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Original Research Article

The impact of breast self-examination (BSE) on school teachers

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ABSTRACT

Introduction: Globally breast cancer is the most common type of cancer in females and is a major health problem. Breast self-examination (BSE) is an important tool for the prevention and maintenance of health. Fostering education and skill training to the women to perform BSE correctly will improve the prognosis and reduce mortality. This study was designed with the objective to evaluate the impact of BSE on school teachers.

Materials and Methods: The study was conducted at RAK Medical and Health Sciences University, Ras Al Khaimah, UAE. Pretest and post-test research design with convenience sampling technique was used in the present study. The subjects enrolled were 145 school teachers of the age group from 21 to 55 who fulfilled the inclusion criteria. Data was collected using a prevalidated structured questionnaire. Data was analyzed using SPSS version 24. Pre-and post-intervention results were calculated using paired t-test.

Results: There was a significant increase in the knowledge, attitude, and practice (KAP) scores after post-test (17.2) when compared to the pre-test (12.5). The p-value for the pre-test and post-test scores of KAP regarding breast self-examination was <0.0001.

Conclusion: The present study concludes the structured educational program positively influenced school teachers on breast self- examination.

1. Introduction

Medical innovations have shown that one-third of all cancers are preventable and a further one-third if diagnosed early, is potentially curable. These observations infer that cancer control and awareness programs should be of priority in the health care programs of rural and urban populations of both developed and developing countries.[1,2]

An important strategic goal in reducing breast cancer mortality is the use of screening methods for achieving earlier detection of cancer.[3,4] This is very important because an excellent prognosis is directly associated with the stage at which the tumor is detected. Early diagnosis usually results in treatment before metastasis and signifies a better outcome of management.

Breast cancer is the most common female malignancy and is commonly associated with high levels of morbidity and mortality. It has become one of the more curable chronic diseases. Prognosis is evidenced by people's knowledge about the disease and the means to prevent it.[5]

As of the end of 2020, there were 7.8 million women alive who were diagnosed with breast cancer in the past 5 years, making it the world's most prevalent cancer. In the UAE, breast cancer is the most frequent malignancy among women, accounting for approximately one-third (38.8%)

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of all cancers in 2014.[6] The low survival rates in less developed countries may be explained mainly by lack of early detection programs, lack of adequate diagnosis and treatment facilities which results in a high proportion of women presenting with late-stage disease.[7] According to the American Cancer Society report every three minutes, a woman in the United States is diagnosed with breast cancer.[8]

For many years, education and communication have been emphasized to encourage health-seeking behavior change, with several studies addressing how to improve breast cancer knowledge and screening practices among women teachers.[9–12]

Breast self-examination (BSE) is a procedure performed by an individual to examine herself physically and visually for changes in the breast. It is an important screening measure for detecting breast cancer. Providing education and encouraging the women to perform BSE is recommended to decrease the mortality rates from breast disorders.[13]

Performing monthly BSE was first advocated by the Colombia university surgeon Cushman. The American Cancer Society emphasizes monthly BSE to create "breast self-awareness" among women over the age of 20years.[14]

BSE needs to perform once a month so that we become familiar with the usual appearance and feel of our breasts. Familiarity makes it easier to notice any changes in the breast from one month to another. Early discovery of a change from what is baseline is the main idea behind BSE.[15]

The ideal time to perform BSE is, 2 or 3 days after the menstrual period ends, at that time breasts are least likely to be tender or swollen. If no longer menstruates, pick a day such as the 1^{st} day of the month, to remind that it is time to do BSE regularly.[16]

BSE is a simple, low-cost, non-invasive, comfortable, adjuvant screening. There is evidence that women who correctly practice BSE monthly and are more likely to detect lump at the early stages of its development and early diagnosis have been reported to influence early treatment and to yield a better survival rate.[8–10]

This study is based on the good practice framework when teachers are educated in BSE they create awareness and educate their students in the process students create awareness and educate the family. As teachers educate and communicate with students, this may play an essential role in health education and in promoting healthy behavior, such as breast cancer screening at the community level. Hence, knowing the barriers to breast self-examination practice among study participants and addressing them is crucial. Therefore, this study aimed to create awareness of BSE among female secondary school teachers.

2. Objective

1. To assess the knowledge, attitude, and practice (KAP) among school teachers before and after administering a planned teaching program regarding breast self-examination.

2.1. Inclusion criteria

1. Who were in the age group of 25-55 years?
2. Who was willing to participate in the study?

2.2. Exclusion criteria

1. Who had a history of breast diseases/lesions?
2. Who had undergone recently any training about BSE
3. Pregnant and lactating mothers.

3. Materials and Methods

This study was conducted at RAK Medical and Health Sciences University. The study design adopted was a cross-sectional, prospective, interventional study with pre and post-test design using a convenient sampling method. A total number of 2 schools with 145 participants (female teachers) who have met the inclusion criteria were part of the study. Data was collected using a self-administered questionnaire developed through an extensive literature search. The instrument was tested for validity and reliability before final usage. It consisted of closed-ended questions that were used to collect data that would meet the objectives of the study. The questionnaire comprised demographic details, personal information, and 23 items with 11 items on knowledge, 6 items on attitude, and 6 items on practice.

