

EFFECT OF A BREAST CANCER HEALTH EDUCATION PROGRAM ON THE AWARENESS AND PRACTICE OF JEDDAH FEMALE SECONDARY SCHOOL STUDENTS

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الهدف : تحديد مدى تأثير برنامج التثقيف الصحي المدرسي عن سرطان الثدي والفحص الذاتي للثدي في نوعية طالبات الصف الثالث الثانوي بمدارس جدة ، المملكة العربية السعودية في هذا الموضوع ، وممارستن للفحص الذاتي للثدي .

الطريقة : قبل إعطاء محاضرة التثقيف الصحي للطالبات عن سرطان الثدي والفحص الذاتي تمت تعبئة الاستبانة المعدة كاختبار مبدئي لمعرفة معلوماتهن عن سرطان الثدي والفحص الذاتي للثدي . تمت تعبئة نفس الاستبانة كاختبار لاحق من قبل مجموعة مختارة من نفس الطالبات بعد مرور ٦ أشهر من التثقيف الصحي ولعدم تساوي المجموعتين فقد تم اختيار عينة عشوائية من اسبانات الاختبار المبدئي مساو لعدد استبانات الاختبار اللاحق وتمت المقارنة بين المجموعتين وتحليلها باستخدام برنامج إحصائي كانت المقارنة باستخدام الطرق الإحصائية الملائمة .

النتائج : بلغ عدد إجابات الاختبار اللاحق من قبل الطالبات ١٣٧٢ وأخذت عينة مقدارها ١٤٠٠ استبانة من الاختبار المبدئي من واقع مجموع ٧٦٦٣ أي نسبة ٣، ١٨ % كان مدى العمر لدى الطالبات من ١٦-٢٥ سنة (معيار انحرافي = ٩، ١ / ومتوسط = ٤، ١٨) وكانت نسبة ٤، ٧٣ % منهن سعوديات الجنسية ، ونسبة المتزوجات ٤، ٨ % . كما بلغت نسبة من لديهن قريبات مصابات بورم في الثدي للاختبار المبدئي كانت ٧، ١٩ % وارتفع هذا المتوسط إلى ٤٣ % في الاختبار اللاحق ($t = ٣١, ٢$ ، $p < ٠, ٠٠٠١$) . كما أن الإجابات الصحيحة عن الفحص الذاتي للثدي ارتفعت بشكل ملحوظ في الاختبار اللاحق . وقد أفاد ٢، ٢٧ % من مجموعة الطالبات في اجاباتهم للاختبار اللاحق أنهم قمن بالفحص الذاتي للثدي ثلاث مرات خلال الأشهر الست السابقة .

الاستنتاج والتوصيات : اتضح أن برنامج التثقيف الصحي لطالبات المدارس عن سرطان الثدي أدى إلى نتائج إيجابية في رفع الوعي الصحي لدى طالبات الصف الثالث ثانوي في الموضوع كما ساعد على تشييط ممارسة الفحص الذاتي للثدي من قبل الطالبات وعليه يوصى بتطبيق البرنامج على جميع طالبات المدارس الثانوية والكليات .

الكلمات المرجعية: سرطان الثدي، التثقيف الصحي، طالبات المدارس، الفحص الذاتي.

Objective: To identify the effect of a school health education program on the knowledge of secondary school girls in Jeddah, Saudi Arabia, of breast cancer and breast self-examination (BSE) and their practice of BSE.

Methodology: A pre-tested, self-administered questionnaire was administered to secondary students before the commencement of the health education to assess their knowledge on breast cancer and their practice of BSE. The same questionnaire was handed 6 months later to a smaller group of these students as a post-test. As the post-test group was smaller than the pre-test group, an equal sample size from the

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pre-test group was drawn for comparison. Random sampling and further analysis was done using the SPSS program, and for the comparison of the two groups, the student t-test and chi square were used.

