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Knowledge Towards Breast Cancer Screening Among Primary Health Care Physicians at the Ministry of Health, Jeddah, KSA, 2015

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ABSTRACT

Background: Breast cancer is an important public health challenge, especially encountered in developing countries. Due to the staggering number of breast cancer cases in Saudi Arabia, it is important to ensure that health care workers in Saudi Arabia possess the appropriate knowledge of breast cancer screening and breast cancer risk factors to ensure that women who are at high risk for developing breast cancer are identified and receive proper preventive care.

Aim: To evaluate the knowledge of breast cancer screening and breast cancer's risk factors among primary health care (PHC) physicians at the Ministry of Health in Jeddah, Kingdom of Saudi Arabia (KSA).

Materials & Methods: A cross-sectional study was conducted among physicians at the PHC centres, in Jeddah, Saudi Arabia. A validated questionnaire was administered. A multistage sampling technique was performed to obtain the sample size of 194, with a confidence level of 95% and an error of 5%. A *P*-value <0.05 was considered statistically significant.

Results: The results indicated that the level of knowledge of the primary care physicians was poor, 40% of physicians could not answer many questions related to the signs and symptoms of breast cancer. The participants' knowledge of breast cancer screening and breast cancer diagnosis was moderate, as only 31.4% of respondents believed that breast self-examinations were not an effective tool for the diagnosis of breast cancer.

Conclusion: The physicians at the PHC in Jeddah, KSA, had limited knowledge of the signs and symptoms of breast cancer. Increasing physicians' health knowledge and providing them with updated medical information and continued participation at medical conferences would lead to better medical treatment for breast cancer.

Keywords: Breast Cancer, Risk Factors, Physicians, Screening.

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INTRODUCTION

Breast cancer is one of the most common types of malignancy in women worldwide. Approximately 1.67 million new cancer cases were diagnosed in 2012 which accounts for 25% of all cancers.[1] According to American Cancer Society one in every eight women i.e. 12.3% in the United State develops breast cancer once in her lifetime, and about 232,340 new cases of breast cancer are registered every year.[2] In the Gulf Cooperation Council countries, breast cancer still has a high prevalence rate, as 16.1% and 35.4% of all female cancers in Oman and Bahrain are breast cancers, respectively.[3] However a decrease in severity and mortality is noticed worldwide through early detection and advancement in treatment.[4]

In Saudi Arabia still breast cancer is top listed and it accounts for 27.4% of all newly diagnosed cancer cases among females. Based on the results of Saudi Cancer Registry (SCR) in 2012 the median age at diagnosis for breast cancer was found to be 49 years.[5] The records suggested that in Saudi Arabia, there is lack of an organized national screening program still there exist several programs / activities like the public awareness of breast cancer, through lectures, in a major hospital in Riyadh, well-designed public awareness program, and the first organized population-based screening mammography program.[6,7]

Breast cancer is a major disease that requires more attention and additional studies, thus the aim of present study was to emphasize the role of PHC physicians in the early detection of breast cancer.

MATERIALS & METHODS

This was a cross-sectional study that was conducted with PHC physicians at the Ministry of Health in Jeddah, Saudi Arabia. Approval from the research committee at the Joint Program of Family and Community Medicine was obtained to conduct this research. The study population consists of 393 physicians (Saudi and non-Saudi) who work in PHC centers, and who either do or do not hold a postgraduate degree. The final sample size included in

this study was 194 physicians. A simple random sampling technique was used to obtain the required sample size of centers, which used a random number generator. Eight PHC centers were randomly chosen from the northeast and northwest sectors. A total of 39 centres were included in the study.

There were 43 PHC centers in the Ministry of Health in Jeddah, Saudi Arabia. These centers are divided into five sectors: northeast, northwest, central, southeast, and southwest. The northeast and northwest sectors each include 10 PHC centers, while the central sector includes 8 centers, the southeast sector includes 8 centers, and the southwest sector includes 7 centers. Questionnaires were distributed to all physicians who were available in the centres at the time when data collection was performed; these physicians were included in the study. A total of 29 questions were included; 23 questions pertained to the various risk factors associated with breast cancer, its protective factors, and the signs and symptoms suggestive of breast cancer. A total of 6 questions asked about breast cancer screening. The questionnaires were distributed to the participating physicians, and the completed questionnaires were collected on the same day by the researcher.

Statistical Analysis

The results obtained in the study were tabulated and statistically analyzed using following tests: "p" value less than 0.05 was considered statistically significant. Categorical data were described using frequencies and percentages. Responses to knowledge-based questions were categorized as either correct or incorrect, and they were assigned a score of 1 for correct answers and 0 for "don't know" or incorrect answers.

