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PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1154757>Available online at: <http://www.iajps.com>**Research Article****HOPE AMONG THE PATIENTS WITH BREAST CANCER
REFERRED TO HOSPITALS IN AHVAZ (SOUTH-WEST OF
IRAN) IN 2017****Sarah Karampour¹, Malek Fereidooni-Moghadam^{2*}, Koroush Zarea³, Reza Masoudi⁴**¹MSN, Nursing Care Research Center in Chronic Diseases, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran²PhD. Nursing and Midwifery Care Research Center, Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran³PhD, Nursing Care Research Center in Chronic Diseases, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran⁴PhD, Community-Oriented Nursing Midwifery Research Center, Shahrekord University of Medical Sciences, Shahrekord, Iran.**Abstract:****Purpose:** The aim of this study was to investigate to investigate the hope among the patients with breast cancer referred to hospitals in Ahvaz (South-West of Iran).**Methods:** This cross-sectional study was carried out on 118 women with breast cancer who referred to the health centers in Ahvaz. The sampling method was nonprobability and consecutive sampling method. Snyder's Hope Scale was used for data collection.**Results:** The mean and standard deviation of hope scores were 43.63 and 5.46 , respectively and more participants (i.e., 51.7%) enjoyed moderate level of hope. There were no significant relationships between age group, marital status, level of education, and economic status and hope scores. (P value > 0.05).**Conclusions:** The findings of the study indicate that most patients in the study had a moderate level of hope. Thanks to the importance of hope in proceeding the whole process of treatment and care, this concept should be taken into account in the provision of care and treatment of and psychological strategies for patients with breast cancer.**Key Words:** Breast cancer, Hope, Mental status, Iran**Corresponding author:****Malek Fereidooni-Moghadam,**
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INTRODUCTION:

Cancer is one of the earliest diseases known to human. This disease is a global issue and in Iran is the third cause of mortality (1). Among cancers, breast cancer is the most common cancer and the most important leading cause of death in women aged 39-44 years, and after lung cancer it is the second-leading cause of cancer death in women (2). Despite recent technical advances in surgery, chemotherapy, and radiation therapy, the cancer mortality rate has remained stable for at least 30 years (3).

The breast seems to be a crucial symbol of beauty and attractiveness in women, so breast cancer is psychologically, emotionally, and socially an awful event for many women; hence, it makes the afflicted person come across a great loss and psychological and social challenges (4). On the other hand, treating women with breast cancer, who are the fundamental pillar of family and society, can have numerous psychological, social, and cultural effects because their health is intimately related to social and family health (4, 5). Response to cancer depends on many factors such as the patient itself, the patient's psychological status, family and social environments, disabilities and deformities caused by the disease and affecting all the aspects of the patient's activities (6).

Therefore, providing solutions for patients to react better and adapt more effectively to the issue at hand is one of the most important issues in this area. In this regard, one of the important issues in reacting better and adapting more effectively to cancer and its treatments is to emphasize the components of the field of positive psychology. Positive psychology is considered to be the study of human capabilities and strengths. One of the main variables in positive psychology is hope. Snyder considers hope, which is a construct very close to optimism, as a construct of two components including 1. the capacity to find routes to desired targets in spite of existing obstacles and 2. the existence of an incentive for using those routes, so hope is the sum of these two components. According to this conception, hope is powerful when it embraces valuable goals and, in spite of challenging barriers, it is possible to achieve them in midterm. Hope is an emotional force that guides imagination towards positive things. Hope provides a human being with energy, flexibility, vitality, and ability to cope with problems, so it increases life satisfaction (7, 8).

According to Caar (2003), hope is related to mental and physical health and has a positive correlation with different types of scales such as positive

responses to medical interventions, mental health, positive mood, avoidance of stressful life events, vitality and happiness in life affairs, and problem-solving (9). The importance of hope in treating diseases is so high that Snyder considers hope as the main goal of treatment (8). The crises caused by cancer result in imbalance and dissonance between thought and body and soul, but the most common mood in this period is a sense of despair (6). In a study conducted on female students by Ironic, Snyder, and Carson in 1998, it is found that hopeful people use more promising strategies to cope with a supposed cancer problem compared with disappointed people (10).

