

## EXPERIENCES IN MIDDLE EASTERN POPULATIONS

# Psychiatric Aspects of Pain in Cancer Patients

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### Abstract

The goal of this review is to discuss the psychiatric aspects of pain in cancer patients from a biopsychosocial approach. Pain in cancer patients is considered as a complex reaction causing severe suffering and involves many psychological aspects. It has many dimensions such as personality, affect, cognition and social relations. The pain experience may also be influenced by some psychological factors such as anxiety, depression and the meaning of pain. Therefore, a successful management of cancer pain requires a multidisciplinary approach. Since cancer pain is generally treated medically, the psychological impact of pain is often underestimated. However, cancer pain is usually related to high levels of psychological distress. Culture, as an important factor affecting cancer pain, will also be discussed during this review. It is crucial to understand cultural diversity in the treatment of cancer patients with pain. Research shows that a minority patients of various ethnicities have less control of their pain because of the miscommunication problem within the medical setting. By paying attention to patients' cultural diversities, problems such as miscommunication causing inadequate control of pain can be eliminated. In order to manage pain in cancer patients, cognitive-behavioral interventions may be integrated with pharmacotherapy. The main goal of these strategies is to provide a sense of control and better coping skills to deal with cancer. Patients' maladaptive thoughts or behaviors may cause physical and emotional stress. Main behavioral strategies include biofeedback, relaxation training, and hypnosis. Cognitive strategies include guided imagery, distraction, thought monitoring and problem solving. By discussing all of these aspects of cancer pain, the multidimensional characteristic of pain and the relation between cancer pain and psychiatric factors will be clarified.

**Keywords:** Cancer pain - psychiatric aspects - pain management - biopsychosocial approach

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### Introduction

Pain is a symptom that points out the disturbance of biopsychosocial balance and adaptation. In a way, pain is a defence mechanism towards a negative stimulus. International Association for the Study of Pain described pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage." (Merskey & Bogduk, 1994). Besides biological factors, psychological needs and dynamics, cultural factors have an influence on pain. The perception and evaluation of the illness, ways of coping behaviours towards the illness all affect the pain. Three factors are important in the formation of emotional reaction towards a physical illness (Özkan, 1993). These are: 1- Characteristics of the illness; 2- Characteristics of the individual; and 3- the Psychosocial environment.

When evaluating the reactions towards an illness the interactions between physical pathology, psychological experience and psychosocial environment should be considered. The effects of psychological factors on pain symptoms, reactions and behaviour should be considered in three axes: 1-Psychophysiological mechanisms; 2- (Psycho) social factors (cultural, social and interactional

and learned socio-behavioral processes; and 3- Psychiatric disorders.

There are two types of pain: Acute pain is easily described. Agitation and excessive stimulation of sympathetic nervous system can be seen. The duration of chronic pain is generally six months. The pain stimulus at the beginning disappears or it is not enough strong to explain the pain. Chronic pain should be considered by psychological, psychosocial and biological components. It is usually the source of a serious pain and morbidity. In chronic pain, pain complaint is usually not related to somatic and physiopathologic disorders (Özkan, 1993).

Cancer pain is a complex, multidimensional phenomenon composed of sensory, affective, cognitive, and behavioral components. It is resulted from a complex interaction between physiological, cognitive, social, and other factors (Porcelli et al., 2007). The incidence of cancer pain is between 51%-70%. It is known that 40%-50% of pain is moderate to severe; while 20%-30% is very severe (Breitbart, 1989). Studies show that approximately 25% of cancer patients do not receive adequate pain relief (Portenoy and Foley, 1990).

Biomedical variables such as tumor sites and status of disease are closely related to the pain experience in

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cancer patients (Porcelli, et al. 2007). It is known that there is a strong association between advanced stage of cancer and pain. These patients are more likely to have complications like pain and depression (Nuhu et al, 2009). Data show that 70% of patients with advanced cancer have significant pain in the course of their illness. Especially in the presence of a terminal illness, pain may have a demoralizing effect and may create affective and behavioral changes in a patient (Portenoy and Foley, 1990).

