

The knowledge of breast cancer among young Saudi females

Wafa A. Sait, MBBCh, Arab Board, Samia M. Al-Amoudi, Arab Board, Dalal A. Tawtai, MBBCh, Hassan S. Abduljabbar, MD, FRCS.

ABSTRACT

الأهداف: تقييم مستوى المعلومات التي تمتلكها طالبات المدارس السعوديات حول سرطان الثدي.

الطريقة: أُجريت هذه الدراسة الاستثنائية في مستشفى جامعة الملك عبدالعزيز، جدة، المملكة العربية السعودية وذلك خلال الفترة من أبريل إلى يونيو 2009م. شارك في هذه الدراسة 500 طالبة من مختلف المدارس الثانوية بجدة. لقد قمنا بتحديد مواقع المدارس في مختلف أنحاء مدينة جدة باستخدام الخريطة، ومن ثم قمنا بتوزيع الاستفتاء الذي يحتوي على مجموعة من الأسئلة التفصيلية حول سرطان الثدي وذلك بعد أخذ الترخيص من وزارة التربية والتعليم. وقد تدرّب مجموعة من المتطوعين على كيفية توزيع أوراق الاستبيان وجمعها، وبعد ذلك تم تحليل نتائج الاستبيان إحصائياً. لقد تم استخدام نتائج الاستفتاء من أجل بناء قاعدة للبرنامج التثقيفي حول هذا المرض.

النتائج: أظهرت نتائج التحليل لما يعادل 337 من أوراق الاستبيان بأن مستوى المعلومات التي تمتلكها طالبات المدارس والجامعات محدودة وغير كافية. إلا أنه تم ملاحظة اهتمام الطالبات وحماستهم نحو معرفة المزيد عن سرطان الثدي وكيفية الوقاية منه.

خاتمة: أشارت الدراسة إلى أن تدني مستوى المعلومات التي يمتلكها الجيل الجديد قد يكون عائقاً أمام برامج الفحص والتشخيص المبكر لسرطان الثدي، ولهذا فنحن بحاجة إلى زيادة الوعي حول هذا المرض وذلك من خلال المحاضرات، والحلقات الدراسية، وورشات العمل، وبرامج التدريب.

Objectives: To assess the breast cancer knowledge level of Saudi female school students.

Methods: A detailed questionnaire on cancer breast was designed with all the needed information. Using a map of the Jeddah area of Saudi Arabia, schools were identified in each area and permission was sought from the Ministry of Education to distribute the questionnaire to the students. A team of volunteers was instructed on how to distribute and collect the questionnaires. The collected questionnaires were

then statistically analyzed. This Pilot study of 500 students was performed in King Abdul-Aziz University Hospital using high schools from the city of Jeddah between April and June 2009. The results were used to build up a base for designing a community educational program.

Results: Analysis of the data from 337 questionnaires from high school and college students showed that the level of knowledge of young females on breast cancer is limited. However, it also indicated that the students are very enthusiastic to learn about cancer breast, and its prevention.

Conclusion: The limited knowledge level of breast cancer in the younger generation might be an obstacle to screening programs and early diagnosis. Awareness programs should be developed including lectures, seminars workshops, and on hands training.

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From the Department of Obstetrics & Gynecology, Medical College, King Abdul-Aziz University, Jeddah, Kingdom of Saudi Arabia.

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Address correspondence and reprint request to: Prof. Hassan S. Abduljabbar, Department of Obstetrics & Gynecology, Medical College, King Abdul-Aziz University, PO Box 80215, Jeddah 21452, Kingdom of Saudi Arabia. Tel. +966 (2) 6533333. Ext. 1336. Fax. +966 (2) 6526381. E-mail: profaj17@yahoo.com

Breast cancer remains the most commonly diagnosed cancer in women, and it is the second leading cause of cancer related death.¹ Worldwide, more than a million women are diagnosed with breast cancer every year.² Breast cancer incidence rates vary considerably, and have shown a marked geographical variation, with the highest rates in western countries, and lowest in Asian and African countries.³ The breast cancer incidence is increasing in most regions; the changes are greatest in areas where rates were previously low.⁴ Environmental

factors might be the cause for the global variations. It was found that women from Japan that emigrate to the USA ultimately lose the advantage of low risk, and within one to two generations they develop the same risk profile as USA residents.⁴ For primary prevention of breast cancer, women need to be adequately informed of risk factors and risk reduction strategies for breast cancer.⁵ Low cancer awareness contributes to delay in presentation for cancer symptoms, and may lead to a delay in cancer diagnosis.⁶ Breast self-examination detects new breast cancers in high-risk women undergoing screening mammogram, clinical breast examination, and yearly breast MRI.⁷ The aim of this research is to assess the breast cancer knowledge level of Saudi female school students, which will help in designing breast cancer awareness education programs for the younger generations.