Hope and cancer are interrelated in two ways. First, hopeful people focus more on the problems and are more active in solving them, and secondly, those who think hopefully manifest less distress and more adaptation when encounter the diagnosis and treatment of cancer. Moreover, in the treatment process, tolerating long and aching pains and the complications of chemotherapy or radiation therapy, hopeful people are more resistant and more likely to follow the treatment, so they can put up with treatment side effects such as hair loss, overweight, fatigue, and nausea. In the recovery phase, hopeful people have more positive thoughts about their lives and show more tendency towards identifying positive aspects (2). Snyder (cited by Movahedi *et al.*) assert even if a cancer is in an advanced stage and cannot be improved, patients who are more hopeful set other goals such as spending more time with the family and enjoying the rest of their life time (2, 7).

Accordingly, diagnosing the amount of hope in this group of patients and attempting to promote it as much as possible can finally lead to identifying the factors that affect people's better adaptation and improving the psychological state of cancer patients. By the way, regarding patients' socio-cultural background and the effect of hope on the compliance status and even on the prognosis of treatment, studies have shown a different status of hope in such patients. For example, Hammer *et al.* (2009) in a qualitative study on hope in women with genital cancer diagnosis report that hope might be considered as an internal power to maintain individual integrity, fight with disappointment, return to normal state, bestow good feeling upon patients, and improve communications with family, spouse, and children (11). In a study by Zhang (2010), the results also show that breast cancer patients have a high level of hope and there is a significant and positive relationship between hope and social support, so patients who have a higher level of hope receive a

higher level of social support (12). McClement and Chochinov (2008) in a study entitled "Hope in advanced cancer patients" state that after diagnosis of cancer, patients face multiple physical and psychological problems and hope plays an important and vital role in providing physical and mental well-being of sick patients and their family members. They assert that hope is necessary for patients to continue their life and reduce the stress caused by the disease; thus, health care personnel need to become familiar with the concept of hope and interventions improving hope (13). In Iran, Shoa-Kazumi and Momeni-Javid (2009), in a study investigating the relationship between quality of life and life expectancy in post-operative cancer patients, declare that the mean hope score, which is measured by the Snyder's Hope Scale, of the participants is 28.38; the findings of the study reveal a positive and significant relationship between life expectancy and quality of life. Therefore, the higher the hope for a better life, the better the quality of life would be and vice versa (14).

Taking these cases into consideration and since few studies have been carried out in Iran in connection with hope among women with breast cancer, the current study was aimed to investigate "the hope among the patients with breast cancer referred to hospitals in Ahvaz in 2017".

2. MATERIALS AND METHODS:

2.1. Design and Samples

The present study was a cross-sectional investigation performed on 118 women with breast cancer, who referred to the healthcare centers in Ahvaz. Nonprobability-based consecutive sampling was used in the study.

2.2. Instrument

The tool for collecting data in this study was a test battery. According to the objectives of the research, the test battery consisted of two parts. The first part included demographic questions such as age group, marital status, level of education, and economic status.

The second part of the test battery was Snyder's Hope Scale. The scale consisted of 12 items developed by Snyder (1991), and included two subscales of agency thinking and pathway thinking. The 8-point Likert-type scale ranging from *I completely disagree* = 1 to *I totally agree* = 8 had five options. The scores of questions 1, 5, 7, and 11 which were deviant questions to increase the accuracy of the test were ignored; therefore, the range of scores was between 12-60. 4 questions made up the agency thinking subscale, 4 questions made up the pathway thinking subscale, and 4 were deviant questions (or

fillers) which were not scored. The total scores of the agency thinking and pathway thinking determined the score for hope. The higher the score, the higher the hope; thus, the lower scores indicated more disappointment. The scoring was as follows:

12-24: low level of hope (hopelessness),

25-32: moderate level of hope, and

Above 37: high level of hope (2, 15).

