

## ASSESSING LEVELS OF SELF-EFFICACY AMONG FAMILY CAREGIVERS OF PATIENTS WITH CANCER

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### ABSTRACT

**Background:** Family caregivers (FCs) play a substantial role in supporting and managing patients with cancer. Self-efficacy is investigated as an essential prerequisite for FCs providing optimum patient care.

**Purpose:** This study was aimed at assessing the levels of self-efficacy among FCs of patients with cancer in Jordan.

**Methods:** A descriptive study was conducted among FCs. A total of 125 participants was recruited from two major hospitals in Jordan. Of those who were recruited only 111 participants completed the: 1) FCs' Demographical Data; and 2) Arabic Version of Self-Efficacy Scale (SES).

**Results:** The mean total score of self-efficacy for FCs was 61.3 (SD= 19.9) and the mean score of self-efficacy for pain management, symptom management, and function subscales were 58.0 (SD= 22.6); 62.9 (SD= 19.7); 65.8 (SD= 23.2) respectively.

**Conclusions:** Levels of self-efficacy and its associated factors need to be investigated in order to adjust supportive and educational care for FCs according to these levels and enhance a better caregiving role among FCs of patients with cancer.

**KEYWORDS:** Cancer, Family Caregivers, Self-Efficacy

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### INTRODUCTIONS

Family caregivers (FCs) play a substantial role in supporting and managing patients with cancer, and there is a growing awareness among oncology clinicians of the importance of enhancing self-efficacy of FCs through assessment, education, support, and training of FCs. A key component of being activated to manage one's health is having self-efficacy to perform specific behaviors (Mazanec, Sattar, Delaney, & Daly, 2016).

Self-efficacy is investigated as an essential prerequisite for FCs providing optimum care for patient. Self-efficacy was found to be influenced by personal and medical characteristics of FCs and their patients (Barber, 2013; Kershaw et al., 2015; Porter, Keefe, Garst, McBride, & Baucom, 2008).

Furthermore, Social cognitive theory suggests that there is an association between individuals' factors (i.e., FCs characteristics) and self-efficacy (Bandura, 1982).

The advanced stages of disease, the disease progression over time, and the FCs competences and capabilities are main aspects to be considered (Kershaw et al., 2015). Self-efficacy is strongly associated with reduced symptom severity and less symptom interference with daily life among colorectal cancer patients. Symptom severity for the patients is associated with the following characters: being older age, female, body mass index <18.5, suburban residence and stage III disease (Zhang et al., 2015). Therefore, if patients exhibit more severe symptoms; self-efficacy for FCs will be challenged. Another study revealed that self-efficacy among FCs was found to be significantly associated with factors like age of FCs and types of treatment modalities (Manne et al., 2004). In addition, a significant relationships were found among social support and self-efficacy among FCs of patients with cancer. The results from the quantitative and qualitative data supported that higher self-efficacy was associated with higher social support for the FCs (Barber, 2013).

In fact, FCs' psychological functioning and self-efficacy are closely interconnected with each other, whereas high levels of anxiety lowers their self-efficacy (Kershaw et al., 2015). Individuals with higher self-efficacy exhibit less anxiety and perform their tasks more efficiently, while more anxious FCs are less prepared or capable of caring for patient's needs (Ugalde, Krishnasamy, & Schofield, 2014). In providing for patients with lung cancer, lower self-efficacy has been associated with a higher level of caregivers' strain, psychological distress, and poor quality of life (Porter et al., 2008).

According to Bandura (Bandura, 2000), self-efficacy represent beliefs about ones' ability to perform specific behavior or task. When FCs, obtain the appropriate knowledge, skills, training, and resources to perform the assigned roles to their patients this eventually help them to exercise higher self-efficacy (Bandura, 1982; Bandura, Caprara, Barbaranelli, Regalia, & Scabini, 2011). The relationship between training for specific patients' symptoms and self-efficacy among FCs of patients with colorectal cancer was investigated. Results showed a significant positive association between the training program training program and high levels of self-efficacy among participants (Havyer, Van Ryn, Wilson, & Griffin, 2016). Results revealed that both Coping Skill Training (CST) and education/support had positive effects on improving caregivers' self-efficacy for symptom management. Moreover, the same study implied that FCs of patients with early stages of lung cancer benefited more from the education/support intervention, while FCs of patients with advanced lung cancer benefited more from the CST protocol (Porter et al., 2011).

Due to undesirable impacts of cancer and its treatment on self-efficacy for FCs; the oncology nurses need to focus on assessing the levels of self-efficacy through the plane of care they provide for patients with cancer and their families (Akin, Can, Durna, & Aydiner, 2008). This study was aimed at assessing the levels of self-efficacy among the FCs of patients with cancer in Jordan.

