirmed a relation between pain level and functional status, and a direct effect between patient's beliefs of pain and the level of pain distress. Therefore, controlling the factors affecting pain level (perceived control, beliefs) may help in promoting the quality of life.

These findings raised the importance of understanding the patient's beliefs and the psychological aspect (patient's moods and anxiety level) in order to consider these aspects while planning for pain management.

The behavioral dimension of the cancer pain experience involves the patient's behaviors during pain to decrease pain or to indicate the presence of pain. Often these behaviors will increase as pain severity increases and will decrease as pain lessens. Three reviewed studies reported on the pain behaviors of patients with cancer.

Ngamkham et al. [12] conducted a comparative, secondary data analysis. The researchers' recruited 762 outpatients with cancer and completed the numeric intensity pain scale (0-10) and the McGill pain questionnaire to measure pain location, quality and pattern. The researcher found that participants with continuous uncontrolled pain patterns reported behavioral effect on activity daily living, communication, movement, fatigue, and emotion increased pain intensity whereas only movement increased pain intensity for participants with intermittent pain pattern. Similarly, Alexopoulos et al. [8] identified the location of pain and its relation with physical and

psychological function. The pain location was reported to influence the patient's physical and psychological functioning. Specifically, 25% of the patients stated reduced physical activity, 12% loss of autonomy, 32% reported fatigue and generalized weakness, and 10% reported sleep disorders and 7% stated they would even prefer to die.

This finding reflects the effects of sensory and physical dimensions (pattern of pain, location of pain) on the behavioral and psychological dimensions of cancer pain that affect activity and ability to function. Thus, nurses need to consider these variables while assessing pain for appropriate management.

The socio-cultural dimension of the cancer pain experience is related to the demographic and ethnic characteristics associated with pain (e.g., age, gender, ethnicity, social support, and religious beliefs) as well as how pain affects personal, family, and social roles [9]. Four reviewed studies were discussed the socio-cultural dimension. Culturally defined roles (e.g., gender roles) are important in the perceived meaning of cancer and its pain.

Meghani and Keane [13] conducted a qualitative descriptive study to explore the preference of analgesic treatment for cancer pain among African American and the factors shaping these preferences. The researcher recruited 35 cancer patients from three outpatient oncology clinic. The data were gathered using demographics, the Brief Pain Inventory-Long Form, and in-depth semi structured interviews. The researcher reported that only (20%) of the participants strongly believed in taking pain medications to decrease their pain, because they believed that attaining optimal pain relief was central to their sense of self-control and that pain medication helped them to communicate with others. The preference for analgesics for cancer pain was related to factors such as meaning of cancer pain treatment, previous experience with pain relief and analgesic side effects, fears of dependency and tolerance, and previous experience with providers and the health system.

Im et al. [14] conducted a qualitative online forum designed from a feminist perspective and recruited 11 African American cancer patients who were recruited through both Internet and real settings. Nine online forum topics were used to administer the six-month online forum, and the data were analyzed using thematic analysis. Four themes emerged through the data analysis process. The researchers found that the participants look for pain as a challenge in life that they should fight against and differentiated from ordinary pain because the cancer was stigmatized in their culture. In addition, Patients held varying beliefs about pain and pain treatments in particular, 41% of participants held strong beliefs about the potential for addiction to narcotics.

Cohen et al. [15] reported that patients, who have strong beliefs about the potential for addiction to narcotics, may influence their pain management. Effective pain management in the inpatient oncology setting continues to be an important clinical issue; there may be a significant relation between patients' beliefs about pain and pain management and the pain management they receive. This was supported by Dunn and Horgas [16] who mentioned that some religious beliefs or rituals play a critical role in reporting cancer pain and in choosing their coping strategies to relieve pain.

The findings of studies proved that the experience of cancer related pain management (perception and beliefs of pain management) affect the patient's level of communication with their environment. Specifically, cancer pain may interfere with patients' abilities to perform daily activities and with their ability to function. Factors affecting the preference for analgesics should be the focus of nurses during planning for pain management in terms of educational programs.

Similarly a study was conducted to determine the relationship between pain beliefs and the pain experience, and pain beliefs and the type of cancer, current treatment, and pain management. A descriptive cross-sectional study design was used to investigate the above purposes among a convenience sample of 120 Taiwanese patients with advanced cancer. The researcher found that Pain beliefs have a significant correlation with pain intensity, anxiety, depression, quality of life. This finding reflects that relationship between the intensity of pain and the psychosocial aspects of pain, when the pain increases, the level of anxiety and depression increases and the quality of life decreases.

Implications for Nursing

This review identifies the experience of pain among patients with cancer treatment. Cancer related pain has been described as interrelated dimensions that are confirmed by research findings. Understanding pain experience dimensions can assist nurses in the development of knowledge about the multidimensional aspects of pain, and in development of a comprehensive plan of care for cancer related pain. Nurses and health care providers need to reform the policies and guidelines used in the assessment and management of cancer-related pain with consideration to the aspects of pain experience. Cancer-related pain may disturb patient's mood and daily activities, understanding the meaning of pain experience for patients, supporting the patients' emotional needs, and preventing the misunderstanding of the patients' pain experience would be invaluable for clinical practice. In order to reduce the negative pain beliefs, health care providers need to make additional effort to achieve better pain management considering the patient's pain experience.

The multidimensional aspects of cancer related pain may provide a relevant conceptual approach to pain assessment and management. Also, many variables within the dimension of cancer related pain can be targeted for specific interventions that affect the pain intensity, and response to pain. In general, the reviewed articles demonstrated the effects of cognitive, behavioral, socio-cultural, and physiological dimensions that could interfere with assessment and management of cancer-related pain.

Conclusion

By understanding the factors that involved in the dimensions of cancer-related pain from the patient's experience, nurses can better prevent problems and consequences of cancer related pain that lead to inadequate management of pain. Thus, understanding the experience of cancer related pain with consideration to sources, etiology of cancer pain, response to analgesic agents, and cultural beliefs should be a primary concern for nurses caring for patients with pain.

Nurses need to become sensitive to all aspects of experience of cancer related pain, and to pay particular attention to what happens when different aspects come together. Appropriate awareness and sensitivity to cultural influences are important in preventing discrepancies in pain assessment and management.

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