

RESEARCH COMMUNICATION

Peer Education Project on Breast Self-Examination in Izmir, Turkey

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Abstract

Purpose: The purpose of this research was to assess undergraduate female student knowledge related to the Peer Education Method and Breast Self-Examination (BSE), to encourage them to refer for screening with certain intervals and to teach them the means of utilizing the health services.

Design: The subjects comprised 160 undergraduate female students who were selected by simple random sampling and who accepted to participate.

Methods: A survey form, which was prepared under the direction of relative literature by the researcher four 3rd graders of Ege University School of Nursing, was applied to female students. The data collected were assessed after being coded.

Findings: The numbers of undergraduate female students performing BSE regularly and their information levels related to the symptoms of breast cancer were found to be very low, but their mean scores for performing BSE after training given by peer guides were increased and the peer group training was found to be effective.

Conclusions: From the results we conclude that the training guide was appropriate for transmitting information to university students for peer group education purposes.

Key Words: Breast cancer - breast self-examination - peer education.

Asian Pacific J Cancer Prev, 6, 29-32

Introduction

Breast cancer is the most frequently seen type of cancer in women both in developed and most developed countries (Tuna, 2002). Today, approximately one third of cancers occur in women and almost 20% of cancer-related deaths are accounted for by breast cancer. The lifetime risk in the highest incidence countries is in the order of 12 % and thus 1 in each 8 women, on average, will develop breast cancer (Harris et. al., 1997; Kocak, 2000; Topuz et. al., 2003). Rates differ considerably with the country and one in 9 American and Canadian women, one in 15 Australian women and one in 50 Japanese women are at risk during their lifetimes (Sevil and Unsal, 2002). Approximately 28 % of cancers seen in Turkey originate in the breast and this relative rate is similar to that reported in the USA (Inanc, 1998). Therefore, mass screening for early diagnosis is considered vital for control of the disease (Sevil and Unsal, 2002).

For women to recognize their own breast tissues and be aware of alterations that occur can be accomplished through breast self-examination (BSE) performed regularly each month. It has been estimated that as many as 90 % of breast cancers are discovered by the patients themselves (Baughman and Havkley, 1996; Carpenter et al., 1998). Regularly and correctly practiced BSE is the most economical, simple and noninvasive method for early detection of breast cancers (Baughman and Havkley, 1996).

The American Cancer Society has issued a statement that women between 14-54 years of age carry the risk for breast cancer and that they should start BSE at 20 years of age. Nurses are responsible for giving training for women related to BSE (Baughman and Havkley, 1996; Carpenter et al., 1998; Inanc, 1998).

Obstacles to performing BSE (such as forgetting its time, lack of knowledge, embarrassment, fear of breast cancer, unable to make time) need to be determined and training

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programs toward their elimination are a high priority (Gray, 1990).

Peer education is aimed at sharing knowledge among individuals who have similar experiences and behavior. It is well known that appropriately organized peer groups are a valuable source for undergraduates. Students should be encouraged to rely on their own personal experiences and their peers in finding answers to their problems and in dealing with them. Trained undergraduate students (peer guides) may best be able to communicate with their peers and transfer information to them more effectively than professionals for development and maintenance of community health (Karabulut, 2003). The present study was performed to address the following question: is there any difference between pre-and post-training mean scores for BSE in female undergraduate students ? A descriptive research protocol was therefore developed to educate female undergraduates about peer education and BSE control, to encourage them to refer for screening at certain intervals and to teach the means of utilizing health services.

Materials and Methods

Sample and Procedure

This research was carried out in Bornova Dormitory of the Institution of Credit and Dormitories between the dates of 15 April 2003 and 31 May 2003. A total of 160 female students who were selected by simple random sampling and who agreed to take part in the research constituted the subjects (female students who were attending sections associated with Ege University Health Sciences and female undergraduates attending the Medical Faculty were excluded).

The survey form, which was developed by the researchers in consideration of the relevant literature, consisted of 15 questions: these questions were posed to determine whether female students staying at Bornova Girl Students Dormitory of Credit and Dormitories Foundation, practiced BSE; if so, their sources of received information; how often and when performed; why they thought BSE was important; whether they experienced health problems associated with their breasts; if so, what they were; whether they knew symptoms of breast cancer, if so, what they were; whether there were individuals with breast cancer in their families; and if so, who they were.

The survey form was applied to female students by 4 third-graders from Ege University Higher School of Nursing. Researcher training related to breast examination was given to these peer guides, using training materials (posters, brochures) and to determine their abilities a breast self-examination check-list was applied. Peer guides right after training reapplied breast self-examination check-list using training materials (poster, brochure, mirror, etc) prepared by them.