Ethical approval was received from the Institutional research and ethics committee of the RAKMHSU. Administrative permission was obtained from the principals of selected schools. Written consent was obtained from the study participants. They were assured that the data would be treated with confidentiality and anonymity. A pre-designed and pre-validated questionnaire was administered to them in the classroom setting.

The study was conducted in three phases

1. First phase- pre-test was administered, and the time given to answer was 10-15minutes.
2. Second phase- a structured educational program for an 80-minute session was conducted with a PowerPoint presentation, videos, and mannequins.
3. Third phase - Post-test was administered after a week and the time given to answer was again 10-15minutes.

The filled questionnaires were collected, and the data was entered into an excel sheet for further analysis using SPSS version 24. The mean and SD were done with descriptive analysis and the Wilcoxon Signed Ranks Test was used to compare between pre and post-test.

4. Results

A total of 145 female schoolteachers were enrolled in the study. The mean age of the study participants was 35±15 years.

As shown in Table 1. There was a statistically significant improvement in knowledge, attitude, and practice (KAP) aspects after the education sessions with the participants.

Table 1: Participant's overall KAP scores pre and post-test

KAP scores	Mean	Standard deviation	p-value
Pre-test	12.5	3.5	<0.0001
Post-test	17.2	4.0	

The study also found that in terms of age groups there were statistically improved KAP scores in post-test as depicted in Table 2.

Table 2: Different age groups of participants with their pre and post-test scores

Age of participants	KAP Scores		P-value
	Pre- test	Post-test	
21-30	11.79±3.85	18.06±2.71	0.001
31-40	11.53±2.87	18.65±1.75	0.001
41-50	11.51±3.82	18.20±1.91	0.001
>50	12±3.51	18.71±0.88	0.001

5. Discussion

There was a significant improvement in the teacher's knowledge, attitude, and practice (KAP) scores about breast self-examination as post-test (17.2) when compared to pre-test (12.5).

The obtained Standard deviation of knowledge, attitude, and practice (KAP) regarding breast self-examination during post-test were 4.0 and the pretest standard deviation was 3.5. The p-value for the pre-test and post-test scores of knowledge, attitude, and practice (KAP) regarding breast self-examination was <0.0001. Hence, the structured teaching program has a significant positive effect on increasing the knowledge, attitude, and practice (KAP) regarding breast self-examination among teachers.

Breast self-examination is an important screening technique for the early detection of breast lumps. Though this procedure, is simple, non-invasive, requiring little time, the right attitude and knowledge are required to practice and as well to sustain it to achieve the desired goal.

Our study found that a structured teaching program had improved the knowledge, attitude, and practice (KAP) of teachers about the BSE. This was in accordance with Soyer et al their study found that the education Programme improved the knowledge, attitude, and practice (KAP) about breast cancer and the practice of BSE in primary health nurses.[12] This has significance because other studies have shown that more knowledge about breast cancer had a positive effect on performing BSE.[13]

Another study conducted in Punjab to assess the effectiveness of planned teaching programs on knowledge, attitude, and practice (KAP) regarding BSE among the nursing students showed the mean post-test score of the students (30.98) was higher than the mean pre-test score (15.66). Also, mean scores were higher in all the areas in the post-test. There was a significant difference between the mean post-test and pre-test knowledge, attitude, and practice (KAP) scores.[14]

The findings of the pre-test scores of the study were of great concern because there was a significant difference in pre-test and post-test knowledge, attitude, and practice (KAP) scores. This showed that the participants got benefitted from the interventional structured teaching Programme and were statistically significant.

The study also found that age-wise difference has the same significance for all groups. By Jirojwong's study (2003), the socio-demographic variables were not effective for BSE practice. Since independent variables like educational levels, women's job status, income level, and type of health insurance were similar among women in this study, they may not be significant for the BSE, CBE, and mammography practices.[16]

6. Conclusion

In this study, the planned educational program had an impact on school teachers, which was reflected in post-test scores. Awareness regarding breast self-examination among teachers has a major role to play in teaching their students, siblings, and relatives and protecting themselves, their families, and the community. This could bring about a desirable change in knowledge which helps for early detection and prevention so that the incidence of breast cancer can be reduced.

7. Recommendations

Cancer health awareness educational programs (e.g. Breast cancer) should be introduced at an early age in the schools. It should be a part of their curriculum. Cancer awareness should be enhanced by using all available means which include news, media, social networks, and guest lectures.

8. Limitations and Future Research

Results should be generalized with caution. Further, concerning the small population (Only 2 schools) of the study and sampling of the participants, only those teachers willing to take part and interested in the research project choose to participate in the study, which affects the diversity of the sample, thus limiting the ecological validity of the study. Posttest was administered after a week, further follow-up with the post-test should have been done after

1 and 2 months for long-term memory. Hence, with larger sample size and long-term follow-up of the study is required for better correlation with the present study findings.

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10. Conflict of Interest

The authors have declared no conflict of interest in this work exists.

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