Results: *The post-test was answered by 1372 students. The sampled pre-test group comprised 1400 students (N=7663) forming a sample of 18.3%. The ages for both groups ranged between 16-25 years (mean = 18.4; SD=1.9). Saudi nationals formed 73.4% of both groups and the proportion of married students was 8.4%. Those who reported that they had relatives with breast mass were 11.2%. The mean knowledge indexes on breast cancer reached 19.7 for the pre-test group and 43.0 for the post-group (t=31.2; p<0.0001). Correct answers for BSE rose significantly among the post-test group. A proportion of 27.2% students from the post-group reported that they had been motivated to practice BSE at least 3 times during the last 6 month.*

Conclusion and recommendation: *The outcome of the school health education program on breast cancer had been successful in raising the awareness of secondary school girls and in helping them to practice BSE more. Hence, it is recommended that the programme be implemented in all female secondary schools and colleges.*

Key Words: *Breast cancer, breast self-examination, health education, student knowledge.*

INTRODUCTION

Breast cancer is one of the most common malignancies in the Arab world and in Saudi Arabia.¹⁻³ Tamimi et al compared data on the Saudi Eastern province and Kuwaiti cancer registry and concluded that breast cancer ranked first among all female malignancies in both countries.¹ Cases of breast cancer in Saudi Arabia are known to present late at the hospital in the advanced stages of the disease.⁴ Hence health programmes and screening for early detection of this disease among young females is becoming an important strategy. The true success of health education program on the breast lies in its capacity to improve the knowledge of the group involved and modify their behavior in order to help detect breast mass early. This study was meant to identify the effect of a school health education program in improving the awareness of secondary school girls in Jeddah, Saudi Arabia, of breast cancer and breast self-examination (BSE) and their practice of it.

THE STUDY BACKGROUND

A health education campaign on breast cancer and BSE was conducted in all secondary schools for girls in Jeddah over a 3-week period in September 1997. Eleven female doctors involved in health education from the Primary Health Care Department visited schools to see all final-year secondary students. The activity concentrated on risk factors associated with breast cancer, its presentation, methods of early detection and the training of students on the technique of breast self-examination. These activities took the form of short lectures, discussion groups and role-play demonstration on how to conduct BSE and a distribution of health educational leaflets.

METHODOLOGY

A pre-tested, self-administered questionnaire was handed to all secondary school students before the start of the health educational programme in the school. It included questions on ten factors that are sometimes

associated with breast cancer such as contraceptive pills, breast x-ray, skin creams, smoking and family history, in addition to two questions on common presentations of the disease. The questionnaire also covered two items on BSE, namely its frequency and timing in relation to menstrual period. The same questionnaire was given to a group of these students as a post-test six months later to determine the effect of the teaching program on their level of knowledge on breast cancer and BSE. A direct question was added to elicit information on the practice of BSE in the post group during the last 6-month period after the health education activity. As the number of post-test group was smaller than the pre-test group, an equal sample size from the pre-test group was drawn to compare the groups. Random sampling and further analysis was done using the SPSS program. A knowledge index was calculated for each student on the 10 risk factors associated with breast cancer and the two questions on its presentation. The index was the sum of scores of the correct answers divided by the total scores on the questions multiplied by 100. The mean index for all students in each of the two groups was calculated and these mean indexes were compared using the student-t test. Questions on two items relating to their knowledge of timing and frequency of BSE were analyzed and compared separately using the chi-square test between the proportions of the correct answers.

RESULTS

The post-test was answered by 1372 students and the sampled pre-test group were 1400 students (N=7663) forming a sample of 18.3%. The mean ages for both groups ranged between 16-25 years (mean=18.4; SD=1.9). Saudi nationals

formed 73.4% of both groups and the proportion of married students was 8.4%. Cigarette smoking was reported by 3.4% of the groups and 11.2% of them reported to have relatives with breast mass. Table 1 compares these characteristics between the two groups with its levels of significance.

Table 1: Comparison of characteristics between pre-test and post test groups

Characteristic	Pre-group	Post-group	p-value
Mean age	18.1	18.6	>0.001*
Nationality			
Saudi	73.9	72.9	0.62
Non-Saudi	26.1	27.1	
Marital status			
Not married	91.1	92.0	0.44
Married	8.9	8.0	
Smoking			
Yes	4.1	3.3	0.29
No	95.9	96.7	
Had relative with breast mass			
Yes	11.0	11.3	0.88
No	89.0	88.7	

*Statistically significant

Age was the only factor that differed significantly between the groups. Out of a hundred, the correct answers for BSE were very low for the pre-test groups, whereas the mean knowledge indexes on breast cancer as well as the correct answers for BSE had risen significantly in the post-test group. Table 2 reports the means of knowledge indexes and compares the correct knowledge answers on the two items of knowledge indexes for both groups with their levels of significance. As a result of the health education campaign, a proportion of students (27.2%) from the post-group reported that they had been motivated to practice BSE at least 3 times during the last 6 months.

