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The Role and Application of Metaphor in Preventing Breast Cancer Phobia

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ABSTRACT

Background: Specialists, researchers, patients, and even their families use metaphors to describe diseases. Metaphors are known to be central tools in both communication and thinking. Crucially, even though many metaphors become conventionalized, metaphor choices are seldom neutral.

Methods: This study investigated metaphors associated with breast cancer using data from SID, magiran, and noormags databases.

Results: The results showed that a number of medical concepts of cancer are expressed using conceptual metaphors, and that Persian speakers use different metaphors to express medical concepts related to breast cancer, such as "breast cancer is bad", "breast cancer results in an inactive life", and so on. These metaphors can have both positive and negative effects on common perceptions of breast cancer. The use of metaphors to address diseases, especially breast cancer, can cause feelings of fear and phobia among patients directly or indirectly, leading to a lack of timely referral for early treatment, fear of stigma or loneliness and death.

Conclusion: The findings of this research can inform experts, researchers and doctors that the use of words can be both curative and destructive. Thus, they should consider this issue in their careers and statements.

Introduction

Breast cancer has a long history as a disease in civilized society and medical science. However, women avoid talking about it with their families, but this issue has attracted much attention in the past 25 year.^{1,2} Cancer can change almost every aspect of a person's life. Analysis of how patients talk about themselves and how they feel is especially important in raising awareness among these patients.³ Research shows dissatisfaction of many breast cancer patients with the way in which words are used to describe it in the process of treatment. Images and metaphors are generally used in health community in communic-

ations about cancer. Physicians, the media, and patients and their families use descriptive language and metaphors to express and convey the impact and experience of the disease. Conceptual metaphors play an important role in understanding the different aspects of emotional concepts when it is difficult to express them.⁴ Sontag in his book *diseases and metaphors* suggested that cancer metaphors emerged under the influence of military metaphors. Expressions like alien cells attack the body, defensive defects, surgery, radiography, chemotherapy, attack and counter-attack are examples of the effects of military metaphors on cancer metaphors.⁵ This may be why the metaphors used in most cases have a harsh and scary nature which create a sense of fear of cancer. Thus, understanding military metaphors are effective in our awareness of breast cancer metaphors. Examples of these metaphors have been seen in published articles on breast cancer including the following: "Women who are survivors of breast

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cancer sometimes feel they have lost their femininity", written in an article about women with breast cancer. This reveals several metaphors for the readers instilling fear and panic in them about breast cancer. According to research, the word cancer is the most terrifying word for people among the diseases.⁶ Research have shown that metaphors can affect people's emotions, creating anxiety and fear which in turn interfere with proper treatment. Thus, care must be taken by doctors and experts in the use of words and metaphors if treatment is going to work for cancer patients, especially those suffering from breast cancer.⁷ Ever since the book *Illness as Metaphor* was published by Sontag, there has been a good deal of empirical and theoretical research on the role of metaphors in disease especially cancer all around the world. However, the effect of metaphors on fear of cancer has not received enough attention in Iran.

Lakoff and Johnson in 1980 initiated a new strand of research on metaphors by publishing their seminal work *Illness and Metaphor*. They developed a conceptual metaphor theory (CMT) in which conceptual metaphors include cognitive maps or a set of domains of dominant goals, most of which are subjective, abstract and complex, and less well-thought-out. Taking advantage of these metaphors, doctors can easily express their own complex emotional feelings and experiences. Medical language experts believe that the language of medicine has little clarity as medicine is not just a science, but rather science mixed with art influenced by emotions and many abstract variables.⁴ Emotional experiences can hardly be expressed precisely in scientific language, so it is these metaphors that connect new emotional experiences to old ones and help us understand the complex pattern of emotions. Therefore, medical professionals widely use conceptual metaphors to make communication easier. These metaphors are often used with euphemisms for a dangerous situation. For example, the aim of a study published in 2008 was described as follows: the paper aims to investigate the relationship between HER2 / neu, p53, ER and PR genes with survival rate in patients with breast cancer in Mashhad.² As can be seen, the metaphor survival used in the study is a military conceptual metaphor. Here survival depicts cancer as a battlefield or war for the individual. In the literature on breast cancer, malignant and benign have been widely used, which apparently divides cancer patients into bad and good. This necessitates attention to metaphors used in medical articles and discourses especially in the case of breast cancer. Thus, the present research aimed to examine the metaphors used for cancer, especially breast cancer. Specifically, the role and application of metaphors in creating fear and panic regarding breast cancer will be investigated. The aim of this study is to draw researchers and specialists' attention as well as that of the public to potential emotional

effects of words on people and creating fears in individuals and society. The question raised in this research is as follows:

1. What does the use of cancer metaphors in contemporary Persian reveal about?
 - (a) dominant views on the phenomena that are most frequently described as breast cancers
 - (b) perceptions of breast cancer
 - (c) factors contributing to the wide application of a metaphor

Methods

To collect data, metaphors used in breast cancer articles were studied. Research articles were examined to find conceptual metaphors associated with cancer. The researcher looked for key words like breast cancer, cancer, invasive treatments for breast disease, metastasis, chemotherapy for breast cancer, mastectomy and radiation therapy for breast cancer. Investigation of all texts required an enormous amount of time, so the number of key words was reduced to make data collection manageable. The metaphors found in the research articles are listed in Table 1. Inclusion and exclusion criteria for the articles under investigation were as follows:

Inclusion criteria

1. The full texts of the articles were available.
2. The journals were approved by Iran Ministry of Health.
3. Journals publishing articles only on breast diseases and cancer.

Exclusion criteria

1. Lack of access to the full text of the articles
2. Specialized scientific journals or journals that did not have scientific approval from the Ministry of Health or the Ministry of Science.

In this research, Pragglejazz Metaphor Identification Procedure (MIP) (2007) was used to identify words or phrases used metaphorically in the text.⁸ The entire article was first scanned to gain an overview of the entire text of the reviewed article. The target units or words within the whole text were determined. In this study, words such as breast cancer, breast metastasis, etc. were used to identify potential metaphors. Every word or metaphor found in the text was then examined to determine its meaning along with its metaphorical meaning in other texts. In this research, words such as invasive treatments, survival etc. were found to have other meanings such as conflict, aggression, and war. Finally, the metaphors were found and listed.

Results

In this study, 10 articles were randomly selected from the articles published in breast cancer journals

**Table 1.** Research articles reviewed in the present study

Article information	F1-score
Seyed Nouri T, Zahmatkash T, Molayi T, Akbari P, Haghi Z, Mohseni Azad P. Assessment the Risk of breast cancer using Gail model. Iranian Journal of Breast Disease Research.2009;1(2):53-57.	8
Yazdani F. The effects of yoga on function scales quality of life in women with breast cancer undergoing radiation therapy: A randomized clinical trial. Avicenna Journal of Nursing and Midwifery Care. 2015;23(1): 49-62.	6
Hosseini Seyedeh M, Khaledifar B. Quality of life, pain and acceptance of treatment in women with breast cancer in stages 1 and 2 in Chaharmahal and Bakhtiari province. Iranian Journal of Breast Disease Research. 2013; 6 (4) : 52-59	4
Ahmadzadeh, Laya, Maryam Vaezi, Sheida Sodagar, and Gholam Reza Golmohammad Nazhad. The Effect of Acceptance and Commitment Therapy Adopted for Couples Compared with Integrative Couple Therapy on Marital Conflicts of Couples with Breast Cancer. Iranian Quarterly Journal of Breast Disease.2019; 12 (3):47-54	8
Najafi R, Amiri F, Roshnayi G, Abbasi M, Razi M. Factors Affecting Survival in Patients with Breast Cancer in Hamedan Province from 2001 to 2018. Iranian Journal Breast Disease Research. 2019; 12 (4) :31-38.	6
Abbasi, Zahra, and Mojgan Karbakhsh. Re: Delivering Bad News: When My Patient Was My Own Mother. Archives of Breast Cancer (2019): 47-48.	4
Mohammadpour M, Yaseri M, Mahmoudi M, Entezar Mahdi R. Estimation of Survival in Women Diagnosed with Breast Cancer with Cure Survival in West-Azerbaijan and East-Azerbaijan Provinces. Scientific Journal of School of Public Health and Institute of Public Health Research . 2018; 16 (1) :63-74	10
Ghasemi M, Raeisi S, Aslani M. Study of BATF2 gene expression in breast cancer samples and association with clinical factors and patient survival. Iranian Journal of Obstetrics, Gynecology and Infertility, 2020.	5
Dehghani S, Salimi M, Nikonahad Lotfabadi N.Evaluation of anti-tumor effect of chemical compound [N-((5-nitrothiophen-2-yl) methylene)-2(phenylthio)benzohydrazide] in mouse model of breast cancer. Journal of Cellular and Molecular Research (Iranian Journal of Biology), 2019; 32 (2): 205-215.	11
Hosseini M, Mellati A, Mousavi S, Moghimi M, Ramezani A. Relation between Proteome of Women with Invasive Ductal Breast Cancer and Body Mass Index.Journal of Zanjan University of Medical Sciences & Health Services. 2017; 25 (109) :74-84	6

from magiran, Sid, and noormags databases and searched for metaphors and words associated with breast cancer. Table 1 presents the specifications of the articles and the number of metaphors and then summarizes the metaphors and words found.

