The effect of education about breast self-examination on knowledge, attitude and practice of women in Nourabad Mamasani health clinics, 2009

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Abstract

Introduction:
One of the methods of breast cancer screening is its self-examination. This study reviews the effect of education about breast self-examination on women’s knowledge, attitude and practice.

Material and Methods:
This clinical trial was conducted on 100 (50 cases, 50 controls) women who referred to health centers in NourAbadMamasani. The participants in the experimental group were trained during 3 sessions. The data gathering tool was a questionnaire consisting of four parts: personal details, and questions on knowledge, attitude and practice. The collected data were analyzed in SPSS software using T-test, ANOVA, Regression and Chi square.

Results:
The results of the study showed that education increased the women's awareness, attitude and performance of breast self-examination. The mean scores of awareness, attitude and performance significantly increased after the educational intervention in the experimental group (p=0.001) as compared to the control group (p=0.309, p=0.233, p=0.489).

Conclusion:
There is a need that health care centers provide some educational courses on prevention and treatment of breast cancer for women in the appropriate time.

Keywords: Breast Self-examination, Knowledge, Attitude

Today cancer is one of the most important diseases and a major health concern. Because of abnormal cell growth, malignant cells can invade and spread to adjacent tissues and even distant organs. While the tumor reaches advanced stages, it can lead to patient death.

As estimated by World Health Organization death toll of cancer has been increased to 8 million in the year 2000. Total incidence of cancer is thought to be 289.3 in 100000 in developed countries and 181.19 in 100000 in developing countries (1). Among different types of cancers, breast cancer is one of the most important and deadliest cancers in women with yearly incidence of 70 in 100000 (2). In Iran also based on the latest statistics till the year 2004, breast cancer is the most prevalent cancer in Iranian women as 32% of cancer cases in women were breast cancer (3).
Due to the statistics of Cancer Society, 8653 cases of cancer were reported in Fars Province, among which 6.62% were breast cancers. Breast cancer was the fourth prevalent cancer in Fars Province (4). Mortality rate of breast cancer is associated with various factors including having fatty and fried foods, administration of oral contraceptives, obesity, history of cancer, exposing to radiation, lack of physical activity, smoking, alcohol, genetic factors and age (5). Mean age of Iranian women with breast cancer is 48.8 years and the most cases of malignancy have been encountered in women aged 40 to 49 years (3).

It is clear that early diagnosis is essential for preventing disease progression (6). Detection of the disease in early stages is vital for appropriate control and treatment of the disease (7) as survival rate is directly related to the stage of the cancer at the time of detection (8). Providing diagnosed in early stages, breast cancer is curable in up to 90% of the cases but in more advanced stages, the survival rate fell to 60% (4). However, most breast cancers in Iran (96%) are being detected in advanced stages (3). The most important methods for early diagnosis of breast cancer are mammography, physical examination and breast self-examination. Among them, mammography and physical examination are specialized and complementary methods performed following self-examination. About 10-15% of palpable breast malignancies are not seen in mammography because they do not cause any calcifications or densities differentiable from surrounding tissue (9). Breast self-examination is a simple, confidential and safe method for self-screening of breast lumps which do not require any costs or special instruments (6) and if performed accurately and regularly enables women to detect palpable lumps in early stages (10). However women’s knowledge and proficiency on breast self-examination in developed countries and especially in developing countries including Iran is not sufficient (11). For instance in North America despite performing special breast cancer screening programs, most women do not conduct breast self-examination. 92 to 93% of American women stated that they are aware of breast self-examination but only 14 to 40% of them perform self-examination every month (12). In Iran also results of a study conducted in Tehran in year 2000 showed that breast self-examination performance of 94% of female students of Tarbiat Moallem University was poor (11).

In Vaezzade and Esmaeili’s study, most of the women referred to clinic (92%) had no information about breast self-examination and none of them had performed it (13). Breast self-examination is a health behavior which people do for maintaining and promoting their health. All women should understand the importance of breast self-examination and learn to conduct it during their adolescence and get used to do it every month as a health habit (14). Providing punctual and correct education of breast self-examination, abnormal conditions will be detected and reported earlier and so progression of the disease is simply prevented. Regarding aforementioned points and the importance of Breast self-examination in prevention and control of breast cancer; we conducted this study to evaluate the effect of education about breast self-examination on knowledge, attitude and behavior of women in Nourabad Mamasani health clinics. Hopefully results of this study could be a motivation for educating breast self-examination and its continuity in the society and to be beneficial in earlier detection and better control of the disease.

**Material and Methods:**
This study was an interventional clinical trial and was conducted on 100 women (50 individuals as cases and 50 ones as controls) under health coverage of Nourabad Mamasani health clinics in year
2009 who were older than 20 years old and had literacy levels to read and write and without any history of cancer. Among 4 health clinics in Nourabad Mamasani, 2 clinics were selected randomly as the case and control groups. Individuals were selected among registered women in the clinics through systematic sampling on their medical archive numbers.

