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Knowledge of Breast Cancer Risk Factors among a Cohort of Nurses in Iran

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Abstract

Background: Improving the knowledge of healthcare providers towards different aspects of breast cancer leads to appropriate management and screening of disease. This study aimed to investigate the knowledge of breast cancer risk factors among a cohort of nurses in Iran.

Materials and Methods: The target group of the present study was 243 consecutive nurses (27 males and 216 females) at two referral hospitals in Semnan province, Iran, between March 2012 and February 2013. The data concerning the nurses' knowledge of breast cancer risk factors was collected using a predesigned questionnaire.

Results: In total, 9.9% of nurses had poor, 71.2% had intermediate and only 18.9% had good level of knowledge towards breast cancer risk factors. The level of knowledge towards risk factors was not affected by nurses' gender, age, level of education, years of experience, marital status, presence of a history of breast problem, or history of caring for a breast cancer patient. However, those nurses with a family history of breast cancer especially those with a patient as a first degree relative had significantly higher level of knowledge about the disease risk factors. The highest level of knowledge on breast cancer risk factors was observed among nurses working in CCU wards, while the lowest level of knowledge was found in pediatrics and psychiatry wards. Among nurses working in obstetrics and gynecology wards, 15.8% had a poor level, 68.4% had an intermediate level, and only 15.8% had an acceptable level of knowledge on breast cancer risk factors.

Conclusion: This study revealed a relatively low awareness of breast cancer risk factors among nurses emphasizing the need for adding proper education programs aimed at improving the knowledge of breast cancer risk factors among our nurses.

Keywords: Nurse, breast cancer, risk factor, knowledge.

Introduction

Breast cancer is the most common invasive malignancy among women and comprises about 23% of invasive cancers and 16% of all female cancers worldwide [1]. The incidence of breast cancer varies greatly around the world with the lowest incidence in less-developed countries and the greatest incidence in the more-developed countries [2]. However, because of poorer management and less appropriate controlling of risk factors, this cancer is a major public health issue in less developed countries leading to higher cancer-related death rates among women in these countries [3]. Moreover, although the incidence of breast cancer has had a downward trend in developed countries within recent two decades, this trend has remained incremental in less developed areas which might be attributed to the transition toward a Western-style economy and improper pattern of reproductive behavior [4]. Also, increases in the proportion of women in the industrial workforce have affected the population distribution of established breast cancer risk factors[5]. Besides, some recent increased incidence of breast cancer in some high-risk Western countries may be due in part to greater use of

mammography and other specific and sensitive diagnostic tools [6,7]. Iran as a developing country in Asia faces a high incidence rate of breast cancer and its-related mortality and morbidity, so that according to recent reports the incidence of breast cancer among women is 22 per 100,000 with the overall prevalence rate 120 per 100,000 [8,9].

According to recent alarming statistics of breast cancer and its life-threatening consequences, improving the knowledge of healthcare providers towards different aspects of disease including what to look for, how to detect and diagnose breast cancer, and when the time is appropriate for its screening seems necessary [10-12]. In this regard, great emphasis must be given to the issue of improving awareness of healthcare providers particularly nurses about breast cancer, its-related risk factors and screening methods. However, a few studies have been performed in Iran about nurses' knowledge towards different aspects of breast cancer. This study aimed to investigate the knowledge of breast cancer risk factors among a cohort of nurses in Iran.

Materials and Methods

In a cross-sectional study the target group which was 243 consecutive nurses (27 males and 216 females) working at two referral hospitals in Semnan province, Iran, between March 2012 and February 2013 were enrolled. The data was collected using a predesigned questionnaire. The questionnaire constituted of 19 questions about nurses' knowledge towards different aspects of breast cancer risk factors. The questionnaires were distributed and collected personally by the researcher after the respondents completed the filling process. The questionnaire consisted of two sections. The first section included personal information such as gender, age, education background, work experience, work specialization, working ward, history of providing health to breast cancer patients, and family history of breast cancer. The second section included information concerning the knowledge of nurses towards breast cancer risk factors. The respondents were requested to place a mark (X) on the choice they had selected. The level of nurses' knowledge was categorized as poor (the correct response to less than 50% of questions), intermediate (the correct response to 50% to 69.9% of questions), and good (the correct response to more than 69.9% of questions). Results were reported as mean ± standard deviation (SD) for the quantitative variables and percentages for the categorical variables. The groups were compared using the chi-square test (or Fisher's exact test if required) for the categorical variables. P values of 0.05 or less were considered statistically significant. All the statistical analyses were performed using SPSS version 21.0 (Armonk, NY: IBM Corp.).

Results

In total, 9.9% of nurses had poor, 71.2% had intermediate and only 18.9% had a good level of knowledge towards breast cancer risk factors. The overall level of knowledge towards this cancer was similar among male and female nurses, single and married nurses, younger and older ones, and also in those with different educational levels (Table 1). The level of knowledge was also not influenced by years of experience, presence of a history of breast problem, or a history of caring for a breast cancer patient. However, those nurses with a family history of breast cancer especially those with a patient as a first degree relative had significantly higher level of knowledge about disease risk factors. The highest level of knowledge on breast cancer risk factors was observed among nurses working in CCU wards followed by surgery ICU wards (Figure 1), while the lowest level of knowledge was found in pediatrics and psychiatry wards. Interestingly, among nurses working in obstetrics and gynecology wards, 15.8% had a poor level, 68.4% had an intermediate level, and only 15.8% had an acceptable level of knowledge of breast cancer risk factors.