In order to avoid embarrassment to female students, for whom the survey form and breast self-examination check-list was applied, and to respect their privacy they were not

asked to bare their upper bodies. The survey form and breast self-examination check-list were applied in their private rooms. During the research, female students who had suspicious conditions in their breasts were advised to refer to a health institute.

Data Analysis

For the data obtained at the end of the research a min-max consistency control was conducted after coding. Data were evaluated using a SPSS 10.0 computer program. Numeric and percentage distributions, medians and standard deviations were generated and significant differences between pairs were assessed with the Student's t test.

Ethical Considerations

The survey form prepared by the researchers was evaluated by the ethical committee of Ege University School of Nursing. Necessary written permission was obtained from Bornova Girl Students Dormitory of Credit and Dormitories Foundation before initiating the research. The female students included in the scope of the research subjects were informed of the research and those who freely agreed to participate were enrolled in the study.

Results

Of the female students included in the research 49.4% were in 16-20 years age group and 50.6 % were 21-25 years old and over. Some 45.0% were attending Engineering and 35.7% the Science and Literature Faculties - 40.6% were attending 1st grade and 28.7% the 2nd grade. It was discovered that 71.2% (n=114) did not perform breast examination by themselves. Of the undergraduates who did (n=46), 17.4% conducted an examination once a month, 15.2% once a week, 6.5% once every 6 months and remainder could not remember.

It was determined that 19.6% of the female undergraduates performing breast examination learned about the method from newspapers and magazines, 17.4% from their families, 17.4 % from health personnel, and 15.2% from radio and TV, and the remainder from other sources or could not remember.

Female undergraduates were divided according to responses they gave to the question "When should breast control be made?" : 43.7 % stated before menstrual discharge, 13.1 % during menstruation, and the remainder did not know.

Regarding the distribution of female undergraduates according to the responses they have given to question "To you, why is breast self-examination important?" the answers given were; 45.0 % to identify breast cancer, 23.7% for early diagnosis, 17.5 % to maintain health and the remainder did not know.

It was found that 3.8 % of female students participating in the research had experienced health problems related to their breasts: 66.7 % (n=4) had fibroadenomas and 33.3 % (n=2) had fluid discharge .

Table 1. Distribution Of Application Mean Scores for Female Undergraduates Who Performed Breast Examination by Themselves According to their Pre-Training and Post-Training Situations

Training	Application Mean Scores for Breast Self-Examination					
	X	Ss	N	SD	t	p
Pre-training	1.13	1.70	46	45	-33.638,	<0.05
Post-training	11.50	1.41				

Some 37.5 % of the female undergraduates knew one symptom of breast cancer, 23.7 % two, but 38.8 % did not know any (answers given by those who knew the symptoms: swelling, cyst in breast, pain in the breast, hardness in the breast, regression of a nipple, disfigurement).

A total of 13.1 % of the female undergraduates had relatives with breast cancer: 23.8 % in their aunts; 19.0 % in their grandmothers; 14.3 % in their mothers; 14.3 % in their mothers aunts and the remainder in others.

The pre-training application mean scores from breast the self- examination check-list received from female undergraduates who stated they were performing breast cancer by themselves was 1.13 and the post-training application mean score was 11.5. The difference between pre- and post-training application mean scores of female undergraduates who said they were performing breast cancer by themselves was statistically significant ($t = -33.638$, $p < 0.05$) (Table1).

With the female undergraduates who in the first instance reported that they performed breast cancer, it was realized

that while evaluating their breasts only 30.4 % used the inner sides of their fingers, 26.1 % assessed their breasts vertically or circularly and 19.6 % did not raise their fingers (Table 2). After giving information related to breast examination, when distribution of all female undergraduate participants ($n=160$) were studied according to their second applications it was seen that 98.1 % slightly squeezed their nipples to see if there was a flow and 97.5 % inspected their breasts while their arms were hanging on both sides, 95.0 % vertically and circularly (Table 2).