Data gathering tool was a standard questionnaire which its validity and reliability were evaluated before. The questionnaire was consisted of four parts: demographic characteristics (7 questions), and questions about individuals’ knowledge (20 questions), attitude (15 questions) and behavior (6 questions). Maximum score in questions about individuals’ knowledge was 20 (1 for true and 0 for every false answer), 60 in questions about attitude (0 to 4 scores for each question based on Likert spectrum) and 6 in questions about behavior (1 score for each “I do it” and 0 for each “I don’t do it” answer). Individuals filled in the questionnaire and afterwards the educational intervention comprising three educational sessions (every session was 60 minutes) was conducted on both groups. Various techniques were used for education including speech, question and answer, group discussion and practical demonstration. During these sessions, breast cancer and its risk factors and breast self-examination were taught. The participants filled in the questionnaire once more one month after educations.

We used SPSS software and Paired T test, ANOVA, Chi Square and regression for data analysis.

Results:
Among 100 participants, 93 (93%) were married and others were single (P=0.659). 73% of individuals were housekeepers and 27% were workers (P=0.822) and regarding their literacy levels, 50% had high school diploma, 4% had university degrees and 4% were illiterate (P=0.778).

Regarding family history, there was no family history in 74 participants (74%) and 26 ones (26%) had positive family history (P=0.648). There were no significant differences in these variables between two groups.

Mean knowledge score before education was 14.71 in the control group and 13.21 in the case group which were increased after education to 17.23 and 18.48 respectively. Paired T test showed that there was significant difference between mean knowledge scores before and after education in the case group (P=0.001) while that difference was not statistically significant in the control group (P=0.309). Mean positive attitude score before education in the case and control groups was 8.21 and 7.8 which were increased after education to 9.31 and 8.10 respectively. Regarding the effect of education on inducing positive attitude to breast self-examination in women, there was a significant difference between scores of attitude before and after education in the case group (P=0.001) but it wasn’t significant in the control group (P=0.233). Moreover mean behavior score before and after education in the case and control groups was 0.9 and 1 respectively which were increased to 2.7 and 0.93.

There was a significant difference between behavior scores in the case group before and after education (P=0.001) whereas it wasn’t significant in the control group (P=0.435). Besides we evaluated the relation of participants’ knowledge with their attitude and behavior through correlation test (Table 1). Knowledge and attitude scores of participants after education were significantly higher than those before education. Correlation test revealed that after education there was a significant relationship between knowledge and behavior (P=0.005) and also attitude and behavior (P=0.001).
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Table 1. Mean scores of knowledge, attitude and behavior of individuals before and after breast self-examination education in case and control groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Phase</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Control</td>
<td>Before education</td>
<td>14.71</td>
<td>4</td>
<td>0.309</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After education</td>
<td>17.23</td>
<td>13.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Case</td>
<td>Before education</td>
<td>13.21</td>
<td>5.05</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After education</td>
<td>18.48</td>
<td>1.9</td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>Control</td>
<td>Before education</td>
<td>7.8</td>
<td>1</td>
<td>0.233</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After education</td>
<td>8.1</td>
<td>1.79</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Case</td>
<td>Before education</td>
<td>8.05</td>
<td>1.49</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After education</td>
<td>9.06</td>
<td>0.82</td>
<td></td>
</tr>
<tr>
<td>Behavior</td>
<td>Control</td>
<td>Before education</td>
<td>1</td>
<td>0.91</td>
<td>0.489</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After education</td>
<td>0.93</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Case</td>
<td>Before education</td>
<td>0.9</td>
<td>0.84</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After education</td>
<td>2.7</td>
<td>0.53</td>
<td></td>
</tr>
</tbody>
</table>

Discussion:
Results of our study demonstrated that education can significantly improve individuals’ level of knowledge, attitude and behavior about breast self-examination which is consistent with preceding domestic and international studies (3, 16-18). In addition, results of some studies about the effects of education, knowledge and attitude on women’s behavior about breast self-examination were exactly the same as our results (11, 20 and 21).
Based on results of this study, there is a relationship between level of individuals’ knowledge and their attitude before education (P=0.013) and after education (P=0.002) which is obvious and consistent with results of preceding studies on relationship of individuals’ attitude, knowledge and behavior about various health issues (17, 20 and 21). In other words, individuals’ level of knowledge is directly related to development of proper attitude in them. In our study, elevated knowledge level of women changed their attitude which led to improvement of breast self-examination behavior. Besides correlation test revealed that after education, individuals’ knowledge and behavior and also their attitude and behavior are significantly related to each other. Regarding the relationship between individuals’ attitude and performing breast self-examination, results of this study were similar to a study conducted by Ghazanfarri in Kerman in 1994 (21).

Results demonstrated that although having sufficient knowledge in various health issues is a necessary condition for health behaviors but there is not always a direct relationship between individuals’ knowledge and behavior. In other words, people with higher knowledge do not necessarily perform better health behaviors. There is an interface between those two factors; individuals’ attitude which can anticipate people’s behavior. With improvement of people’s right attitude we can expect their appropriate performance.

Conclusion: According to aforementioned points, we suggest to consider comprehensive educational programs to improve women’s knowledge about breast cancer and advantages of breast self-examination as an effective method for early recognition of the disease. As mentioned, education can significantly improve individuals’ levels of knowledge, attitude and behavior about breast self-examination.