Nonbiological aspects of social and emotional experience in cancer pain are also important besides the biomedical factors. Pain perception is closely linked to one's self representation, disease's characteristics, cognitive schemata, and coping mechanisms. Since patients vary in psychosocial and spiritual strengths and weaknesses, their ways of coping with pain are different (Porcelli et al., 2007).

Porcelli et al (2007) found that pain was predicted by several aspects of abnormal illness behavior and maladaptive coping. Patients with excessive observing and thinking about the physical symptoms, hopelessness, and cognitive problems in processing and identifying feelings have tendency to pain perception amplification. According to this study, cognitive difficulties in cancer patients in identifying feelings may experience higher pain intensity and they may describe sensations of pain sensations more severely. Therefore, besides the biomedical aspects of tumor site and status, alexithymia, maladjustment to cancer and health concerns of abnormal illness found to be associated with the cancer pain experience (Porcelli et al., 2007). In the enmeshment model of pain perception, Pincus and Morley (2001) also indicated that pain experience results from different overlaps of the three cognitive schemas of self, illness, and pain. Pain perception is also related to medical and biological variables in cancer patients and other pain-related clinical conditions (Pincus and Morley, 2001).

The related literature points out that cancer patients who are confident in coping and controlling the cancer pain experience less pain (Özkan and Armay, 2007). On the other hand, cancer patients who use catastrophizing coping skills and feeling helpless about their situation experience higher levels of pain and anxiety (Bishop and Warr, 2003). Patients with higher levels of mastery perceive themselves as having more control; therefore, they may appraise a situation as more manageable than those with lower levels (Nuhu et al, 2009).

Theoretically, this model can be summarized as:

- Nociception
- Pain
- Pain experience
- Pain behavior

Nociception is a stimulus coming from a damaged tissue. In the perception of this pain, all emotional factors and psychological necessities have an important role. In some patients, especially in patients with chronic pain, the suffering dimension can be added. Suffering is a negative reaction to pain. Therefore, depression and

anxiety are among frequently seen psychiatric disorders. The development of pain experience as a defective illness perception is related to patient's pain and environment's reaction to patient's perception of pain (Lipowski, 1976).

Cancer pain is often related to high levels of psychological distress, including higher levels of depression, anxiety, fear, and negative mood (Zaza and Baine, 2002). Both chronic and acute pain characteristics may be seen in cancer pain. Like acute pain, cancer pain is directly associated with tissue damage. When cancer pain persists, it may be considered as a sign of the progression of disease and a sense of hopelessness may arise since patients think that their lives are not worth continuing (Tavoli et al., 2008). Types of pain are also associated with different psychiatric symptoms. The onset of acute pain is associated with the affect of anxiety and signs of sympathetic nervous system hyperactivity. As the pain continues and becomes chronic, depression and vegetative signs, such as sleep disturbance, poor appetite, lassitude, poor concentration and diminished libido can be seen (Portenoy and Foley, 1990).

With the biopsychosocial approach to cancer treatment, the relationship of the cancer pain experience with psychological factors such as anxiety and depression become more important. Research shows that there exists a strong association between cancer pain and psychological functioning. Glover et al (1995) indicate that cancer patients suffering from pain report significantly higher levels of anxiety, depression, and anger. Another study conducted with hospitalized patients with advanced cancer shows that patients experiencing greater pain had much higher levels of worry about pain, fear of the future, and fear of pain progression (Strang, 1992).

Cancer patients who experience pain were found to be two and a half times more likely to be anxious than those who did not report pain (Glover et al., 1995). Uncontrolled pain may also cause anxiety in cancer patients. Anxiety symptoms may be a result of patients' fear of dying from the illness. With the presence of pain, this fear is augmenting since pain can be considered from patients as an evidence of progression of cancer. Patients' sleep problems may arise from a painful physical condition or indirectly from depression or anxiety which are found to be associated with pain (Nuhu et al., 2009).

