

CHAPTER 1

INTRODUCTION

Background and Significance of the Problem

Cancer-related pain of various types of cancer is a widespread problem that impacts on the patient's quality of life. Cancer is a leading cause of death worldwide, estimated 16.5 million new cases of cancer are expected to be diagnosed in 2020 (American Cancer Society, 2006). Cancer account for 7.6 million (13%) of all death in 2005 which is 70% of all cancer death occurred in low and middle income countries (WHO, 2006a). Cancer is contributes to 3.4 percent of all death reported from India, 2.9 percent from Myanmar, 0.8 percent from Nepal, 4.2 percent from Sri Lanka, 5.4 percent from Thailand, and 6.6 percent from Indonesia (WHO, 2006b).

Other than death, cancer patient's greatest fear is pain. Cancer patients often experience multiple causes of pain and multiple locations of pain (Foley & Gelbond, 2003 as cited in Foley, 2005). Pain associated with direct tumor is the most common cause of pain (65%), pain associated with cancer therapy (15% to 25%), and pain caused by non-cancer related problems

(15%). In the early stages of cancer, 10 to 15 percent of cancer patients report experiencing significant pain, increasing 25 to 30 percent along with metastases development, and 60% to 90% at the advanced stage of the cancer (Patt & Loughner, 1993).

People respond to pain, especially chronic pain, differently (Turk, 1990). McCracken (1998) described that patients with chronic pain are heterogeneous, differ in severity, emotional distress and social circumstances. Numerous factors such as past experience with pain, coping skills, motivation to endure the pain, and energy level all contribute to the variation of pain¹ tolerance and subjectivity in pain experience (McCaffery & Pasero, 1999). Melzack and Casey (1968) emphasized that pain can be determined by three determinants: sensory-discrimination, affective-motivational, and cognitive-evaluation. Additionally, Melzack and Casey confirmed that pain is a function of the interaction of these three determinants. Therefore, pain is not only just a physical sensation or psychological event, but a combination of these three determinants.

Ahles, Blanchard, and Ruckdeschel (1983) and McGuire (1987 as cited in McGuire & Sheilder, 1993) conceptualized that cancer-related pain is a multidimensional phenomenon including physiological, affective, sociocultural, sensory, cognitive, and behavioral dimension.

These dimensions are interrelated, interactive, and dynamic. Each dimension contributes in an integrated way in perceptions and responses to pain (Ahles et al., 1983). When cancer patients experience pain, other aspects may influence the pain experience, such as social response (families, spouse, and significant others), cultural evaluation, change in daily behavior, and the ability to receive information regarding pain. Therefore, pain experiences are considered subjective and different among various individuals.

Clinically, the sensory, cognitive, and behavioral dimensions of pain are probably the most common dimensions seen in the cancer patients. The physiological basis of the pain may result from direct tumor involvement and/or cancer therapy and usually depends primarily on the etiology of pain (McGuire & Sheilder, 1993). The intensity of pain is the most common aspect in pain assessment. Wording such as none, mild, moderate, severe, intolerant, excruciating, bad, and intense, usually identifies pain intensity. In chronic cancer pain, pain becomes more intense along with the severity of the disease (Daut & Cleeland, 1982; Peptichetchian, 2001; Spiegel, Sand, & Koopman, 1994). Pain becomes the center of thought (Hayes & Duckworth, 2006). Turk and Flor (1994) stated that a maladaptive cognitive process contributes to the maintenance of the pain as

well as behavior. Patients then spend their lives trying to find a way to reduce their pain, sometimes depending too much on pain-relief medication and abundant their meaningful life. However, when the available medications and treatments are not affectively reduce pain or exposure to the economic burden, it is necessary for patients to accept their pain. Acceptance is a cognitive process involving a strategy that compliments manipulation and coping (Hayes, 1994 as cited is Bland & Henning, 2004).

Pain acceptance is a commitment towards living satisfactorily with pain present (McCracken, Spertus & Janeck et al., 1999). It is also self-awareness in developing a new meaning of the pain and contributes to a greater degree of positive psychological consequences such as emotional control and well behaviors (McCracken, 2005a).