RESULTS

In this current study, the response rate was 100% and the target sample size was reached (n=194). The participants' socio-demographic characteristics are summarized in Table 1. A total of 75.3% of the participants were married. The female to male ratio was 2:1; 65.5% of participants were female and 34.5% were male. The majority of participants were Saudi (86.1%). Only 41.2% of the participants had a postgraduate degree. Moreover, 6.2% of the participants were consultants, 16.5% were specialists, and 58.8% were general practitioners. The majority of participants (71.1%) were in the younger age group (25–35 years); 59.8% of all respondents had only 1–5 years of work experience (Table 1).

Table 1: Patients sociodemographic data

Variable		Frequency	%
Age, in years	**25–35 years**	138	71.1
	36–45 years	41	21.1
	>46 years	15	7.7
Marital status	**Single**	44	22.7
	Married	146	75.3
	Divorced	3	1.5
	Widowed	1	0.5
Gender	**Male**	67	34.5
	Female	127	65.5
Nationality	**Saudi**	167	86.1
	Non-Saudi	27	13.9
Years of practice after graduation	**1–5 years**	116	59.8
	6–10 years	33	17
	11–15 years	13	6.7
	16–20 years	22	11.3
	>21 years	10	5.2
Professional qualification	**Bachelor's degree (MBBS)**	114	58.8
	Postgraduate	80	41.2

Table 2: Knowledge of breast cancer risk factors and protective factors

Variable		Frequency	%
Risk factors	**Old age**	130	67
	Early age of menarche	84	43.3
	Late age at menopause	103	53.1
	Increased breast density	68	35.1
	Being female	139	71.6
	Use of hormone replacement therapy	91	46.9
	Family history of breast cancer	186	95.9
	Radiation exposure to the chest	131	67.5
Protective factors	**Breastfeeding**	174	89.7
	Physical activity	129	66.5
	Being pregnant	77	39.7
	Being married	69	35.6

Table 3: Knowledge scores for breast cancer risk factors

Variable	Question no.	Frequency	%
Risk factors	**0**	2	1
	1	3	1.5
	2	12	6.2
	3	12	6.2
	4	30	15.5
	5	37	19.1
	6	43	22.2
	7	34	17.5
	8	21	10.8

Graph 1: Knowledge of suspected breast cancer signs and symptoms

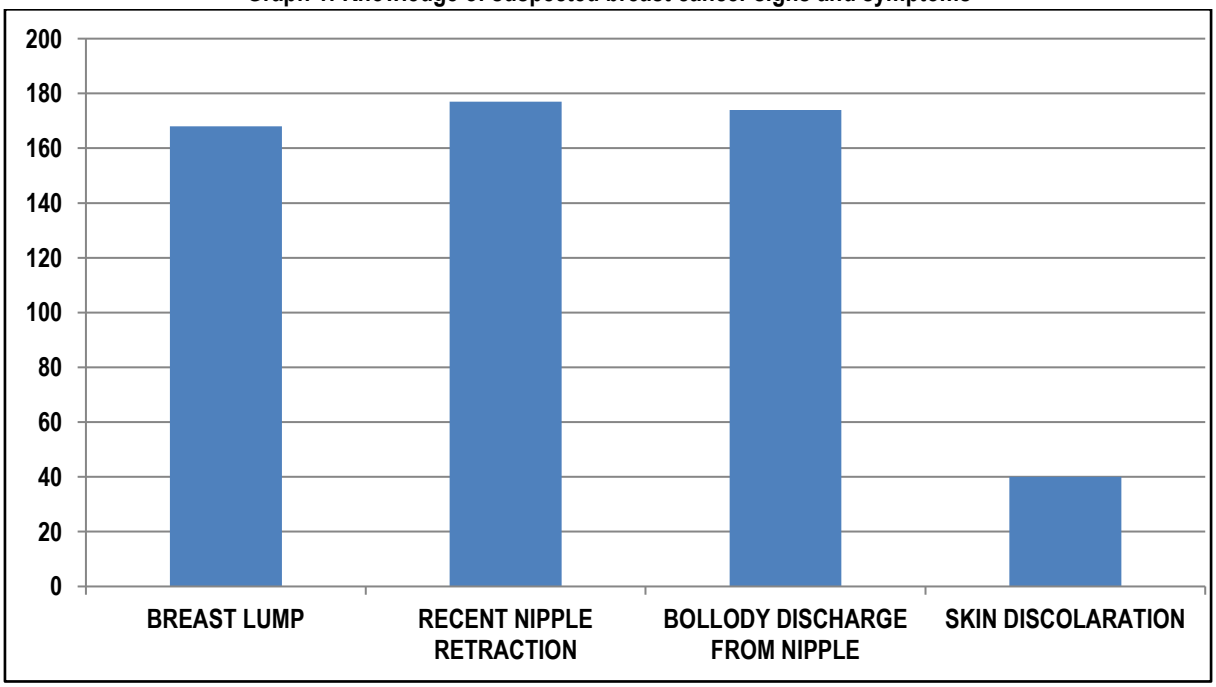

Table 4: Participants' perceptions regarding breast cancer screening

Variable	Frequency	%
Breast cancer is the most common cancer among females in the KSA	**181**	**93.3**
Were you aware of the Saudi guidelines for breast cancer management?	**71**	**36.6**
Do you currently have any subscriptions to any medical journals or medical websites?	**70**	**36.1**