The reliability level of this scale was estimated on the basis of Cronbach's alpha (= 84%). Snyder and Peterson also verified the validity of this scale by content validity. The reliability of the Snyder's scale was investigated by Golzari (2007) using the internal consistency method, and the Cronbach's alpha coefficient was 0.89 (15). The reliability of this scale was obtained in the study conducted by Zahed babelan (2011) by using Cronbach's alpha test (= .79) (15).

The questionnaire was completed in an appointment by the participants.

2.3. Data analyses

After the data was collected, the descriptive statistics and chi-square test were run to analyze the data by using the SPSS 22 software.

3.4. Ethical Considerations:

The Ethics Committee of Ahvaz Jundishapur University of Medical Sciences approved the study (ETH-387). Formal authorization was obtained from College of Nursing and Midwifery of Ahvaz Jundishapur University of Medical Sciences and the hospitals for both the sampling and the study. Both the purpose and method of the research were described for the participants, and written informed consent to participate in the study was received from all of them.

3. RESULTS:

The mean age of the participants was 47.65 (SD = 10.45) with the minimum age of 18 years and the maximum age of 76 years. In Table 1, other demographic characteristics of the participants can be found.

The mean and standard deviation of hope scores were 43.63 and 5.46, respectively, with the minimum score of 19 and the maximum of 54. Moreover, more participants (i.e., 51.7%) enjoyed moderate level of hope (Table 2).

Moreover, the participants' responses to the questions of the Hope Scale are given in Table 3. According to the responses, 65.3% of the participants were "usually found themselves worrying about something".

Additionally, the findings of the study discovered there were no significant relationships between age

group, marital status, level of education, and economic status and hope scores. (P value > 0.05).

Table 1: Demographic information of the participants

Variable		Frequency	Percentage
Age group	Below 30 years	6	5.1
	30 to 50 years	69	58.5
	Above 50 years	43	36.4
Marital status	Single	22	18.6
	Married	71	60.2
	Divorced	7	5.9
	Widowed	18	15.3
Economic status	Good	30	25.4
	Average	61	51.7
	Bad	27	22.9
Level of education	Illiterate	23	19.5
	Elementary education	29	24.6
	High school diploma	20	16.9
	Associate Degree	13	11.0
	Bachelor degree	24	20.3
	Master degree	9	7.6

Table 2: The overall levels of hope among the participants

Hope levels	Frequency	Percentage
Low	2	1.7
Moderate	61	51.7
High	55	46.6
Total	118	100

Table 3: The frequency and percentage of responses to each of the questions of the Hope Scale

	Mostly True Frequency (%)	Somewhat True Frequency (%)	Slightly True Frequency (%)	Somewhat False Frequency (%)	Definitely False Frequency (%)
1- I can think of many ways to get out of a jam.	9 (7.6)	61 (51.7)	37 (31.4)	9 (7.6)	2 (1.7)
2- I energetically pursue my goals.	6 (5.1)	71 (60.2)	20 (16.9)	20 (16.9)	1 (0.8)
3- I feel tired most of the time.	16 (13.6)	79 (66.9)	6 (5.1)	16 (13.6)	1 (0.8)
4- There are lots of ways around any problem.	19 (16.1)	63 (53.4)	28 (23.7)	7 (5.9)	1 (0.8)
5- I am easily downed in an argument.	7 (5.9)	45 (38.1)	43 (36.4)	13 (11.0)	10 (8.5)
6- I can think of many ways to get the things in life that are important to me.	17 (14.4)	66 (55.9)	28 (23.7)	7 (5.9)	0 (0.0)
7- I worry about my health.	36 (30.5)	61 (51.7)	9 (7.6)	10 (8.5)	2 (1.7)
8- Even when others get discouraged, I know I can find a way to solve the problem.	13 (11.0)	64 (54.2)	21 (17.8)	17 (14.4)	3 (2.5)
9- My past experiences have prepared me well for my future.	20 (16.9)	55 (46.6)	32 (27.1)	9 (7.6)	2 (1.7)
10- I've been pretty successful in life.	10 (8.5)	65 (55.1)	12 (10.2)	27 (22.9)	4 (3.4)
11- I usually find myself worrying about something.	13 (11.0)	77 (65.3)	17 (14.4)	6 (5.1)	5 (4.2)
12- I meet the goals that I set for myself.	12 (10.2)	66 (55.9)	17 (14.4)	21 (17.8)	2 (1.7)

4. DISCUSSION:

Developing breast cancer in women raises numerous challenges; diagnoses, treatments, consequences, side effects of treatment, and disease recurrence can cause psychological reactions such as stress, anxiety, and depression and these reactions can have negative and devastating effects on the quality of life of these patients by causing malfunctions, problems in controlling symptoms, weaknesses in making therapeutic decisions, poor adherence to treatment regimens, and poor social interactions (16).