The behavior dimension includes a variety of observable behaviors related to pain. The overt behaviors may indicate patients' pain while other behaviors attempt to control the pain. Sternbach (1990) proposed that chronic pain is no longer a merely symptom of tissue damage but subjectively manifests individual function and behavior appropriate to the degree of tissue injury. Grabois (2002) also confirmed that behavioral manifestation of pain persists beyond objective

evidence of tissue injury; therefore when patients engage pain, a certain pain related behavior will occur.

Culture is a belief influencing individual's thought. Foster (2000) affirmed that culture might influence behavior for health seeking, personal expectation for health and health care outcomes. Moreover, culture is believed to have a strong role in determining perceptions and responses to the pain (McGuire & Sheilder, 1993). Similarly, Bates, Edward, and Anderson (1993) confirmed that culture may also influence the reports of pain.

Indonesia has various types of ethnic groups and cultures. Each ethnic group has its own unique way of health perception and response to illness. Batak ethnic is the largest native ethnic in Sumatera Utara; others are Melayu Deli and Nias. Batak is a collective term used to identify a number of ethnic groups found in Sumatera Utara, including Toba, Karo, Pak Pak, Simalungun, Angkol, and Mairindailing groups. The pain experience of Batak patients has been found unique. Suza (2003) found that Batak patients more expressive while experiencing pain compared to other ethnic groups such as the Javanese, even though they are both Indonesian. These behaviors, somehow produce difficulties in assessing and managing their pain as well as a challenging

clinical situation. Therefore, ethnicity, especially Batak ethnicity is considered influence the outcomes of the study.

There have been few studies conducted in Indonesia related to the pain phenomenon: Erniyati (2002) conducted a study to explore nurses' and patients' perception to pain management, she found that there were significantly differences in pain assessment-evaluation, pain intervention, and the overall pain management perception between postoperative pain patients and nurses in medical ward ($p < .01$). Suza (2003) explored the pain experiences between two cultures; Javanese and Batak. She found that Javanese and Batak patients were significantly different in pain intensity score ($p < .001$). In addition, Suza stated that Batak patients demonstrated expressive response to pain and perceived pain as disturbing, discomfort, and tiring experience. Dwiningsih (2004) investigated the relationship among pain, anxiety, and coping strategies, she found that worst pain was significantly correlated with anxiety ($r = .34, p < .01$) and behavioral coping strategies ($r = .23, p < .05$).

There have been no studies conducted to explore the pain intensity, pain acceptance, and pain behavior among Indonesian people with chronic cancer. Therefore, this present study

proposes further exploration of cancer pain in Indonesian patients where the cultures are different from others. Practically, pain behaviors are not commonly used for pain assessment. For some patients, who are unable to provide self-report, observing pain behaviors may offer an understanding of the pain experience of the individual. This study will examine whether self-report of pain intensity (sensory dimension) is related to expression of pain behaviors (behavioral dimension). Furthermore, this study also examine whether the pain intensity and pain behavior are associated with the level of patients pain acceptance (cognitive dimension). The result will provide an evidence to support the use of pain behaviors assessment within Indonesian culture. Moreover, if this study reveals the pain acceptance is related to the pain intensity report thus contribute in expression of pain behaviors, the evidence will be useful for nursing for managing chronic cancer pain.

Therefore, this study purpose to investigate the pain intensity, pain acceptance, and pain behaviors among Indonesian cancer patients. The finding of the study will be beneficial for nurse to understand the pain phenomenon in cancer patients in Indonesia. Furthermore, the findings

may inform nurses to be able to perform comprehensive pain assessment and offer better pain intervention to patients with chronic cancer pain.

Objectives of the Study

The objectives of the study are as follows:

1. To identify level of pain intensity in patients with chronic cancer pain.
2. To explore pain acceptance in patients with chronic cancer pain.
3. To explore pain behaviors in patients with chronic cancer pain.
4. To identify the relationships of pain intensity, pain acceptance, and pain behaviors in patients with chronic cancer pain.

Research Questions of the Study

The research questions of the study are as follows:

1. What is the level of the pain intensity in patients with chronic cancer pain?
2. What are the levels of pain acceptance expressed by patients with chronic cancer pain?

3. What are the levels of pain behaviors expressed by patients with chronic cancer pain?
4. Are there any relationships among pain intensity, pain acceptance, and pain behaviors in patients with chronic cancer pain?