Pain and depression are highly prevalent in cancer patients; however, although associations exist, there are no sufficient evidences to support an interdependent relationship between pain and depression. It is logical to conclude that specific characteristics of pain such as pain intensity or effect on enjoyment of life are related to depression (Laird et al., 2009). In their study, Heim and Oei (1993) examined patients with prostate cancer and showed that patients who experience pain were more depressed than those who were pain-free. There are also other studies showing that prevalence of depression is higher in patients with pain than those had not (Spiegel, 1994). Patients who reported that they have pain were more likely to have significant depressive symptoms, anxiety symptoms and suicidal ideation. Pain may be interpreted as a sign of illness severity and may therefore feel hopeless. They think that they can not escape from

death. This way of thinking may cause hopelessness and helplessness in cancer patient (Nuhu et al., 2009). Another study compared patients with and without pain who were matched by site and progression of disease. Patients with pain scored higher on measures of depression as well as anxiety, hostility, and somatization (Ahles, 1983).

Cancer pain has a significant impact on the overall quality of a cancer patient's life by influencing physical, psychological, and spiritual aspects (Tavoli, et al. 2008). Patients' functional status and their quality of life may be affected by pain, as pain is the most distressing symptom experienced by approximately 50% of cancer patients (Porcelli et al., 2007). Pain is also associated with poor health satisfaction in cancer patients. Pain control plays a key role in determining health-related quality of life. Therefore, a better quality of life may be achieved by adequately controlling the pain. By this way, the associated psychological and physical symptoms can be prevented (Nuhu et al., 2009). If pain remains uncontrolled, it may have a detrimental, effect on many aspects of a patient's life. Anxiety and emotional distress can be seen; patient's well being is undermined, problems in functional capacity and in fulfilling familial, social, and professional relationships may arise. These effects would in turn diminish patients' quality of life. Patients who reported experiencing moderate or severe pain are found to have sleep problems, problems in daily activities, enjoyment of life, work ability and social problems (Yıldırım et al., 2005).

Pain is a multidimensional experience and it is closely related with patient's socio-cultural characteristics and belief system (Tavoli et al., 2008). Culture is an important factor that influences the dimensions of cancer experience for patients, family care givers and health professionals. The way pain is perceived, manifested and treated by patients and families is another area affected by culture (Juarez, et al., 1998). Since every culture is unique, the interpretation and meaning of pain is related to patient's cultural characteristics. Beliefs and values belonging to a specific culture also help to create an understanding for normalizing experiences of pain in some groups, whereas for other people they can be more problematic (Koffman, et al., 2008).

In some cultures, it is seen that cultural background, family beliefs and religion have a crucial role in how pain is managed and expressed by the patient and the care giver. In cultures where pain should be hidden or endured, pain is considered as a part of life and as God's will. Moreover, enduring pain may also reflect personal strength and pride especially for men (Juarez et al., 1998). A study which is conducted with Hispanic cancer patients reveals that these patients do not complain even though they were in pain, since they do not want to bother their family members (Ok and Guevara, 2007).

The oncology team should identify health related cultural beliefs and practices for each patient by listening carefully the patients' narratives, which include the meanings they attribute to pain (Koffman et al., 2008). In the assessment and treatment of cancer pain, consideration of cultural factors is important. In pain management, an individualized patient care is crucial in order to provide

optimum care to the cancer patients (Juarez et al., 1998). Nonsteroidal anti-inflammatory drugs, opioids, and analgesics are among the most frequently used medications in the management of cancer pain (Lyne et al., 2002). However, since distress and pain can not be completely avoided by medication in these patients, it is also important to pay attention to nonpharmacologic treatment approaches in controlling pain (Tatrow and Montgomery, 2006). Thus, nonpharmacologic interventions are important adjuncts to treatment modalities. Since the medical treatment of cancer pain is essential, the impact of cancer pain on psychological distress is often underestimated by health professionals and the potential benefits of using psychological treatments to help manage cancer pain is rarely considered (IASP, 2009). Appreciation of the influences of psychological issues and appropriate interventions are important aspects in the treatment of pain. In this way, the suffering of the patient and family can be reduced. However, an insufficient pain control demoralizes both the family and the caregivers (Portenoy and Foley, 1990).

