Awareness and Practice of Female Nursing, Midwifery and Paramedicine Students at Hormozgan University of Medical Sciences in Relation to the Risk factors, Prognosis and Prevention of Breast Cancer in the Second Semester of 2015-16

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ABSTRACT

As the most prevalent malignant neoplastic cancer among women, breast cancer stands as the second common cause of mortality inducted by cancer worldwide. Since people's awareness affects their attitude and in turn positively affects the prevention of breast cancer and its timely prognosis, it helps to cut down on the mortality rate. This latter issue motivated the present study which aimed to investigate the awareness and practice of Nursing, Midwifery and Paramedicine students concerning breast cancer at Bandar Abbas University. As a cross-sectional research, the present study was conducted among university students in the second semester of 2015-16. The sample was selected through a randomized method and finally included 253 subjects. The data collection instrument was a questionnaire whose reliability and validity were already established in some other research. SPSS ver19.0 was used for the statistical analysis of the data. The majority of subjects (61%) had an average score and only a few (2.3%) achieved a good score. No statistically significant correlation was found between the family background of breast cancer and the awareness score. Half of the subjects (51%) were aware of the breast self-test method but only 37% did it regularly every month. 41.6% visited a doctor annually for a test. Negligence comprised the highest percentage of refraining from the self-test. Feeling no pain (29.2%) was the most common cause of not visiting a doctor. The internet played a key role among the information sources. Raising awareness contributes to positive behavior and affects the performance of self-test and visiting a doctor. Students' low level of awareness of how to diagnose breast cancer requires that healthcare staff as well as academics take a step to increase this awareness and practice through proper education and strategies.

Key words: Awareness, University Students, Breast Cancer, Prognosis

INTRODUCTION

As a non-contagious disease, cancer induces a high rate of mortality [1] and is considered today as a primary disease and problem in the medical sciences [2]. Breast cancer is among the most common neoplastic malignancies among women worldwide [3]. It is the most prevalent cancer only standing second to skin cancer and is the second most common cause of women mortality after lung cancer in the U.S. [4, 5]. Not only does it threatens women's health, but also endangers their sexual identity, mental and social health [6, 7]. In the U.S., one out of every eight women gets afflicted with breast cancer [1]. According to the mortality rate reported by the Ministry of Health education in Iran, 25% of Iranian women suffered from this cancer in 2007. The most common age of affliction has been reported to be 41-60 years of age in Iran. 34.3% of cases occur at the age below 40. In Western communities, the average age of breast cancer is 62 years and the prevalence of this disease below the age of 40 is 6% [8]. This shows that in Iran, breast cancer emerged at least

one decade earlier than the west [9, 10]. Though it cannot be prevented, breast cancer can be best treated through a timely prognosis [11]. Preventive acts include breast self-test, clinical examination and mammography [12]. If diagnosed at an early stage, the affected women can have a faster choice and a higher chance of survival [13]. Therefore, prevention and screening lower the rate of affliction with cancer and death [8]. A body of research has indicated that women's awareness of cancer prevention has positively affected screening and treating the disease [14, 15]. A regular self-test is a simple and affordable way which requires one's cooperation and needs no equipment or expert. In case there is a regular self-test as well as regular examinations by doctors or the use of mammography, advancement of the disease can be prevented for 95% [16, 17]. Another method is breast screening annually at the age of 20-40 years and above 40 [6]. According to research, the mortality rate of women in breast cancer screening was reduced for 40% [18]. The screening programs aim to diagnose the disease before or after the emergence of clinical symptoms [8]. The occurrence of breast cancer in developing countries is about 50% of the emergence of this disease in the world which can be due to timely diagnoses that contributed to the preventive and screening programs in developed countries. This indicates how these educational programs can be effective in controlling breast cancer [19]. However, unfortunately still these methods have not been received well by the medical and health staff as well as women population in developing countries [8]. In Enjezab et al.'s investigation in Yazd, 80.25% of the women subjects showed to have never had a clinical breast test and the most common obstacles were their unawareness of such examinations, medical centers for this purpose and their no experience of breast problems [6]. It seems that Iranian women's inadequate awareness of the risk factors and symptoms of the disease and the advantages of screening methods as well as the functioning of healthcare centers are due to a lack of preventive programs [20]. Once the history of patient is recorded we must make sure the following are included: family background of the disease, high-fat diet, obesity, alcohol, lengthened pregnancy, previous background of cancer in the other breast, menopause above 55 years of age, the first childbirth at an age above 35 and other relevant risk factors [21]. Breast self-test should prevail as a reliable method in countries where breast cancer is commonplace [22]. Unfortunately, due to the defective preventive programs in Iran, there is not access to precise and detailed information on women's awareness level and attitude towards cancers. Therefore, in case instructions on how to do the self-test are comprehensive, accurate and timely, the probably abnormal cases will be diagnosed soon enough and can be prevented. This can help to stop the advancement of the disease easily. Since female medical students are among those aware and influential in healthcare activities, their awareness and attitude not only affect their personal life but also the other women in society. The present investigation was conducted to explore Nursing, Midwifery and Paramedicine female students' awareness of the risk factors, prognosis and prevention of breast cancer. The present findings are hoped to be used in educating the preventive acts of breast cancer and their establishment in society so as to help a timely diagnosis and control of the disease.

