# Patient-related attitudinal barriers to cancer pain management among adult Jordanian patients

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A B S T R A C T

*Purpose:* To evaluate the attitudinal barriers to cancer pain management among adult Jordanian patients and to explore relationships between attitudinal barriers, pain, and demographic variables.
*Methods:* In this descriptive correlational study a convenience sample of 150 Jordanian adults with cancer pain were recruited from the outpatient cancer clinic at a regional comprehensive cancer center in Jordan. Patients completed the Arabic version of Barriers Questionnaire (ABQ-II), the Arabic version of Brief-Pain-Inventory (ABPI), and demographic questions.
*Results:* More than half of participants were male (61%), had a mean age of 44 years and length of education 14.5 years. Mean (SD) ABQ-II total score was 2.3 (0.8), on a scale of 0–5, with higher scores indicating stronger barriers. Older patients had significantly more barriers, and scored higher on concerns about harmful effects and communication. Patients with higher education levels had significantly lower fatalistic beliefs. Patients with higher barriers had significantly higher levels of worst pain. Pain interference with life activities was positively correlated with the fatalism subscale.
*Conclusions:* Study provides useful baseline data on barriers to management of cancer pain among Jordanian that have not been available before. This data can be used in planning and testing interventions to understand and improve patient's attitudes to cancer pain management, and allow for cross-cultural comparisons.

## 1. Introduction

Worldwide reviews of cancer pain statistics concluded that 50% of patients at all stages of the disease and 70% of patients with advanced cancer reported experiencing pain (Portenoy et al., 2013; Parás-Bravo et al., 2017). Barriers to optimal cancer pain management exist among patients, clinicians, and within the healthcare system (Kwon, 2014). Barriers to pain management among patients are generally attitudinal barriers based on misconceptions or misinformation about pain and its management (Kwon et al., 2013; Lin et al., 2015).

It is estimated that 30–50% of patients in the early and intermediate stages of cancer experience moderate to severe pain, and as many as 75% of patients in the advanced stages of cancer experience pain, with 25–30% of these patients experiencing severe pain (Miller et al., 2016). At the same time, approximately 95% of cancer patients could be free of significant pain if their pain were managed effectively (Dowell et al., 2016). However, data from around the world support the conclusion that many patients with cancer still receive inadequate analgesics and live with unacceptable levels of pain (Cleary et al., 2013; Liang et al.,

2013; Blaney et al., 2016). Moreover, subgroups of patients found to be at increased risk for underestimation and under treatment of pain include the elderly, patients of minority ethnic origins, and women (Muneer, 2015). Research studies in the area of pain and pain management are primarily conducted in North America. However, research from other countries does support the notion that unrelieved cancer pain is a universal problem (Cleary et al., 2013; Liang et al., 2013; Jho et al., 2014; Phillips et al., 2015). Attitudinal barriers to pain management were found to be widespread in studies from the United States, South Africa (Cleary et al., 2013), Taiwan (Liang et al., 2013), Australia (Phillips et al., 2015), and Korea (Jho et al., 2014).

Attitudinal barriers to pain management are important as they are often based on misconceptions about pain and pain management. Patients who experience pain might choose not to use resources available to manage pain because of erroneous beliefs. The BQII addresses eight attitudinal barriers (concerns about addiction, fatalism, tolerance, monitoring, complaining, distracting, immune function and side effects) to cancer pain management that were identified and shown to have a negative impact on analgesic use, pain severity, and quality of

life (Gunnarsdottir et al., 2005; Greco et al., 2014). These barriers were identified by patients' self-report on the Barriers Questionnaire-II (BQ-II) (Gunnarsdottir et al., 2017).

In Jordan, however, only a few research studies were found concerning pain or pain management in general, and even fewer research studies were conducted to describe the prevalence of attitudinal barriers to cancer pain management. Instruments to conduct such research have been lacking. The Barriers Questionnaire (BQ-II) is an instrument developed to measure barriers to cancer pain management (Gunnarsdottir et al., 2005). In order to use the BQ II in Jordan, the instrument was translated to the Arabic language, its psychometric properties examined, and a feasibility study using the questionnaire in its Arabic translation was conducted. The results proved the Barriers Questionnaire (BQ II), Arabic version (ABQ-II) to be a reliable measure of barriers to cancer pain management. The purposes of the present study were to evaluate the attitudinal barriers to cancer pain management among adult Jordanian patients and to explore relationships between attitudinal barriers, pain, and demographic variables. Understanding attitudinal barriers to pain management can enable nurses and other health care providers to design and offer appropriate health education programs for cancer pain management.

## 2. Methods

### 2.1. Sample

A convenience sample of 150 Jordanian patients with cancer was recruited from the outpatient cancer clinic at a regional comprehensive cancer center in Jordan. Inclusion criteria were a) age 18 years and older, b) ability to read and write Arabic, c) receiving treatment at the regional comprehensive cancer center in Jordan, and d) had experienced cancer-related pain in the past week.

