

Knowledge about Breast Cancer among Male Medical Students, Jeddah, 2011Samia M. Al-Amoudi^{1*}, Basem S. Eldeek^{2,3}, Nasra N. Ayuob^{2,3}, Wael Alzhrani⁴ and Mahmoud S. Alahwal⁵¹Department of Obstetrics & Gynecology, Faculty of Medicine, King Abdulaziz University,² Faculty of Medicine, Mansoura University, Egypt³Department of Medical Education, Faculty of Medicine, King Abdulaziz University, Jeddah, Saudi Arabia⁴Faculty of Medicine, King Abdulaziz University, Jeddah, Saudi Arabia⁵Consultant Oncologists, Dean of the Faculty of Medicine, King Abdulaziz University, Jeddah, Saudi Arabiadr.samia_amoudi@hotmail.com

Abstract: **Objectives:** To assess the level of breast cancer knowledge among Saudi Male Medical students, which will help in designing breast cancer awareness education programs for the younger generations. **Methods:** This was a cross sectional study that carried out in the faculties of Medicine at King Abdulaziz University, AlBatarji and Ibsina, Jeddah Saudi Arabia, between April and June 2011. A questionnaire was distributed to 400 male medical students to assess their knowledge about breast cancer, its risk factors and breast self examination (BSE). Data were collected and analyzed using the Statistical Package for Social Sciences (SPSS). **Results:** About 24% of the participants have a family history of breast cancer and only 17.2% knew what mammogram. The use of oral contraceptive pills (43.5%), exposure to radiation (16%), smoking (25.8%), fatty diet (47%), family history of ovarian cancer (30.3%) and of colonic cancer (28.5%) were recognized by the participants as a risk factor of breast cancer. 20% Twenty percent of the students knew what is meant by BSE and 18% knew that it has to be carried out after the monthly period and about 8% of them were very enthusiastic to receive a training course on how the BSE should be done. **Conclusion:** Limited knowledge of breast cancer among male medical students might be an obstacle to screening programs and early diagnosis of breast cancer. Therefore, awareness programs and empowering medical students with knowledge is important area to work on through the medical curriculum development to help in the fight against breast cancer.

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1. Introduction

More than a million women, all over the world, are diagnosed with breast cancer every year ^[1]. In Saudi Arabia the total number of cancer cases among Saudis, in 2006, as reported by the Saudi Cancer Registry (SCR) was 8,054. For the first time, since the establishment of the SCR in 1994, cancer was more among women than men, with a female to male ratio of 1 : 0.94. Cancer of breast, thyroid, colorectal, and Non-Hodgkin's lymphoma, were the most common cancers among women ^[2].

For primary prevention of breast cancer, women need to be adequately informed of risk factors and risk reduction strategies for breast cancer ^[3] as it was found that low cancer awareness contributes to delay in presentation for cancer symptoms, and may lead to a delay in cancer diagnosis^[4]. Different studies conducted in the kingdom showed that the knowledge of females regarding breast cancer and its screening was low, and exhibited a wide range of prevailing preventive health practices such as breast self-examination (BSE), Clinical Breast Examination (CBE), and Mammography ^[5-10]. Some of these

studies were based on selected groups, like students ^[7, 9] and teachers ^[10].

Although there were a lot of studies about knowledge of breast cancer and practice of BSE in female university students ^[7], there were few studies about the knowledge of breast cancer and practice of BSE in male university especially those in medical colleges either at national or international levels. Hence it was recorded that the adolescent period is a time of rapid change that provides teaching opportunities for shaping health behaviors into adulthood ^[11]. Therefore, the aim of this study is to assess the breast cancer knowledge level of Saudi Male Medical students, which will help in designing breast cancer awareness education programs for the younger generations.

2. Subjects and Methods:

This study was carried out at the faculty of Medicine of King Abdulaziz (KAU), AlBatarji and Ibsina, Jeddah Saudi Arabia, between April and June 2011. The research proposal was approved by the ethical committee of the faculty of Medicine,

KAU. A modified version of the questionnaire used by *Sait et al.*, to assess the knowledge about cancer breast was used in this study ^[12]. It is first section included 5 questions on the demographic data of the participant in addition to the family history of breast disease and what is meant by mammogram. The second section of the questionnaire included 6 questions on the risk factors of breast cancer (e.g. oral contraceptive pills, radiation, smoking, fatty foods and family history of ovarian and colonic cancer). The third one included 3 questions on self-breast examination (e.g how and when it should be carried out). Finally, there were 6 general questions including the relationship between breast cancer and breast-feeding, wearing breast brassiere, treatment for breast cancer and diagnosis of breast cancer.

The questionnaires were distributed to 400 male medical students from the three faculties, collected and the data were entered to the computer and analyzed using the Statistical Package for Social Sciences (SPSS) version 15 (SPSS Inc, Chicago, IL, USA). Percentages of the different variables were calculated, risk factors and knowledge about cancer breast was analyzed, and the results were used to build up a base for designing a community educational program.

3. Results:

The study showed that most of the participants were single (92%) , only (6.5%) were married and (1.5%) were divorced. Their ages ranged from (22-25) years with a mean of 23.45 ± 1.75 years. About 24% of the participants admitted that they have a family history of breast cancer, 66% have no family history and 10.3% did not know. On direct questioning on the mammograms, only 17.2% knew what it is, while 82.8% did not know (**Table 1**).

