

## Rapid Communication

## Health Literacy in Iranian Women with Breast Cancer

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Breast cancer is the most common cancer among women all over the world. 14.1 million new cases were diagnosed in 2012, 8 million of which occurred in developing countries. In Iran, breast cancer is being diagnosed in women at least 10 years younger than their counterparts in developed countries. Thus a great number of Iranian breast cancer patients are in their reproductive ages.

Health literacy is a rather new concept in health issues, which can positively affect many aspects of life in general population and more particularly in patients i.e. breast cancer patients.

This study was performed as a cross-sectional study on 290 women with breast cancer under 50 years of age, attending Tehran Breast Diseases' clinics in 2014-2015. Health literacy of participants was assessed by a regionally developed tool: HELIA (Health Literacy of Iranian Adults).

Of the 290 participants, 103 (35.5%) obtained excellent scores in health literacy; 113 (39%), 56 (19.3%), and 18 (6.2%) had enough, not so enough, and inadequate scores respectively.

In all, the majority of breast cancer patients in this study (74.5%) had enough or excellent health literacy, which may be due to their daily struggle with the disease and their need to closely follow medical instructions. Nevertheless, these findings need more investigations performed in different settings, and with more samples to enable health policy makers to organize and administer beneficial health programs for this large group of cancer patients.

**Introduction**

After all the remarkable medical advances achieved by man in the previous and present century, cancer still remains a great challenge for human health, and is the second cause of death all over the world after cardiovascular diseases [1]. Breast cancer is the most common cancer among women worldwide and in Iran, and also is the second cause of cancer related deaths in women after lung cancer [2,3]. In a cancer survey conducted in 5 Iranian provinces, the peak incidence of breast cancer was among 45-54 year old women, with the mean age of  $48.4 \pm 14.4$  [4]. Recent studies reveal the fact that most new cases of breast cancer in Iran, are occurring between the ages of 35-44 years [5].

Despite the remarkable improvement in the field of cancer diagnosis and treatment, and thus the longer survival of the patients; the most important remaining challenge for clinicians and health care providers, is improving the survivors' quality of lives [6]. Health literacy can be considered as a necessary tool to achieve a desirable quality of life; and consists of the ability to read, understand, and use the necessary information for obtaining adequate health care, including reading and understanding prescription instructions, labels, and business cards [7,8]. According to a recent study in Iran about levels of health literacy in general population, 38.1%, 15.3% and 56.6% of the studied population had adequate, borderline and inadequate health literacy respectively [8].

Considering the rather large number of women suffering from breast cancer in reproductive ages and the importance of health

literacy in developing and preserving the optimal health conditions in these women, the authors decided to perform this study to assess the scores and levels of health literacy among younger (<50 years) Iranian women with breast cancer.

**Materials and Methods**

This study was a cross-sectional study, performed on 290 under 50 year old women with breast cancer who attended breast cancer clinics in Tehran, in 2014-2015. The recruited clinics were majorly referral centers, and the patients were from various parts of Iran, and did not necessarily live in Tehran. The inclusion criteria consisted of: having literacy, Iranian citizenship. Minimum interval between mastectomy, chemotherapy, radiotherapy (if any of them were performed) and participation in the study were 6, 1, and 1 months respectively.

Data were collected via a demographic/medical questionnaire, and also HELIA (Health Literacy of Iranian Adults) questionnaire. HELIA is the first and only Iranian devised health literacy assessment tool, containing 47 questions in 5 domains of health literacy i.e., reading, access, understanding, appraisal, and decision. HELIA was devised by A. Montazeri et al. in 2014 [9].