## **METHODS**

### **Design and Sample**

A descriptive study was conducted to assess the levels of self-efficacy among FCs of patients with cancer. The FCs recruited from outpatient units from two major hospitals in Jordan. A total of 125 participants was recruited, of those who were recruited only 111 participants completed the measure.

## **Ethical Considerations**

After obtaining the institutional review board from the selected hospitals. An informed consent was signed from the eligible participants. The purpose, objectives, nature, and risk-benefit of the study were provided for the participants before they agreed to participate. Confidentiality and voluntary participation were assured; moreover all participants were assured of their ability to withdraw from the study at any time.

## **Measurement**

All participants were completed a questionnaire consisting of the: 1) FCs' Demographical Data; and 2) Arabic Version of Self- Efficacy Scale (SES).

## **Demographical Data**

Individuals were invited to participate in the study if they met the following criteria, a) age of 18 and older; b) serving as a FCs for a patient with cancer in any stage of cancer; c) able to speak Arabic; d) serving as a primary caregiver and providing various caregiving tasks for the cancer patient most of the time; e) currently free from any psychiatric or mental illness. However, The FCs were excluded if they are: a) healthcare professionals such as nurses and physicians because being a health care provider might influence their self-efficacy levels.

## **Self-Efficacy Scale (SES)**

This is a modified version of the original scale with 16-items to evaluate self-efficacy for managing pain, symptoms, and function for lung cancer (Porter et al., 2002). The original Chronic Pain Self-Efficacy scale was modified by adding seven more pain management items (Khanjari, Langius-Eklöf, Oskouie, & Sundberg, 2014) and other common symptoms such as shortness of breath in cancer patients. It is used to assess the perceived ability to manage a variety of symptoms on a scale of 10 (not at all certain) to 100 (completely certain).

This scale has three subscales: self-efficacy for managing pain, self-efficacy for managing other symptoms (fatigue, nausea, depression), and self-efficacy for function. The three subscales were found to be highly correlated with each other (from 0.80 to 0.86) among the FCs of patients with lung cancer. The possible range for the total score is 10 to 100, with a higher score indicating greater self-efficacy. Prior studies have used the self-efficacy scale to evaluate lung patients with cancer, cronbach alpha for the total scale score was .96 for caregivers (Porter et al., 2008). Reliability in this study at the end of data collection was tested and revealed an excellent internal consistency of .93.

To ensure the validity and reliability of the instruments in this study, the SES scale was translated from English to Arabic following the steps described by (Brislin, 1970). First, the scales were translated from English to Arabic by a professional English-language translators. Then, scales were back-translated from Arabic to English by two different professional English-language experts. Later, all translators confirmed that both versions have the same conceptual meanings.

## **RESULTS**

### **Characteristics of Family Caregivers**

The FCs mean age was 36 years (SD=11.1); ranging between 18 and 69 years. The FCs were mostly females (73%), had a secondary school level of education (34.2%). The majority of FCs are free from chronic illnesses (79.3%). About half of them had a low monthly income (less than 300 Jordanian Dinar, 1 JD=1.4 US Dollar). Of those

who were employed (n=45, 41.5%), the mean of working hours per day was 8.04 (SD = 2.4). The characteristics of FCs are presented in Table 1.

**Table 1: Family Caregivers Demographical and Clinical Data (N= 111)**

Variable	Mean (SD)
Age	36.0 (11.1)
Working hours/day	8.04 (2.38)
Duration in caregiving/ months Range (6-60)	23.5 (17.1)
	<b>n (%)</b>
<b>Gender</b>	
Male	30 (27.0)
Female	81 (73.0)
<b>Marital Status</b>	
Single	40 (36.0)
Married	67 (60.4)
Divorced/ Widow	4 (3.6)
<b>Educational Level</b>	
Less than secondary school	27 (24.3)
Secondary school	38 (34.2)
Diploma	19 (17.1)
University level	27 (24.3)
<b>Employment Status</b>	
Working	45 (40.5)
Not working	66 (59.5)
<b>Family Income</b>	
less than 300 JD	56 (50.5)
301-500 JD	41 (36.9)
More than 500 JD	14 (12.6)
<b>Medical Insurance</b>	
Insured	83 (74.8)
Not Insured	28 (25.2)
<b>Suffering from Chronic Diseases</b>	
Yes	23 (20.7)
No	88 (79.3)
<b>Having Mean for Transportation</b>	
Yes	58 (52.3)
No	53 (47.7)

### Characteristics of Patients

The mean age for the patients under caregiving in this study was 55 years (SD =12.5), ranging between 18 and 77 years. Almost 66% of patients had stage 3 and 4. About 55% of them are free from co-morbid conditions. The majority of FCs had complications (73%) and side effects of treatment (79%). The characteristics of the patients are presented in Table 2.