### 2.2. Instruments

### 2.2.1. Demographic characteristics

Participants answered questions regarding gender, age, marital status, education, employment and income.

### 2.2.2. Attitudinal barriers

The Barriers Questionnaire-II (BQ-II) is a 27-item self report instrument developed by Gunnarsdottir and her colleagues designed to measure the extent to which people endorse eight beliefs about reporting cancer pain and using analgesics that can act as barriers to pain management (Gunnarsdottir et al., 2002). The eight beliefs are 1) fear of addiction; 2) concerns about tolerance; 3) concerns about side effects; 4) fatalistic beliefs; 5) desire to be a 'good' patient; 6) fear of distracting one's physician from treating the disease; 7) concerns about ability to monitor changes in one's body; and 8) fear that opioids impair immune function. The BQ-II consists of 4 subscales: a) Physiological effects, which consists of 12 items about the physical effects of cancer pain and the side effects of analgesics; b) Fatalism, which consists of 3 items reflecting cancer pain is inevitable; c) Communication, which consists of 6 items regarding communication with the physician; and d) Harmful effects, which consists of 6 items about potential harmful effects of analgesics (Gunnarsdottir et al., 2002). Participants rate the extent to which they agree with each item on a numeric scale, ranging from 0 (Do not agree at all) to 5 (Agree very much). Mean scores for the total scale and subscales are used for analyses, with higher scores indicating stronger barriers. The psychometric properties of the BQ-II have been assessed in different clinical samples of patients with cancer, and have been shown to be robust (Gunnarsdottir et al., 2005; Gunnarsdottir et al., 2017). The BQ-II total had an internal consistency of 0.89, and Cronbach alpha for the subscales ranged from 0.75 to 0.85. Mean and standard deviation (SD) scores on the total scale was 1.52 (0.73) (Gunnarsdottir et al., 2005; Gunnarsdottir et al., 2017). The BQ-

II in its Arabic version was used to evaluate attitudinal barriers to cancer pain management. Internal consistency (Cronbach's Alpha) for the ABQ-II total scale is .815, and the alpha for the subscales ranged from 0.60 to 0.81.

### 2.2.3. Pain severity and pain interference with life activities

The Brief Pain Inventory (BPI) is a frequently used multiple-item measure of pain severity in cancer research (Daut et al., 1983; Cleeland and Syrjala, 1992; Cleeland and Ryan, 1994). The BPI in its Arabic version (ABPI) was used to evaluate presence of pain, severity of pain, and pain interference with life activities in the sample of participants. Internal consistency for the total ABPI (Cronbach's Alpha) was 0.92, for the severity scale was 0.88, and for the interference scale was 0.94. The BPI contains one item that evaluates the presence of pain, and another that evaluates location of pain. Four items are used to assess pain severity. Participants report their worst, least, and average pain during the past 24 h, and their current pain level on a scale of 0 (no pain) to 10 (pain as bad as I can imagine). Participants also used a scale of 0–10 to report how much their pain has interfered with various activities of daily function, and to estimate the percent of relief they received from their current pain treatment. One item, designed to record the treatments or medications used by the individual, was evaluated with an open-ended question. Many studies have shown that the BPI has a high internal consistency with Cronbach alpha reliability ranging from .77 to .91 for the total BPI. Coefficient alphas in six international studies were ranged from 0.78 to 0.88 for the Pain Severity Scale. And 0.78 to 0.92 for the Pain Interference Scale in a variety of samples of persons with cancer (Furler, 2013; Webber et al., 2014; Ham et al., 2015; Ferreira et al., 2015; Budnick et al., 2016; Azevedo et al., 2017; Majedi et al., 2017; Shin et al., 2017).

### 2.3. Ethical consideration

Ethical approval for the study was obtained from the Institutional Review Board (IRB) of Wayne State University in the USA and then from the Ethics Committee of the regional comprehensive cancer center in Jordan. A research assistant explained the study aims, procedures, and participants' role in the study to all prospective participants before they started. Participation in the study was voluntary, and the participants had the permission to withdraw at any stage of the research. The identities of the participants were not disclosed, and only aggregate data were reported.

### 2.4. Procedure

Patients in the outpatient waiting area of the regional comprehensive cancer center in Jordan were screened by asking them if they had pain during the past week or not. Those responding positively were asked to participate in this study. Data were collected from patients in the waiting area prior to their scheduled appointment at the outpatient clinic. Because the waiting area was used by multiple oncology services, data were collected on different days of the week and at different times of day; so that all appointment time intervals were equally represented ensuring the sample was representative of patients in the cancer center.

## 3. Results

### 3.1. Descriptive statistics

The majority of the sample was male (61%), with a mean age of 44 years (SD = 16.6) and a range from 19.0 to 74.5 years. Thirty-three percent of the sample listed university education (length of education 16 years) as their highest level of education, 25% had completed high school (length of education 12 years), and 16% had a college education (length of education 14 years). Most of participants were married (61%) and only 34% worked full time outside of the home. Almost half of all