MATERIALS AND METHODS

As a cross-sectional research, the present investigation had all female students of Nursing, Midwifery and Paramedicine in the second semester of 2015-16 in Bandar Abbas University as its population (768 students). The sample size was 253 and to account for the probable attrition, 260 questionnaires were distributed.

The data collection instrument was a standardized questionnaire whose reliability and validity were tested and reported in a previous research. 25 items were included in multiple sections: the first section involved the demographic information such as age, education level, academic major and semester, marital status, initial awareness of breast cancer, background of cancer in close and distant relatives, history of breast tumors in relatives; the second section contained 21 multiple-choice and true-false items which explored respondents' risk factors, prognosis and prevention methods. The third section comprised of 15 items looked into subjects' attitude to be rated among 5 choices; the final section consisted of 5 items which assessed respondents' practice in a multiple choice format. What is implied by practice in the title as well as the items is the performance and non-performance of an act as well as the interval of a certain act such as the breast self-test or doctor's examination but not the skill of those involved which cannot be assessed in a questionnaire. The awareness score

is a sum of the attitude and knowledge scores and ranges between 0 and 10. If between 0-2.5, it is interpreted as very low; if it is located between 2.5-5, it is taken as low, if it is between 5 and 7.5, it is considered as moderate and when it ranges between 7.5 and 10 it is interpreted as good.

To assess the subjects' practice a descriptive method was used as the students did the self-test and the doctor's examination. Those who did so in the right intervals were recorded and those who did not do so were asked for the reason and the percentage was reported. The information sources were also reported in percentage. Finally, the data obtained were statistically analyzed via SPSS ver.19.0.

RESULTS

The results revealed that from among the 257 participants, 211 (82.1%) were single and the rest (17.9%) were married. The lowest age was 18 and the highest was 32. All the subjects were B.S. undergraduates. A significant correlation was found between the major and awareness score (p=.006). However, no statistically significant correlation was found between family background of breast cancer and awareness score (p=.926).
The demographic information has been included in tables 1 and 2.

The awareness score is a sum of subjects' knowledge and attitude as relates to risk factors, preventive methods and prognosis of breast cancer and is in the form of four sections as included in table 2.

Table 1: Demographic information

Specification		N.	%
Awareness of breast cancer	Very low	61	23.7
	Low	73	28.4
	Moderate	92	35.8
	High	21	8.2
	Very high	10	3.9
	Total	257	100
Concern about affliction with breast cancer	Yes	138	53.7
	No	119	46.3
	Total	257	100
History of cancer in close relatives	Yes	7	2.7
	No	250	97.3
History of cancer in distant relatives	Yes	36	14
	No	200	77.8
	Don't know	21	8.2
History of cancer in relatives	Yes	74	28.8
	No	149	58
	Don't know	34	13.2
History of breast cancerous tumors in relatives	Yes	47	18.3
	No	151	58.8
	Don't know	59	23

According to the results indicated in table 2, those whose age ranged between 17 and 20 obtained the most frequent moderate awareness score (65.1%). From among the academic majors, Midwifery managed to obtain the most frequent moderate awareness score (78.6%).

Among the information sources, the internet system showed to play the key role (29.6%, N=76) as included in table 3.

Table 2: Demographic information and comparison of the target variables

Variables		Total (%)	Awareness				p-value
			Very low	low	Mode rate	good	
Total		250 (100)	5 (1.9)	89 (34.6)	157(61.1)	6(2.3)	
Age	17-20	39 (15.5)	0 (0)	11 (28.2)	25(65.1)	3(7.7)	.293
	20-24	170 (66.1)	3(1.8)	64 (37.6)	101(59.4)	2(1.2)	
	24-28	41 (16)	2 (4.9)	11(26.8)	27(64.9)	1(2.4)	
	28-35	7 (2.7)	0 (0)	3 (42.9)	4(57.1)	0(0)	
Major	Nursing	51 (19.8)	2 (3.9)	10 (19.6)	39(76.5)	0(0)	.006
	Midwifery	42 (16.3)	0 (0)	8 (19)	33(78.6)	1(2.4)	
	Health IT	30 (1.7)	0 (0)	15(50)	14(46.7)	1(3.3)	
	Lab Sciences	35 (13.6)	0 (0)	18(51.4)	16(45.7)	1(2.9)	
	Radiology	40 (15.6)	2 (5)	16(40)	19(47.5)	3(7.5)	
	Operation Room	31 (12.1)	1 (3.2)	15(48.8)	15(48.4)	0(0)	
	Anesthesia	28(10.9)	0 (0)	7(25)	21(75)	0(0)	
Marital status	Single	211(82.1)	5(2.4)	76(36)	124(58)	6(2.8)	.251
	married	46(17.9)	0(0)	13(28)	33(71)	0(0)	

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Table 3: Information sources of breast cancer and prevention methods