Methods. This pilot study was carried out at King Abdulaziz University Hospital, Jeddah, Saudi Arabia between April and June 2009, and the research proposal was approved by the Research Ethical Committee of the institute. A map of Jeddah was used to locate the schools in each area, and permission was sought from the Ministry of Education to distribute the questionnaires to the students. A team of 4 volunteers' and 2 physicians were instructed on how to distribute and collect the questionnaire. Verbal informed consent was taken from all the students prior to participating and completing the questionnaire.

The detailed questionnaire on breast cancer included 9 questions in the first section: name, age, age of menarche, level of education, social status, family history, what is a mammogram, if there are any symptoms of breast disease, and if there any surgical procedures in the breast. The second part of the questionnaire comprised 6 questions on the risk factors of breast cancer, including knowledge of oral contraceptive pills, radiation, smoking, fatty foods, family history of ovarian and colonic cancer. This was followed by 3 questions on self-breast examination, like how and when to carry out a self-examination, and if they would like to receive training on how to carry this out. Finally, there were 5 general questions including relationship of breast-feeding, breast brassiere, if there is any treatment for breast cancer, does it cause death, and should the diagnosis be secret.

The questionnaires were collected and the data were entered and analyzed using the Statistical Package for Social Sciences 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.

Results. Out of 500 students, only 337 answered. On analysis of 337 questionnaires, 21% were college students, and 79% were high school level, 99% were single and only 1% were married. Age ranged from 12-18 years with a mean of 16.2±1.5, and the age of menarche between 9-16 years with a mean of 12.6±1.2 years. Of the 337 students, 9.8% admitted that they have a family history of breast cancer, 83.9% answered that they have no family history of breast cancer, and 8.3% did not know. On direct questioning on mammograms, only 30% knew what this was, and 70% did not know. Only 18.4% had complaints regarding their breasts, such as mastalgia, pain, lumps, or their breasts were getting bigger, and only 1.8% reported previous surgery, mainly aspiration, or biopsy. Table 1 summarizes the results of exploring the level of knowledge of certain risk factors, namely, oral contraceptive pills (OCP), radiation, smoking, and fatty food. On direct question regarding carrying out self-breast examination, 61.1% answered yes and 39.9% answered no. Surprisingly approximately 55% answer that it has to be carried out after the monthly period and not before as recommended, and 72.1% of the students were very enthusiastic about receiving a training course to learn how to perform self-breast examination. Only 2% of students reported a family history of ovarian or colonic cancer. Table 2 summarizes the results of questions regarding knowledge of breast cancer prevention and treatment.

Discussion. It seems that the younger Saudi generation has limited information and knowledge of cancer breast, and it is well known that low cancer

Table 1 - Results of the questions related to knowledge of breast cancer risk factors.

Risk factor	Yes	No	Don't Know	Missing**
OCP	32.6	26.7	39.2	1.5
Radiation	60.8	13.6	24.0	1.5
Smoking	65.0	15.1	19.3	0.3
Fatty food	48.4	14.2	35.6	1.8

**missing means did not answer, OCP - oral contraceptive pill

Table 2 - Results of the questions related to knowledge of breast cancer prevention and treatment.

Variable	Yes	No	Don't know	Missing
Breast feeding	68.8	6.2	22.3	2.7
Breast brassiere	44.2	19.9	31.5	4.5
Any treatment	77.7	2.4	16.0	3.9
Can cause death	0.6	32.6	63.2	3.6
Should you talk about breast cancer	3.0	85.5	5.6	5.9

**missing means did not answer

awareness contributes to delays in presentation of cancer symptoms, and subsequent diagnosis.⁶ Approximately 40% of the study population reported a lack of knowledge regarding breast self examination. Although, breast self examination has not been proven to be effective in early detection or in lowering mortality from breast cancer,⁷ it is a good way to raise awareness regarding the appropriate age to start screening, namely, periodic clinical breast examination and mammographic screening. Screening mammography is the only modality proven by randomized clinical trials to allow early detection resulting in overall lower mortality.⁸ In our study, only 30% of our students knew of the mammogram. It is also known that mammographic screening is effective not only in women aged 50 years or more, but also in those aged less than 50 years.⁸

The risk factors for breast cancer are well known, such as female 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.⁹⁻¹⁷ A recent meta-analysis of 54 studies relating OCP use to breast cancer found that women who are currently using combined OCP or have used them in the past 10 years are at a slightly increased risk (relative risk 1.07-1.24) compared with never users.¹⁴

A similar study carried out by Millat in 2000,¹⁸ concluded that female secondary-school students in Jeddah had very little knowledge of the presentation of breast cancer and its risk factors. Students were also not familiar with breast self-examination. The study indicated the necessity for a health education program on risk factors, early signs, and methods of diagnosis of breast cancer for this group of easily targeted young women.¹⁸

In conclusion, our results indicate the limited information about cancer breast in the younger generation, which might be an obstacle to screening programs and early diagnosis. However, we also found that the younger generation was very enthusiastic to learn more about breast cancer. An awareness program has to be developed including lectures, seminars, workshops, and hands on training. To improve the medical knowledge of young women seeking education, this information could be introduced in the basic curriculum in high school.

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