The researchers used the convenient method sampling, entering all breast cancer patients who met the inclusion criteria and visited the 7 recruited clinics for therapeutic reasons, till the fulfillment of the required sample size (290 women). The researchers provided the patients with complete information about the study and its goals and they were reassured that their information would remain strictly confidential, and then if they agreed to participate in the

**Table 1:** Distribution of demographic, and breast cancer characteristics among study participants (n=290).

Variable	43.59±5.50	26	Max
<b>Age(year)</b>	<b>Mean± SD</b>	<b>Min</b>	<b>50</b>
	<b>N (%)</b>		
<b>Education</b>	High school diploma or less	194 (66.9)	
	College degree	96(33.1)	
<b>Job</b>	Housewife	226(77.9)	
	Employed	64 (22.1)	
<b>Smoking</b>	Patient	8(2.8)	
	Husband	81(27.9)	
	No Mastectomy	65(22.4% of total 290 Patients)	
<b>Treatment</b>	Partial Mastectomy	75(33.33% of 225 mastectomized patients)	
	Total Mastectomy	150(66.66% of 225 mastectomized patients)	
	Unilateral Mastectomy	215(95.55% of 225 mastectomized patients)	
	Bilateral Mastectomy	10(4.44% of 225 mastectomized patients)	
	Chemotherapy	263(90.7% of Total 290 Patients)	
	Radiotherapy	226(77.9% of Total 290 Patients)	
	Hormone therapy	334(80.7%of total 290 patients)	

study, an oral and also a written consent were obtained from them. This study was approved by the ethics committee of TarbiatModares University, Tehran, Iran, and was performed in accordance with the ethical standards of Helsinki declaration in 1964. After entering into the study, the 2 above mentioned questionnaires were given to the patients and the necessary information to complete the questionnaires was provided for them. Then the participants would complete the questionnaires and give them back to the researchers. All this procedure took about 15-20 minutes and was performed in the waiting rooms of the clinics, when the patients awaited their turn to go into the exam room. The researchers tried to maintain the patients' privacy as much as possible by keeping a reasonable distance from the others; but it was a hard task because of the lack of access to a separate room with complete privacy. All obtained data were entered in the computer and analyzed by SPSS software, v.21.

## Results

The mean age of the participants was  $43.59 \pm 5.50$  years, and they were mostly housewives (77.9%). Sociodemographic characteristics of the participants are shown in Table 1.

The mean scores obtained in different domains of health literacy by the participants, and their levels of health literacy are illustrated in Table 2. Of the 290 breast cancer patients participating in the study, 103 (35.5%) obtained excellent scores in health literacy; 113 (39%), 56 (19.3%), and 18 (6.2%) had enough, not so enough, and inadequate scores respectively.

## Conclusion

The majority of breast cancer patients in this study obtained excellent or enough scores in health literacy. As the authors found no studies regarding health literacy in breast cancer patients, other types of studies were compared with this one.

**Table 2:** Distribution of scores of health literacy scores among participants (n=290).

Domains	Mean± SD	Min	Max
<b>Reading</b>	16.80± 3.23	4	20
<b>Access</b>	22.85± 5.02	12	30
<b>Understanding</b>	30.27± 4.83	15	35
<b>Appraisal</b>	14.89± 3.76	4	20
<b>Decision</b>	49.72± 6.62	29	60
<b>Total</b>	76.02± 16.09	100	30.18
	<b>N (%)</b>		
<b>Total score (0-100)</b>	103(35.5)		
	113(39)		
	56(19.3)		
	18(6.2)		

In a study about health literacy in Iranian diabetic women, performed by Tall et al in 2011, using S-TOFHLA (Short test of functional health literacy in adults), and the majority of the patients had intermediate health literacy [10]. In another study on Iranian general population's health literacy by Bani-Hashemi et al in 2012, also using TOFHLA, women obtained higher scores than men [8]. Javadzadeh et al showed in 2013 in Iran that women, older people and those with lower incomes were more prone to inadequate health literacy in TOFHLA and NVS (Newest Vital Sign) questionnaires [11].

None of the mentioned studies used the HELIA questionnaire which was used in this study, as it is a rather newly devised tool. Thus it is difficult to compare their results with the findings of this study, but in general it seems that women with breast cancer in this study had much higher scores of health literacy compared to other women in general Iranian population or diabetic women, which may be due to the fact that they are rather younger than general population, and most importantly that they are facing a life threatening condition which forces them to be more careful with medical instructions and general health information.

However, before any definite conclusions could be made regarding these findings, we need to perform more investigations in different settings, and with more samples to enable health policy makers to organize and administer beneficial health programs for this large group of cancer patients.

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