The results of this study summarized the level of knowledge among the medical students about certain risk factors of breast cancer namely; use of oral contraceptive pills (43.5%), exposure to radiation (16%), smoking (25.8%) and fatty diet (47%).

It was found that less than one third of participants recognized a family history of ovarian cancer (30.3%) and of colonic cancer (28.5%) as a risk factor of breast cancer (**Table 2**).

Regarding the knowledge of breast cancer prevention and treatment it was found that only 20% of the students knew what is meant by breast self-examination (BSE), approximately 18% of them knew that it has to be carried out after the monthly period and not before (as it is recommended) and about 8% of them were very enthusiastic to receive a training course on how the BSE should be done (**Table 3**).

Table 1: The Demographic Data of the participants and their knowledge about the mammogram.

Age	N	%
Mean \pm SD	23.45 \pm 1.75	-
Range	(22-25)	-
Marital Status	N	%
Single	368	92
Married	26	6.5
Divorced	6	1.5
Family History of Breast Cancer	N	%
Yes	95	23.8
No	264	66
I don't know	41	10.3
Do you know what Mammogram is?	N	%
Yes	69	17.2
No	331	82.8

Table 2: Knowledge of the participants about Risk Factors of Breast Cancer

Use of Contraceptives	N	%
Yes	174	43.5
No	81	20.3
I don't know	145	36.3
Exposure to Radiation	N	%
Yes	64	16
No	32	18
I don't know	304	76
Smoking	N	%

Yes	103	25.8
No	67	16.8
I don't know	230	57.5
Fatty Diet	N	%
Yes	188	47
No	146	36.5
I don't know	66	16.5
Family History of Ovarian Cancer	N	%
Yes	121	30.3
No	261	65.3
I don't know	18	4.5
Family History of Colon Cancer	N	%
Yes	115	28.5
No	249	62.3
I don't know	36	9

Table 3: Knowledge about Breast Cancer and Self-Examination

Do you know breast self-examination?	N	%
Yes	80	20
No	320	80
Do you want to be trained on BSE?	N	%
Yes	31	7.8
No	369	92.2
When BSE should be done?	N	%
Before menses	31	7.8
During menses	73	18.3
After menses	296	74
Does Breast Feeding Protect from Breast Cancer?	N	%
Yes	130	32.5
No	43	10.8
I don't know	227	56.8
Does brassiere wearing lead to Cancer?	N	%
Yes	159	39.8
No	116	29
I don't know	125	31.3
Breast Cancer has treatment	N	%
Yes	89	22.3
No	41	10.3
I don't know	270	67.5
Breast Cancer leads to death	N	%
Yes	270	67.5
No	105	26.3
I don't know	25	6.3
Talk to a Cancer Patient	N	%
Not appropriate	72	18
Benefit	292	73
No difference	36	9
Talk to Students about Cancer	N	%
Not appropriate	67	16.8
Benefit	302	75.5
No difference	31	7.8

4. Discussion:

It is well known that low cancer awareness contributes to delays in presentation of cancer symptoms and subsequent diagnosis^[4], but unfortunately, it seems that younger Saudi generation has limited knowledge about breast cancer^[12].

This study showed that the male medical student at the studied faculties have limited knowledge about cancer breast. Approximately 80% of included medical students reported a lack of knowledge regarding breast self-examination. Although the value of BSE is controversial^[13], American Cancer Society recommends it as an option for early detection of breast cancer. It benefits women in two ways: women become familiar with both the appearance and the feel of their breasts and detect any changes in their breasts as early as possible^[14].

Regarding screening mammography is the only modality proven by randomized clinical trials to allow early detection resulting in overall lower mortality. It is effective not only in women aged 50 years or more, but also in those aged less than 50 years^[15]. In spite of this, this study showed that only 17.2% of the male medical students of these faculties knew the mammogram.

Many breast cancer risk factors are detected along many years of epidemiological studies, such e.g. gender, older age, and the older the age the greater the risk of breast cancer, a positive family history of breast cancer, being exposed to large amounts of radiation, such as very frequent spinal x-rays for scoliosis or treatment for Hodgkin's disease at a young age, a personal history of breast or ovarian cancer, being overweight after menopause, or gaining weight as an adult and current or recent use of birth control pills^[16-23]. In spite of this, the majority of the participating students did not know about these risk factors. A similar study was carried out by *Sait et al.*,^[12] and they concluded that female's students of the high school and college possess limited level of knowledge on breast cancer. However, it also indicated that the students are very enthusiastic to learn about cancer breast and its prevention^[12] and it was the case in this study.

In conclusion, the limited knowledge level of breast cancer among male medical students in the studied faculties might be an obstacle to screening programs and early diagnosis of breast cancer. Therefore, awareness programs including lectures, seminars, workshops, and hands on training should be developed. Empowering medical students with knowledge is one important area to work on through the medical curriculum development to help in the fight against breast cancer. This study calls for further ones to demonstrate the areas of deficiencies and the best ways to implement proper strategic plans for the future.

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