Table 2: Comparison of mean knowledge indexes on all 10 risk factors and comparison of proportion of correct answers on 2 items in BSE between pre-test and post test groups

	Pre-group	Post-group	p-value
Mean knowledge index on risk factors	19.7	43.0	<0.001*
Frequency of BSE per month	14.3	43.4	<0.001*
Timing of BSE with relation to period	7.5	27.3	<0.001*

*Statistically significant

DISCUSSION

Breast cancer was and is still considered a major health problem among females in Saudi Arabia.¹⁻³ Despite this, studies on the awareness of women in Saudi Arabia on the issue are minimal. This study reports a low mean knowledge index among students in the pre-test group. This can be attributed largely to the lack of well-organized health educational programs in the country. A hospital based study (N=157) by Kashgari⁵ had shown that only 12% of general clinic attendants had ever done BSE, while 92% of all ladies interviewed were only willing to seek medical advice when they discovered lumps in their breast. It is unfortunate that though there is a willingness on the part of the women to seek advice, the dearth of information to the public on such an important issue and the absence of organized screening have contributed to their not taking adequate preventive measures.

Breast cancer as an issue for health education is not familiar to people in Saudi Arabia. This might be the result of the social tendency not to discuss any

issues about women and the difficulty in explaining various associated risk factors. Myths and controversies are associated with possible causes and associated risk factors. The American Institute for Cancer Research⁶ has recently documented the link between breast cancer and many known dietary and non-dietary items. However, there was little or no evidence to support the view held by the public that foods such as coffee, polyunsaturated fat and factors such as cholesterol are associated with cancer. Public fears and misconceptions of the nature of breast cancer is related to the manifestation of advanced cases of the disease in Saudi Arabia.⁴ From the finding of the pre-test group in this study, we can surmise that this late presentation is the result of the lack of knowledge on the manifestation of the disease and poor awareness of risk factors involved.

The implementation of health education programs in schools on common problems is meant to raise the awareness of the targeted students and motivate them towards practice required for early diagnosis. A comparison of the means of knowledge index of the two groups indicated that this education campaign had been successful enough to raise awareness of school girls on the subject. No factor under study, except age, had influenced this change and the difference between the mean ages of both groups can be an artifact, as the pre-group was formed from a random selection from a large one and compared to a smaller post-test group. Generally, public health educational programmes for females in the Saudi society are not easy to conduct. Possibly, the diverse social and educational factors in the country make media information somewhat inaccessible to them. Consequently, school health educational programs could be most helpful. In fact, younger women are known to have a more positive attitude toward health education on breast cancer and early screening for it.⁷ This was partially confirmed in this study by the

significantly increased awareness of the post-group after 6 months of the activity. However, the selection of a suitable group in the school chosen for this activity is vital. It is good strategy to target female students in their final year. Many of these girls are most likely to get married soon after graduation from secondary school, if they are not already and are likely to get pregnant immediately as is customary in Saudi culture.^{8,9} This program has an added indirect benefit, in that it will encourage them to breastfeed their babies when they have them since it informs them of the preventive effect of breastfeeding on the occurrence of breast cancer. In the pre-test group, knowledge on two items in breast self-examination was very low. After the health education program, this picture had changed significantly. In addition, the program had encouraged over a quarter of the students to practice self-examination in the last 6 months. It is quite valid to question the value of inclusion of BSE in this education program. Breast self-examination is not mandatory in cancer preventive programs in USA, though most preventive programs recommend mammography and periodic clinical examination.^{10,11} These last two preventive measures are not used in Saudi Arabia. Researchers have, therefore, recommended that they be given routinely to women.¹² The justification for the inclusion of BSE in the health education program is that it is evident that the practice of BSE can help in raising the awareness of women on the problem of breast cancer.

In conclusion, the Jeddah school health education program on breast cancer was successful in raising the awareness of secondary school girls on breast cancer and in helping to increase BSE among them. It is therefore, recommended that the programme be implemented in all

female secondary schools and colleges in the country.

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