In the assessment of the patient, the general appearance of the patient, his perception and interpretation of the pain should be examined. When and how the pain begins, under which physical and psychosocial circumstances it increases and what is the potential effect of medical treatments are among the questions that should be asked. How the patient's life is affected from the disease should also be observed. It is also important to observe the patient's physical and psychological state and relationships in a patient's life, as well as psychosocial history. Pain's relation to the patient's daily life practices, compelling personal experiences, emotions and psychosocial events is questioned (Özkan and Armay, 2007).

It is crucial to inform and educate the patient and his/her family members about the physical, psychological and social dimensions of pain. Especially in chronic pain, the aim is to decrease the suffering while increasing the psychosocial adjustment and functionality of the patient (Özkan, 1993).

The components of psychomedical treatment are to encourage the expression of emotions about underlying hostility, depression and anxiety, as well as to change the point of view toward compelling life events and provide a successful life adjustment. Increasing the life objectives, helping to understand the underlying conflicts and motivations in the functional deficit, and the development of healthy coping skills is important for a successful pain management (Özkan and Armay, 2007).

Effective pain control is essential, but it may vary according to disease's stage. In the early stages of the disease, the goal of psychological treatment should focus on allowing the patient to function normally. However, for the terminally ill patient, comfort is more important. Providing sufficient relief and allowing patient to be free of pain should be primary goals of the pain treatment in this stage (Portenoy and Foley, 2000).

Cancer patients should be aware that during episodes of intense pain, changes in mood and emotion may be seen. Therefore, health professionals should pay attention to the symptoms of psychological distress in patients who

are experiencing pain. A careful evaluation and treatment of psychological distress is indispensable for an efficient cancer pain management (IASP, 2009).

Pain beliefs help human beings in gaining a stable understanding of the events that they experience. The belief that pain is understandable is associated with better treatment compliance and adaptive coping strategies; however the belief that pain is strange is associated with the use of catastrophizing (Tavoli et al., 2008).

A way of helping cancer patients to adopt more adaptive coping skills with the disease may focus on identifying the source of their feelings. By using pain descriptors for their psychological maladjustment to disease, patients with alexithymic characteristics may misinterpret the negative affective dimension of pain (Porcelli et al., 2007). Understanding how each patient copes with pain and encouraging the patient in developing pain coping skills are crucial elements of the treatment. Educational and psychosocial treatments may be designed to improve pain coping skills in patients with particular difficulty dealing with cancer pain (IASP, 2009).

Distress and pain in cancer patients may be managed by a variety of psychological interventions. Especially, cognitive behavioral therapy (CBT) techniques are found to be important tools to reduce distress and pain in various cancer populations. The CBT approach includes; stress management and problem solving techniques, goal setting, pacing of activities, and assertiveness. Hypnosis, relaxation training, biofeedback, distraction, imagery and sensation redefinition can also be incorporated within CBT to increase the selfcontrol. Therapies such as relaxation techniques are used as adjuncts in cancer pain management and their utility make them important tools in managing pain (Tatrow and Montgomery, 2006). It is also known that significant muscle spasm responds well to relaxation techniques. Distraction, sensation redefinition and imagery are among other cognitive approaches that are applied in the treatment of cancer pain. These techniques are found to be effective in experimental and acute pain (Portenoy and Foley, 1990).

In psychotherapy, helping the patient for the emotional expression and, from the cognitive perspective, changing “the conditioned indifferenciation” to “learned productivity” is aimed. In cognitive therapy, firstly pain specific cognitions are described and changing them with more positive cognitions is the main goal. Besides, techniques such as coping with stress, assertiveness training, education about the origine of the pain may also be helpful. The aim is the perception of pain on behalf of the patient and changing his/her reaction (Özkan and Armay, 2007).

In summary, the most important aspect of pain treatment is the interdisciplinary approach. It is crucial to consider the psychological and psychiatric aspects of the patient in the management of cancer pain. The optimum treatment of cancer pain is reached by combining biological and psychiatric treatment approaches.

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