**Table 2: Patients' Demographical and Clinical Data (N= 111)**

Variable	Mean (SD)
Age	55.0 (12.5)
Duration of diagnosis/ months Range (6-96)	28.6 (24.4)
	<b>n (%)</b>
<b>Type of Cancer</b>	
Breast	44 (39.6)
Prostate	8 (7.2)
Colorectal	14 (12.6)
Lung	13 (11.7)
Others	32 (28.8)
<b>Stage of the Disease</b>	
First	20 (18.0)
Second	25 (22.5)
Third	32 (28.8)
Fourth	34 (30.6)
<b>Type of Treatment</b>	
Radiation	23 (20.7)
Chemotherapy	60 (54.1)
More than one type	18 (16.2)
Others	10 (9.0)
<b>Having Complication from Disease</b>	
Yes	81 (73.0)
No	30 (27.0)
<b>Having Side Effects from Treatment</b>	
Yes	88 (79.3)
No	23 (20.7)
<b>Suffering from other Chronic Diseases</b>	
Yes	50 (45.0)
No	61 (55.0)

### Levels of Self-Efficacy among FCs of Patients with Cancer

Levels of self-efficacy were examined in this study. The mean total score of self-efficacy for FCs was 61.3 (SD= 19.9) and the mean score of self-efficacy for pain management, for other symptoms management, and for function subscales were 58.0 (SD= 22.6); 62.9 (SD= 19.7); 65.8 (SD= 23.2) respectively as shown in Table 3.

**Table 3: Means, SD, and Range for Self-Efficacy among FCs (N=111)**

Variables	Possible Range	Actual Range	Mean	SD
Total Self-Efficacy	10-100	15-100	61.3	19/9
Self-Efficacy for pain management	10-100	10-100	58.0	22.6
Self-Efficacy for symptoms management	10-100	18-100	62.9	19.7
Self-Efficacy for Function	10-100	10-100	65.8	23.2

SD= Standard Deviation

## DISCUSSIONS

This study examined the levels of self-efficacy among FCs of patients with cancer using the self-efficacy scale which measured their ability for managing pain, other symptoms, and function. The level of self-efficacy in this study was higher than which was reported in a study conducted among FCs of patients with lung cancer (Porter et al., 2008) but, it was lower than which was reported among FCs of patients with prostate cancer (Campbell et al., 2004). The mean score on self-efficacy for subscales in this study showed that FCs had higher mean score on self-efficacy was for

function while the lowest score on self-efficacy was for pain management. The mean scores on self-efficacy to manage symptoms were lower than those reported in a study of FCs of prostate cancer patients (Campbell et al., 2004) but slightly higher than was found in a study of FCs of patients with lung cancer (Porter et al., 2008; Porter et al., 2002).

Several studies examined self-efficacy among FCs in the context of cancer using various self-rated self-efficacy scales to assess various domains of self-efficacy. These domains included: symptoms management, stress management; physical functioning; coping with medical treatment; communication; and personal management (Barber, 2013; Campbell et al., 2004; Hendrix et al., 2016; Kershaw et al., 2015; Ugalde et al., 2014). These studies were concerned with interdependence between self-efficacy and well-being. One of these studies revealed that FCs' self-efficacy enhances their physical well-being (Kershaw et al., 2015), this is in part consistent with social cognitive theory, which anticipated that self-efficacy among individuals enhances their physical and mental well-being (Bandura, 1997; Bandura et al., 2011).

Moreover, FCs who had greater self-efficacy also had greater mental well-being, this perhaps because greater self-efficacy helps FCs to deal with suffering associated with caregiving experience or because FCs who feel more confidence to provide care will demonstrate greater mental well-being (Kershaw et al., 2015). Individuals who have greater self-efficacy may be more likely to feel more competent in their role, which in turn lead them to feel less worried about their capabilities in performing caregiving tasks (Ugalde et al., 2014). Higher self-efficacy was associated with better adjustment to physical symptoms and better mental well-being in patients with cancer (Campbell et al., 2004).

## **CONCLUSIONS**

The current study assessed the levels of self-efficacy among FCs of patients with cancer in Jordan. The results indicated that FCs were moderately certain about their levels of self-efficacy. In addition, the levels of subscales were assessed, results revealed that the highest levels on self-efficacy were for function and the lowest levels of self-efficacy were in pain management. Hence this study focused only on assessing the levels of self-efficacy among FCs of patients with cancer in Jordan, future research should be conducted to assess the associated factors with self-efficacy. Consequently, supportive and educational care could be adjusted accordingly in order to enhance a better caregiving role among FCs of patients with cancer.

## **Limitations**

The generalize ability of the findings may be compromised; therefore additional studies with larger and more representative samples are warranted. Similar to the majority of other findings which based on self-reported measures the possibility of high rating due to social desirability issues should be considered.

## **Conflict of Interest**

The authors declare that they have no conflict of interest.

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