Conceptual Framework of the Study

The conceptual framework of the study was constructed based on the conceptualization of the Multidimensionality of Cancer Pain Phenomenon by Ahles and colleagues (1983) and McGuire (1987). The concept of multidimensionality of pain is presented as follows:

Multidimensionality of Pain Phenomenon

Cancer pain is a multidimensional phenomenon. Ahles and colleagues (1983) conceptualized five dimensions of cancer pain experiences. In addition, McGuire (1987 as cited in McGuire & Sheilder, 1993) proposed the sixth dimension as the socialcultural dimension. The multidimensionality of the pain phenomenon is derived from gate control theory introduced by Melzack and Wall (1965). The Gate control theory suggested that central control (neural system

beyond the gate) has different systems for sensory-discrimination, motivational-affection, and cognitive-evaluation. The neospinothalamic projection is involved in the sensory-discriminative process to identify location, intensity, and duration of the pain. The projections are also passing through the paleospinothalamic system to activate the reticular and limbic areas to provide the neural basis of the motivational and unpleasant or aversive affect. Both sensory-discrimination and motivational-affection are evaluated by the brain through the cognitive processes (Melzack & Casey, 1968).

Experiencing cancer-related pain may involve directly the sensory, cognitive, and behavioral dimension, which is influenced by other dimensions, including physiological, affective, and socialcultural dimension. In this study, three dimensions explored including sensory, cognitive, and behavioral dimension were selected because: 1) there are strong evidences from western literature of the interrelationships among these dimensions when people experiencing pain, 2) knowledge regarding these three dimensions may offer direction for nursing management for cancer patients experiencing pain.

These dimensions were conceptualized as follows:

Sensory dimension: Sensory dimension of pain encompasses location, quality, and intensity of pain. Intensity of pain is the amount of pain perceived by the individual and often described with words, such as mild, moderate, severe, excruciating, and intolerable. Pain intensity is a common indicator being used to represent sensory dimension.

Cognitive dimension: Cognitive dimension of pain encompasses thought processes, perception, evaluation and judgment of pain and its treatment. Knowledge is an important aspect of the cognitive dimension. Knowledge can affect patients' perceptions to pain and the interventions (McGuire & Sheilder, 1993). Knowledge may influence patients' adjustment to pain such as knowledge about disease as well as the available treatment that they can reach. Knowledge also contributed in acceptance of pain. Pain acceptance is emerged when the treatment is unavailable or when the pain is still remind.

Behavioral dimension: Behavior dimension of pain encompasses observable pain-related behavior. Fordyce (1976) suggested that when patients are engaged in pain, the overt behavior

would occur to indicate that they are in pain. Pain behaviors are the way of patients to communicate their pain to others (Keefe, 1998). The expression of pain behaviors such as guarding, rubbing, bracing, grimacing, and sighing are usually appropriate to the degree of tissue damage (Sternbach, 1990). The expression of pain behaviors may be influenced by social circumstances. Pain behaviors may occur beyond the objective pathologic evidence because of being reinforced by attention or compensation. Patients who gaining benefit from their behaviors, are more likely to maintain the behaviors longer than expected healing time.

Research framework to study the relationship among pain intensity, pain acceptance, and pain behaviors in chronic cancer patients

The concept of the multidimensionality of pain phenomenon suggested by the work of Ahles and Colleagues (1983) and McGuire (1987) provided direction to the construct of the framework of the study (Figure 1). This framework was used to guide the exploration and investigation of various responses of cancer patients related to pain intensity, pain acceptance, and pain behaviors.

Pain intensity is the most common aspect in pain assessment, also common symptom of sensory dimension reported by cancer patients, which indicates the severity of the cancer disease. Pain intensity is defined as the level of pain sensation perceived by cancer patients. The intensity of pain involves the sensory-discriminative system for transmitting information from noxious area of the body to the central control in the brain to be evaluated and modulated, thus activated the action system to produce behaviors. The central control activities involve thought processes, judgment, expectation, and acknowledge of the meaning of pain in life.