Discussion

The main finding of the present study was an overall low level of knowledge among nurses towards breast cancer risk factors so that less than one-third of studied nurses had appropriate information about this subject and most of them had intermediate information about risk factors. More interestingly, in gynecology department with the most referrals of breast cancer patients, only 15.8% had an acceptable level of knowledge about breast cancer risk factors. Furthermore, intermediate to good level of knowledge was more observed in those nurses with a family history of breast cancer. These findings suggests that affected women with breast cancer who were referred

Table 1: Level of knowledge about breast cancer risk factors among participating nurses according to baseline characteristics

Characteristics	Level of knowledge		
	Poor	Intermediate	Good
Gender			
Men	5 (18.5)	19 (70.4)	3 (11.1)
Women	19 (8.8)	154 (71.3)	43 (19.9)
P-value		0.087	
Education level			
Non-college degree	2 (11.8)	11 (64.7)	4 (23.5)
College degree	22 (9.7)	162 (71.7)	42 (18.6)
P-value		0.827	
Age group			
< 30 y	12 (12.1)	71 (71.7)	16 (16.2)
30-39 y	7 (7.4)	69 (72.6)	19 (20.0)
≥ 40	5 (10.2)	33 (67.3)	11 (22.4)
P-value		0.294	
Marital status			
Single	5 (8.6)	43 (74.1)	10 (17.2)
Married	19 (10.3)	130 (70.3)	36 (19.5)
P-value		0.943	
Years of experience			
< 5 y	1 (12.9)	64 (68.8)	17 (18.3)
5-9 y	4 (5.6)	52 (73.2)	15 (21.1)
10-14 y	5 (14.3)	27 (77.1)	3 (8.6)
≥ 15 y	3 (6.8)	30 (68.2)	11 (25.0)
P-value		0.339	
History of breast problem			
Positive	1 (12.5)	5 (62.5)	2 (25.0)
Negative	23 (9.8)	168 (71.5)	44 (18.7)
P-value		0.852	
Family history of breast cancer			
Positive	0 (0.0)	20 (71.4)	8 (28.6)
Negative	24 (11.2)	153 (71.2)	38 (17.7)
P-value		0.038	
Care of a breast cancer patient			
Positive	9 (10.3)	59 (67.8)	19 (21.8)
Negative	15 (9.6)	114 (73.1)	27 (17.3)
P-value		0.592	

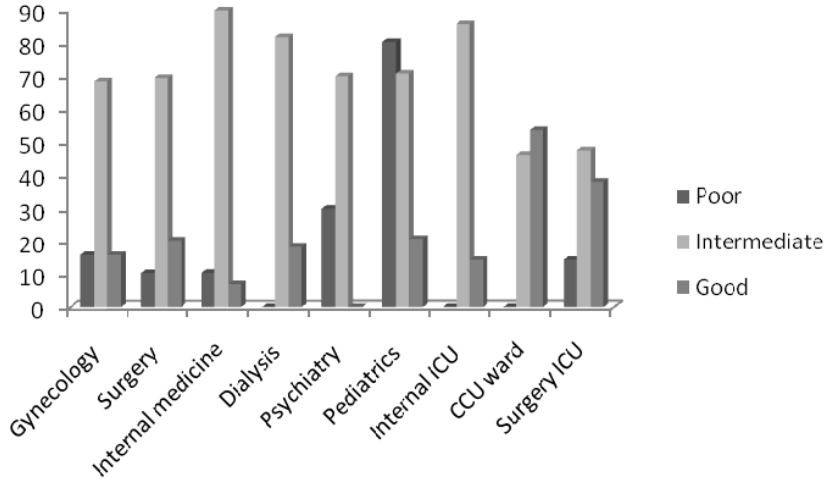

Figure 1: Level of knowledge about breast cancer risk factors according to different hospitals wards.

to theses healthcare centers probably did not received enough information or guidelines about their disease especially how to control and manage their risk factors. Similar results have been reported in some previous studies. In a study by Yaren et al., in Turkey, despite a high level of knowledge of breast cancer risk factors, inadequate knowledge of cancer screening methods was observed among nurses [13]. In another study by Ibrahim et al., in Nigeria, female doctors obtained a mean knowledge score of 74% and were the only professional group that had satisfactory knowledge of risk factors [14]. In a study by Chong et al., from Singapore, the majority of nurses had certain misconceptions in the knowledge of breast cancer and breast cancer screening. In this context, a higher proportion of those nurses in the family health services had higher knowledge scores than other nurses in the public health services [15]. In a study by Fotedar et al., in India, the average knowledge of breast cancer risk factors in the entire nursing population was only 49% so that 10.5% of nurses had poor knowledge, 25.2% of the nurses had good knowledge, 45% had very good knowledge and only 16.3% of the nurses had excellent knowledge about breast cancer risk factors and early detection methods [16]. Ahmed et al., in Pakistan found that only 37% of nurses had good knowledge of breast cancer risk factors [17].

Thus, it seems that similar to other developing countries discussed here, a relatively small proportion of our nursing population, even those who are working in healthcare centers providing caring services for breast cancer patients have a good knowledge of the breast cancer risk factors. One of the present study's limitations is that sometimes nurses had previously been employed in other wards or hospitals which could have a confounding effect.

Based on our results we think there is an urgent need to introduce more breast cancer education in nursing schools particularly in the public sector. Also results from the present study suggest the need for continuing medical education programs aimed at improving the knowledge of breast cancer risk factors among healthcare providers in our nursing population.

Conclusion

This study revealed a relatively low awareness of breast cancer risk factors among nurses emphasizing the need for adding proper education programs aimed at improving the knowledge of breast cancer risk factors among our nurses.

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