As evident from the results, 67% of the participants recognized that old age are one of the risk factors for developing breast cancer, and 71.6% knew that being female is a risk factor, while 95.5% believed that a family history of breast cancer is a major risk factor. Less than one half of the participants recognized that early age of menarche, increase breast density, and the use of hormone replacement therapy constituted breast cancer risk factors. 89.7% of the participants knew that breast feeding is s protective factor for breast cancer. Only 39.7% and 35.6% of participants, respectively, recognized that being pregnant and being married are protective factors that decreased a woman's chance of developing breast cancer (Table 2). When questioned about the knowledge of the various signs and symptoms that are suggestive of breast cancer. More than 85% of the participants recognized that breast lumps, nipple retraction, bloody discharge, and skin discolorations were all changes suggestive of breast cancer (Graph 1). With respect to the respondents' knowledge of the factors that protected against breast cancer, they were asked to answer 8 questions. About 12 candidates (6.2%) did not correctly answer any of these questions, while only 5 (2.6%) were able to correctly answer all 8 questions. The majority, 38 candidates (19.6%), answered 5 questions correctly, followed by 37 (19.1%) who accurately answered half of the questions. Moreover, 22 (11.3%) correctly answered 6 questions and 12 (6.3%) accurately answered 7 of the 8 questions (Table 3).

DISCUSSION

The current study indicated that the knowledge levels among primary care physicians in PHC centers within the Ministry of Health in Jeddah, KSA was poor with respect to breast cancer risk factors, protective factors, and its signs and symptoms, as only 14.4% of the physicians were able to correctly answer 15 out of 22 questions on the questionnaire. The percentage was far lower (.5%) for those who correctly answered 20 questions. Around 69.6% of respondents in this study correctly answered more than half of the questions that assessed their knowledge of breast

cancer risk factors. However, these respondents had a less-than-average knowledge level about the factors that lower the occurrence of breast cancer, as only 39.7% of them correctly answered half of the questions related to the protective factors against breast cancer. The results of this study also showed that more than 85% of participants recognized that the detection of a breast lump, nipple retraction, bloody discharge, and skin discoloration were all possible signs of breast cancer. Similar study conducted in Riyadh, Saudi Arabia, it was reported that 70% of female physicians correctly acknowledge the clinical signs of breast cancer.[8]

However another study done in UK (1999) reported that approximately more than half of PHC physicians were able to correctly identify the risk factors for breast cancer.[9] Study conducted in an urban city in Nigeria further indicated that 55% of its participants had poor knowledge of breast cancer screening practices, with an overall mean knowledge score of 1.61±0.93 out of a maximum score of 4 points.[10]

In the present study, participants' knowledge of breast cancer screening and diagnosis was below average, as only 31.4% of respondents believed that BSE is not an effective tool for diagnosing breast cancer. A study conducted by Smith et al. in 2012 in Toronto, Canada reported that 74% of the physicians under study did not recommend BSE, as it was assigned a low recommendation level (B) by the Canadian Task Force on Preventive Health Care.[11] Another study performed in Turkey it was found that the majority of physicians i.e. 68% currently perform BSE, while 72% of nurses perform BSE in hospitals and clinics.[12]

The results of this study have indicated one of the most critical issues facing practicing physicians when they acquire knowledge. Physicians are expected to read newly published articles and reports concerning medical topics in medical journals or websites. Study conducted by Abobakar Ahmed showed that only 1.4% samples had an adequate level of knowledge regarding current breast cancer recommendations.[13] The demographic data that were collected from the survey, which was employed in this present study, revealed some key information as to why many of the participants (physicians) of this study, in Saudi Arabia, possess inadequate knowledge of the signs and symptoms of breast cancer. Specifically, gender, postgraduate degree certification, years of practice, and age can serve as major factors that can influence the inadequate knowledge levels toward the signs and symptoms of breast cancer among participants.

CONCLUSION

The findings of this study indicated that there is currently limited knowledge of breast cancer screening, breast cancer risk factors, and protective factors among physicians working in the PHC centers in Jeddah, Saudi Arabia. However, these practitioners' knowledge of breast cancer signs and symptoms was higher when compared with their knowledge of breast cancer's risk and protective factors. When examining the demographic differences between the subjects in this investigation, it was found that females and males possessed significantly different knowledge levels about breast cancer, which was expected since patients in our community prefer to be seen and examined by female physicians. This is why female physicians had better knowledge about breast cancer than did male physicians.

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