Choice	N	%
Mass media (radio+TV)	47	18.3
The Internet	76	29.6
Relatives	27	10.5
Coursebooks	72	28
Doctor or medical staff	35	13.6

Subjects' practice concerning breast cancer involved a self-test, doctor's examination and mammography. Since the students had an average age below 5 years and mammography is usually done after 5 years, the two other alternatives have been considered in assessing practice. The following results were obtained: Concerning whether they were aware of how to do the self-test, 51% (131 subjects) answered positive while 49% (126 subjects) answered negative. As for the intervals of paying doctor a visit for breast examination, 41.6% (107 subjects) were found to do so annually, 7% (18 subjects) showed to do so irregularly at least once in three years, 5% (15 subjects) did it irregularly in intervals of 5 years and 11.7% (30 subjects) did so irregularly in longer intervals (>5 years).

Concerning the intervals of the self-test, the following results were obtained: 37% (95 subjects) did so regularly every month, 10.5% (27 subjects) did it irregularly every three months at most, 20.2% (52 subjects) did it irregularly once a year and 21.4% (55 subjects) did it irregularly every six months.

Among the reasons why they did the self-test were negligence and absent-mindedness and for not visiting the doctor a lack of belief in its efficacy had the lowest percentage among the reasons as summarized in table 4:

Table 4: Underlying reasons for not doing the self-test (a), and not visiting a doctor (b)

A)   Reasons for not doing the self-test

Choice	n.	%
Unawareness of the method	71	27.6
Disbelief in the efficacy of the method	10	3.9
Lack of time	14	5.4
Fear of developing a cancerous tumor	13	5.1
Negligence and absent-mindedness	89	34.6
No feeling or pain	51	19.8
No response	9	3.5

B)   not visiting a doctor

Choice	n.	%
Disbelief in the efficacy of the method	2	0.7
Negligence and absent-mindedness	69	26.8
Fear of developing a cancerous tumor	10	3.9
Lack of time	11	4.3
No feeling or pain	75	29.2
High costs	38	14.8
All the above	48	18.7
No response	4	1.6

DISCUSSION

The aim of the present research is determining female students' awareness and practice of the risk factors, prognosis and prevention of breast cancer in the second semester of 2015-16 at Bandar Abbas University. The present findings revealed that more than half of the subjects (53.7%) were concerned about affliction with the disease while this rate was reported in Anvari et al.'s study to be 59.7%. Since breast cancer is considered a major threat to health and among the causes of women mortality in the world, their awareness of this disease needs to be improved [7].

Though a significant correlation was found in Anvari *et al.,* study between family history and one's knowledge score, no such significant correlation was found in the present research. It needs to be reminded that only 7% of the subjects of the present research had a history of cancer in close relatives which can partly account for the divergent results. In Anvari *et al.,* study, 4.3% and in the present research 2.7% had a history of cancer among close relatives. Due to a high prevalence in developing countries, breast cancer is considered a serious threat to health and is among the main causes of women mortality worldwide. Half of the present subjects (50.6%) had a good awareness of the risk factors of breast cancer and self-test [9].

However, the present findings reveled that only 2.3% of the students had a good awareness score; 34.6% had a very low score, and 61.1% had a moderate score. The different findings between Iran and the developing countries seem to be due to a more emphasis and better communication of the risk factors, early diagnosis and effective preventive acts of breast cancer. A body of research suggests that promoting social awareness and attitude of breast cancer can positively affect women screening behaviors in society [17].

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Moreover, Karimi and Sam believe that women's little awareness of the facts related to breast cancer, unawareness of the importance of self-test and how to perform it as well as social poverty are among the key factors of not visiting a doctor in the initial stages of the disease [5]. As for practice, the findings revealed that 51% of the subjects were aware of the self-test and only 37% performed it once a month regularly which is consistent with the findings of similar research conducted among Iranian women.

In an investigation among 1000 Asian women in 2009, 53% of the subjects showed to have regularly performed the self-test which can be due to the different social and cultural contexts [7]. A body of similar research has also been conducted and found similar results [5, 12].

Moreover, 41.6% of the present subjects were found to annually visit a doctor for examination on a regular basis which is consistent with the results reported by Anvari *et al.*, [7].

In the present research, among the reasons why the self-test was not performed, negligence and absent-mindedness explained 34.6% of the reasons while unawareness of the importance of this act accounted for 27.6% of the cases. These findings were similar to those of Anvari et al. and feeling no pain or trouble accounted for the primary reason why the subjects did not visit a doctor.

Among the information sources, the internet system had the highest rate (29.6%). Next stood the coursebooks. However, in an investigation conducted on 1000 American women, 66% of the participants had obtained information from TV. In Anvari *et al.,* study, university coursebooks ranked first among the sources of information [7].

CONCLUSION

As one's awareness affects positive behavior, self-test and visits paid to doctors, this awareness should be raised through certain strategies. These might include appropriate educational programs in class, student consultation programs in dormitory or faculty, use of brochures and pamphlets, messaging system and so on to provide information on breast cancer.

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