Discussion

The present survey revealed that 71.2 % of the subjects did not perform breast examination by themselves, the result being in line with findings by Demirtas (1997) in Turkey. A number of studies in other countries showed that women's rate of BSE varies between 20 % and 40 % (Gray, 1990; Rudledge, 1986). According to a study carried out by American Cancer Society 77 % of women know about BSE

Table 2. Distribution Of Female Undergraduates According To Their Levels Of Adequacy In First And Second Applications Evaluated with the Breast Self-Examination Check-List

Breast self-examination by observation (In a well-illuminated room, facing a mirror)	1. Application (n=46)						2. Application (n=160)					
	Adequate S	%	Inadequate S	%	Total S	%	Adequate S	%	Inadequate S	%	Total S	%
- Arms hanging at both sides	1	2.2	45	97.8	46	100.0	156	97.5	4	2.5	160	100.0
- Arms placed on the waist	1	2.2	45	97.8	46	100.0	145	90.6	15	9.4	160	100.0
- Arms raised over the head	0	0.0	46	100.0	46	100.0	146	91.3	14	8.7	160	100.0
- With the arms hanging on both sides and the body bended towards, the shape and dimensions of the breasts, the color of the skin, the nipples, dents, and deformations can be observed	4	8.7	42	91.3	46	100.0	151	94.4	9	5.6	160	100.0
Breast self-examination by palpation												
- Lie on the bed and put a towel under the breast to be inspected	2	4.4	44	95.6	46	100.0	154	96.3	6	3.7	160	100.0
- Stretch arms to the outside	6	13.1	40	86.9	46	100.0	153	95.6	7	4.4	160	100.0
- Use the inner sides of your fingers (middle) while inspecting the breasts	14	30.4	32	69.6	46	100.0	153	95.6	7	4.4	160	100.0
- When moving form one point to another don't raise your fingers	9	19.6	37	80.4	46	100.0	145	90.6	15	9.4	160	100.0
- Evaluate your breasts with vertical and circular movements	12	26.1	34	73.9	46	100.0	152	95.0	8	5.0	160	100.0
- Inspect the areas from breast to the armpit and from the top of the breast to the clavicle and the shoulder	6	13.1	40	86.9	46	100.0	147	91.9	13	8.1	160	100.0
- Subsequently, inspect the other breast after changing the towel	0	0.0	46	100.0	46	100.0	146	91.3	14	8.7	160	100.0
- Slightly squeeze the nipples to determine if there is flow	2	4.4	44	95.6	46	100.0	157	98.1	3	1.9	160	100.0

but only 24 % apply it on a regular basis (Rudledge, 1986; Sortet and Banks, 1997). Rashidi and Rajarom (2000) in their study investigated the knowledge and frequency of BSE application of Muslim women with a Middle-East origin, living in USA and reported that 85 % of the women included in the scope of research had just heard of it and 74 % never performed BSE.

It was established that of the female undergraduates who had performed breast examination by themselves, 17.4 % did it once a month and 15.2 % once a week. The research carried out by Noyan (1998) on 100 female instructors determined that 21.0 % knew the appropriate time span for performing breast examination. Feldman et al (1981) (as cited in Tuna, 2002) in a study carried out with 996 patients with cancer diagnosis demonstrated an extremely important relationship between stage of disease and BSE, and that those individuals who performed BSE once a month had tumors smaller in diameter than those who never or only occasionally performed the examination. Our results also indicated that Turkish female undergraduates have very insufficient information related to application time of breast examination and symptoms of breast cancers, although they recognized the importance of BSE even if they did not pay attention. Those female undergraduates who said they performed breast cancer also had clearly not sufficient prior training as to practicalities of the examination itself.

It was concluded that 3.8 % of female students participated in research experienced health problems related to their breasts, smaller than in the study by Demirtas (1997) who found 9 % of women participating in the research to experience such problems, but this may be explained by differences in the age group. Our finding of 13.1% of female undergraduates having relatives with breast cancer is comparable with the figure of 15 % for teachers published by Noyan (1998).

Pre-training application mean scores received from breast self-examination check-list by female undergraduates who figure of stated they were performing breast cancer by themselves was 1.13 and post-training application mean scores was 11.50. The relationship between pre- and post-training application mean scores of female undergraduates who said they were performing breast cancer by themselves was statistically significant ($t = -33.638$, $p < 0.05$). Also, in the study carried out by Karabulut (2003) among 250 peer groups, pre-and post-tests mean scores demonstrated statistically significant difference. In that carried out by Tuna (2002) among 150 peer groups, while pre-training information mean scores was 43.00, the information mean scores one week post-training increased to 88.16, again pointing to effective training guides.

Recommendations

The present research established that information levels of female undergraduates related to self-performed breast examination and symptoms of breast cancer were very low but after the training conducted by peer guides their mean

scores increased markedly, so that the training given to the peer group was effective. It should be recommended that peer education models be utilized in university for all topics concerning youngsters, as well as for health.

Acknowledgements

This study was presented as a poster announcement during the First Regional Meeting of the Asian Pacific Organization for Cancer Prevention (APOCP) congress held on between the dates of 14-16 October 2003 in Izmir Turkey.

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