In chronic cancer pain, the intensity of pain may fluctuate and persist longer than expecting healing time. This pain may influence patients' thought to view, perceive or develop the meaning of pain. In cancer pain, often pain persists longer than expecting healing time, pain become center of thought and neglected their valuable life such as family and leisure. Those patients with maladaptive cognitive process, such as those patients who perceive their pain negatively, have demonstrated to have a high level of pain intensity. According to Eccleston and Crombez (1999), pain may act as a barrier to pursuit personal goals and aspirations. Within the pain presence, patients thought may be discourage and provide occasion for choice to either

engage in of avoid activity due to their pain (McCracken, 1998). In this standpoint, accepting the pain by commit toward living satisfying life despite the pain and acting as if the pain does not necessarily imply disability may bring benefit for patients. Particularly in the eastern country such as Indonesia, the socioeconomic status may prevent effort to available treatments. Pain acceptance is cognitive process. Pain acceptance was defined as patients' own free will to have a certain level of pain in life. Pain acceptance addressed into components; activity engagement and pain willingness. Activity engagement was defined as entail pursuing activities in maintaining meaningful life regardless to the pain, and pain willingness was refers to active exposure to pain without controlling or avoiding pain. Within greater pain acceptance, patients showed the better adjustment to their pain and demonstrated better performance of behaviors when they experiencing pain.

Pain behaviors refers to pain-related behaviors including guarding, bracing, rubbing, grimacing, and sighing when cancer patients engage with a certain level of pain. The pain behaviors may indicate the unpleasant stimuli of as behaviors to control pain. Patients, who have high level of pain intensity, have demonstrated to have high level of pain behaviors. The way of

patients valuing their life may contribute to the expression of pain behaviors. Patients with greater pain acceptance were more likely to have lower pain behaviors. In contrast, those patients with high level of pain behaviors and gain benefit from their behaviors such as attention and compensation, the behaviors will be maintained even though the source of pain was reduced or eliminated.

In conclusion, pain intensity, pain acceptance, and pain behaviors are interrelated (Figure

1). This conceptualization helps guide the study.

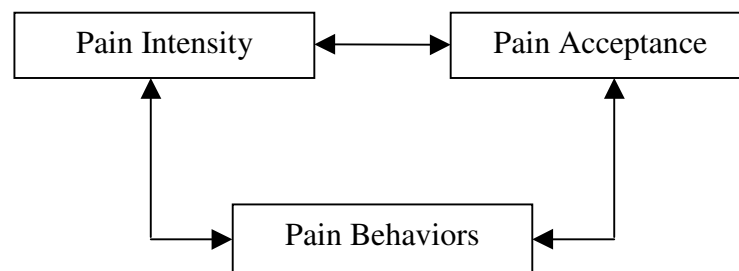


Figure 1. Conceptual framework of the study representing the relationships among pain intensity,

pain acceptance, and pain behavior in patients with chronic cancer pain.

Hypotheses

The hypotheses of this study are as follows:

1. There is a significant relationship between pain intensity and pain acceptance in patients with chronic cancer pain.
2. There is a significant relationship between pain intensity and pain behaviors in patients with chronic cancer pain.
3. There is a significant relationship between pain acceptance and pain behaviors in patients with chronic cancer pain.

Definition of Terms

Pain intensity: Pain intensity refers to the level of pain sensation perceived by cancer patients currently, measured by 11-points Pain Numerical Rating Scale (PNRS).

Pain acceptance: Pain acceptance refers to patients' own free will to have a certain level of pain in life reflected by activity engagement, the degree of activities in life without influence

from their level of pain, and pain willingness, the absence of attempt to avoid or control the pain.

Pain acceptance is a summation of activity engagement and pain willingness measured by

Chronic Pain Acceptance Questionnaire (CPAQ)

Pain behaviors: Pain behavior refers to observable behaviors that cancer patients exhibit in response to the pain including guarding, bracing, rubbing, grimacing, and sighing, when they engage with a certain level of pain, measured by Pain Behavior Observational Protocol (PBOP).

Significance of the Study

The findings of this study are a useful evidence for nurse clinicians in assessing patients with chronic cancer pain. The findings offer the direction for nursing for managing patients with chronic cancer pain. The finding also provide useful information for future research regarding to patients pain behaviors and how they accept their pain especially in Indonesian patients with chronic cancer pain, where the cultures are different.