

ability to perform each pain coping behavior from the Coping Behaviors Instrument on a 0 (not confident at all) to 6 (completely confident) scale. The internal consistency alpha of this instrument was 0.83 for this study. The content validity was determined by a panel of experts. The Content Validity Index of this measure ranged from 0.70 to 0.79.

### **Outcome expectancies**

Patients were asked to rate their expectations about the effects of coping behaviors on a 0-6 scale, where 0 means "pain will get worse", 3 means "pain won't change", and 6 means "pain will decrease". The internal consistency alpha of this instrument was 0.81 for this study. The content validity was determined by a panel of experts.

### **Pain outcomes**

The Brief Pain Inventory (BPI) short form is a self-reporting instrument used to assess the multidimensional nature of pain, including the intensity of pain and its subsequent interference with life activities in the past week.<sup>18</sup> The BPI has been used worldwide to measure pain and has been adopted by the World Health Organization.

### **Pain intensity**

Pain intensity is measured by the pain worst scale. Patients rate their pain at its worst in the last week on a scale of 0 (no pain) to 10 (the worst pain I can imagine). The pain worst item has been demonstrated to be a reliable and valid measure of pain intensity. Test-retest reliability of the pain worst scale was 0.93 over a 2-day period in a sample of 20 inpatients with cancer. A significant correlation has been found between ratings of pain worst and ratings of pain interference.<sup>19</sup>

### **Pain interference**

Seven items were used to assess the extent to which pain interferes with general activity, mood, walking, working, relations with others, sleeping, and enjoyment of life. Each item is rated on a 0 to 10 scale. An interference score is computed by averaging these seven items. The internal consistency alpha for the pain interference scale was 0.93 in the current study. In addition, the BPI contains a list of 15 words to describe pain experiences. Patients were asked to check the words (e.g., aching and tiring) that described their pain experiences in the past week.

### **Demographics/Medication**

Information regarding demographics, diagnosis, and treatment was collected by a self-report questionnaire, which covered age, gender, education, income, diagnosis, medications, and pain-related treatments (e.g., surgery or physical therapy).

### **Procedure**

The data collector went to the oncology clinic to obtain the patient's name and information regarding pain from the flow sheet on the chart on the day before data collection. If the chart indicated that the patient was experiencing pain related to cancer at the previous visit and met the selection criteria, the data collector attached a letter which was signed by the director of the cancer center on the chart. The letter described the nature of the study and invited the patient to participate in this study. The nurse gave the letter to the patient when he/she came to the clinic. The letter instructed the patient to check "yes" or "no" to indicate his/her interest in participation. Data collectors contacted clinic staff at the end of each day to obtain the names and addresses of patients who checked "yes". A questionnaire, a consent form, and a stamped return envelope were mailed to these patients.

## **RESULTS**

### **Descriptive Analysis Descriptive information regarding pain intensity and pain experiences**

The mean (SD) pain intensity and the extent to which pain interferes with activities of daily living were 4.84 (2.45) and 3.56 (2.45), respectively. Demographic variables (e.g., gender, age, level of education, marital status, and income) were not related to pain intensity or pain interference with daily life. The words that patients used most frequently to describe their pain experiences were aching (86%), nagging (74%), and tiring (67%).

### **Descriptive information regarding perceived self-efficacy and outcome expectancies**

Descriptive data regarding perceived self-efficacy and outcome expectancies are summarized in Table 1. The mean (SD) self-efficacy expectancies ranged from 0.78 (1.35) (self-efficacy to use hypno-