On the other hand, in recent years, paying attention to hope and other components of positive psychology has been considered as one of the most important determinants of treatment continuity and even the prognosis of treatment. In this regard, this study

attempted to examine the level of hope in a sample of patients with breast cancer.

The findings of this study showed that the mean and standard deviation of hope scores in the samples were 43.63 and 5.46, respectively, and 46.6% of the samples had high life expectancy and 1.7% of them had low life expectancy. As it is shown, the studied patients faced incurable diseases, but they enjoyed a moderate to high level of hope. This can be due to medical advances in treating this disease, individuals' awareness of the disease, and the existence of alternative beauty treatments for the treatment of this disease. This concept can also be the basis for reflecting the psychological state of cancer patients and reflecting the proper mental state of cancer patients. Therefore, nurses and other members of the

care team can use this strength of the patients to provide better care for such patients.

In this regard, various studies have been carried out in Iran and other countries. For example, the results of the study done by Afrouz (2013) indicate that the mean score of hope for cancer patients is 32.4, indicating that the afflicted patients have high levels of hope (17). In a study by Aghahosseini *et al.* (2012) carried out on the cancer patients referred to a hospital in the north of Iran, it is depicted that the mean score of hope for cancer patients being aware of the diagnosis of cancer is 37.61 and the mean score of hope for patients being unaware of the diagnosis of cancer is 37.16, indicating that Iranian patients with cancer in this study have a moderate to high level of hope and there is no significant difference between the hope level of patients aware of the diagnosis of cancer and patients not aware of the diagnosis of cancer (18). The results of the study by Baljani *et al.* (2011) also demonstrate that the mean score of hope is 39.11% amongst the afflicted patients, indicating that the cancer patients in this study also have a moderate to high level of hope (19). Moghimian *et al.* (2010) also in their study on the correlation between spiritual well-being and hope in cancer patients referred to a hospital in Isfahan conclude that the mean score of hope in cancer patients with scores ranging from 17-64 is 49.8, indicating that patients with cancer have moderate to high levels of hope in this study, too (20). In a study by Vellone *et al.* (2006) in Italy, which is conducted on patients with cancer referred to an oncology department of a hospital in Rome, the results disclose that the mean hope score is 86.06 which indicates that patients with cancer enjoy moderate to high levels of hope (21). As it can be observed, the results of the present study are to some extent similar to those of other studies. However, the differences among the results of this study and those of other studies can be due to the nature of the concept of hope in individuals which is influenced by various factors such as race, gender, culture, and religious beliefs.

Also, the results of this study show that there is no statistically significant relationship between life expectancy and demographic characteristics including age, occupation, marital status, educational level, and economic status. The findings of some studies in this regard are somewhat similar to those of the present study. In Esbensen *et al.*'s study on adult cancer patients, there is no significant relationship between life expectancy and age, marital status, place of residence, and economic status (22). Also, in a study by Denewer *et al.* (2011) conducted on 301

women with breast cancer after mastectomy, there is no significant relationship between hope and age and education (23). In addition, in a study by Estakhri *et al.* (2017) which is conducted on two groups of 30 cancer patients with the aim of comparing hope levels in cancer patients and non-cancer patients, it is discovered there is no significant relationship between hope and education level (24).

CONCLUSION:

The findings of the current study showed that, in general, most patients in the study had a moderate level of hope. Thanks to the importance of hope in promoting the quality of life, maintaining sustainable mental health, complying with therapeutic processes, and proceeding the whole process of treatment and care, this concept should be taken into account in the provision of care and treatment of and psychological strategies for patients with breast cancer.

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