The following metaphors were found in the articles reviewed:

Breast cancer is invasive

In sentences containing these metaphors, cancer is seen as an enemy, or a wild beast that intends to invade and attack individuals. This metaphor depicts the feeling of fear and stress caused by the attack of an attacker in people. This invader is sometimes the breast cancer itself, sometimes a tissue specialist or a doctor, sometimes chemotherapy or radiation therapy. For example, the following sentence is an example of this metaphor^{9,10,11}: "Postoperative pathology may be similar to the initial pathology report or may be more severe and even invasive cancer".

Breast cancer threatens the lives of all human

beings

In sentences containing this metaphor, cancer is considered as an entity or an object that seeks to kill all members of human society. According to this metaphor, no one is safe from the risk of being killed by breast cancer anywhere and under any circumstances. The following is an example of this:

Despite many advances in medical science and the development of human knowledge in the prevention and treatment of various diseases, cancer is still the most serious disease that unfortunately threatens the lives of many people and the risk of catching it exists for a large number of people from human society.¹²

Breast cancer destroys the sense of femininity

In the sentences containing this metaphor, it is stated that women who suffer from breast cancer lose part of their femininity or all of their senses and sometimes have marital problems. The following is an example of this:

Breast cancer causes a person to feel amputated by losing one or both breasts. This lack of an organ in

women causes a change in their mental image, a decreased sense of femininity, a decreased sense of attraction specially sexual attraction as well as anxiety, depression, arousal, embarrassment, accompanied by fear of relapse, the thought of rejection and thoughts of death. With these words or metaphors, the person feels that with surgeries such as breast removal, she can no longer be like the person in the past to her spouse. In this case, the fear will overcome the person with the diagnosis of breast cancer, leading to actions such as rejecting treatment and surgery, denial of the disease and so on.

Breast cancer is synonymous to a passive lifestyle

In such metaphors, it is suggested that people with breast cancer become stagnant or inactive in their lives, jobs and so on. In these metaphors and words, people are told that they will suffer from some kind of physical disability following breast cancer and surgeries such as breast resection (mastectomy), which in turn causes fear and panic about breast cancer. The following is an example of this metaphor: Breast cancer has caused a passive life in people.

Discussion

The study revealed that cancer is used as a metaphor in Persian. It also revealed that the use of metaphors associated with breast cancer is of particular importance in terms of their semantic load and their ability to create certain feelings and emotions in people. It was also found that metaphors associated with breast cancer have a wide use. The results of this research are in accordance with the results reported by previous results.^{4-6,10-15}

Specialists, doctors and researchers working in the field of health and treatment of patients with breast cancer use metaphors to make unfamiliar and abstract concepts available to the general public. These metaphors actually act as frames where words take on meaning. According to many studies, the use of words has an emotional and cognitive load affecting people's mental health and well-being. Some studies have shown that metaphors used in texts about cancer can express different aspects of the disease and the experience of patients.⁴ In this study, it was found that the use of words associated with breast cancer can cause negative feelings and interference with the treatment, creating fear and phobia. In a study conducted to investigate the effectiveness of metaphorical therapy on people's irrational beliefs, the findings showed that metaphorical therapy could neutralize a patient's reactions without raising his or her anxiety and inform the patient through awareness or help to reconstruct the conditions and in some way use cognitive reconstruction.¹³ In fact, metaphors somehow create a false and irrational beliefs that form the basis of people's ideas about cancer in general and breast cancer in particular. Due to the use

of these metaphors and words, doctors and researchers have reconstructed people's cognitive and emotional beliefs about breast cancer. Another study found that metaphors gave rise to culturally appropriate treatment methods in individuals, which in turn alter emotional beliefs by reducing depression and increasing resilience in individuals.¹⁴ Therefore, it can be said that by reconstructing and paying attention to people's metaphors, it is possible to increase people's adaptability and, self-esteem in dealing with diseases.¹⁵ The findings of this study are informative in that they provide insight to experts and researchers when reporting their research findings on breast cancer in articles and conversations with patients and their families. Conducting experimental research in the future can focus on the effect of metaphorical therapy on reducing anxiety and fear among people with breast cancer.

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