# The practice of breast-self examination among women at Gülistan district of Isparta*

ÖZTÜRK M.[1], ENGİN V.S.[2], KİŞİOĞLU A.N.[3]

*Department of Public Health[1], School of Medicine, Süleyman Demirel University, Isparta*

*Maternity Health Center[2], State Hospital[3], Isparta*

**Objective** To investigate the knowledge and attitude about breast-self examination (BSE) among a target population.

**Methods** In this study, knowledge and attitude about BSE were examined among 657 women aged 25 - 75 years old and resident at the Gülistan District in Isparta city.

**Results** It was found that despite nearly one-third of the study group (n=199, 30.3%) had known BSE, only 19.0% of them (n=125) were performing this examination monthly. The ratios of knowledge and performing BSE among study group were both significantly correlated with education level, prosperity and working status. In addition, according to the ratio of being informed about BSE among respondents, media was found to be more efficacious than health staff with the ratios of 59.8% and 32.2%, respectively.

**Conclusion** Consequently, information about BSE and regular performance of this method among the population included have not attained a satisfactory level. It was concluded that further attempt for public education was necessary.

**Key words** Breast-Self Examination, Breast Cancer, Women, Health Education

## Introduction

Breast Self Examination (BSE) is an important, cheap and easy method in early diagnosis of the breast cancer that became an important health problem with its high mortality (1).

Among the most common causes of death, cancer keeps the second place after cardiovascular diseases in developed countries like the United States (USA) (2-4). It is also true for Turkey as it inclined gradually since 1970's when it was only third cause of death (5). Also, it was reported that every one in three persons would develop cancer through his life in USA and every four of ten persons who diagnosed as cancer would be able to survive only five years after the diagnosis according to the current mortality rates (3).

Early diagnosis of cancer possibly influences the rates of patient improvement, alleviation of disease process, interference with complications and limitation of the debilitation, further; it increases life quality and survival (4).

In many studies, it was reported that women who carefully examined their breasts could find little masses of breast cancer and their prognosis became better. For example, in a study performed by Philip et al. 54.0% of 304 patients with newly diagnosed breast cancer claimed to practice BSE (6). In this study, it was found that those who performed BSE had reported their symptoms to health personnel sooner than the other subjects. In addition, in a meta-analysis of 12 studies including the study mentioned above, Hill et al. reported that there was good evidence of the benefit of encouraging women to

## Material and Method

This cross-sectional study was carried out between March and April 1997 to determine the knowledge and attitude about BSE of women resident in Gülistan district of Isparta. All women aged were 25 to 75 years old were included in this study. The contact was achieved by Gülistan Health Center. Among the target population attaining 700 women; 657 (93.9%) could be reached who constituted the study group (SG). A questionnaire form consisted of questions about socio-demographic characteristics and BSE was applied by interviewing during the house visits of midwives to the district residents. The questionnaire was designed according to the public health document about BSE that had been distributed by Turkish State Health Ministry, Department of Cancer Control (8).

Women who knew at least two of the three steps that been described in this document were considered to be sufficiently informed about BSE and defined as "knows BSE". Women who reported that she keeps performing BSE monthly or more often were defined as "performes BSE".

All data were analyzed by computer using SPSS. During the statistical analysis, first, the independent variables that may influence the results (like age groups, marital status, education, working status, etc.) were evaluated with chi-square ($\chi^2$) test. Among these, variables that turned out to be significantly influencing factors evaluated again by logistic regression model.

## Results

Women that included in the Stuıdy Group (SG) were averagely 42.2±13.4 years old and 574 of them (87.4%) were married. While 130 of them (20.1%) were illiterate, 150 of them (22.8%) were graduated from high school and forth. In addition, 117 of them (17.8%) were reporting that they were prosper, 34 of them (5.2%) reported that they were poor.

The great majority of the SG (n=574, 87.4%) were housewife and 482 respondents (23.4%) have had social security. Parity was averagely 2.5±1.5 in the SG and menarche time was averagely 13.4±1.2 years old. While 221 women (33.6%) have experienced menopause in SG, their average menopause time was turned out to be 46.0±5.7 years old.

As described in table 1, despite 199 subjects (30.3%) knowed BSE properly; only 125 of them (19.0%) were performing it monthly. The knowledge of BSE was found significantly correlated with education level ($\chi^2$=72.7, degree of freedom (d.f.)=4, p=0.0001): While the ratio of knowledge of BSE in illiterate group was 19.7%, the ratios of graduated from primary, secondary and high school and college were 24.5%, 24.3%, 58.0% and 78.1%, respectively. Like this, the percentage of the knowledge of BSE was significantly higher in women who were prosper ($\chi^2$=21.0, d.f.=2, p=0.0001) and women who were working or retired ($\chi^2$=69.7, d.f.=2, p=0.0001). Similarly with knowledge, regular performance of

BSE among SG was significantly correlated with these variables (education level: $\chi^2$=81.9, d.f.=4, p=0.0001; prosperity: $\chi^2$=17.4, d.f.=2, p=0.0002 and working status: $\chi^2$=58.2, d.f.=2, p=0.0001).

Among 199 subjects knowed BSE, the most common information source was depicted as TV (n=102, 51.3%) while nurses followed (n=43, 21.6%). In another word, influence of the media in public education about BSE is greater than health personnel's with 59.8% and 32.2%, respectively (table II). However, monthly performance ratios were significantly higher in those who were educated by health personnel.

When the variables that determined as significantly effective on both knowledge and performance of BSE evaluated again by logistic regression model, the efficiency of education level and working status turned out to be standing (table III). Women who work or retired have shown to be 4.5 times more likely to know and 3 times more likely to perform BSE than housewives. Besides, women who were graduated from secondary school and forth have shown to be 2.2 times more likely to know and 3 times more likely to perform BSE than others.

Besides, 6 women (0.9%) reported that they have diagnosed as breast cancer while 27 women (4.1%) had at least one relatives who have had that diagnosis.

Table I. The percentage of knowledge and performing on breast-self examination in the study group

| Variables | BSE Knowledge | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | No | | Yes | | | | Total | |
| | | | Performing BSE | | | | | |
| | | | No | | Yes | | | |
| | n | % [a1] | n | % | n | % [a2] | n | % |
| Age | | | | | | | | |
| <41 | 229 | 68.4 | 37 | 11.0 | 69 | 20.6 | 335 | 51.1 |
| >41 | 229 | 71.1 | 37 | 11.5 | 56 | 17.4 | 322 | 49.0 |
| Education level | | | | | | | | |
| İlliterate+prim. | 389 | 76.7 | 54 | 10.7 | 64 | 12.6 | 507 | 77.2 |
| Secondary | 69 | 46.0** | 20 | 13.3 | 61 | 40.7* | 150 | 22.8 |
| Marital status | | | | | | | | |
| Married | 395 | 68.8 | 69 | 12.0 | 110 | 19.2 | 574 | 87.4 |
| Single+divorced | 63 | 75.9 | 5 | 6.0 | 15 | 18.1 | 83 | 12.6 |
| Working status | | | | | | | | |
| Housewife | 438 | 75.0 | 59 | 10.1 | 87 | 14.9 | 584 | 88.9 |
| Working+retired | 20 | 27.4** | 15 | 20.5 | 38 | 52.1 | 73 | 11.1 |
| Prosperity | | | | | | | | |
| Poor+moderate | 397 | 73.5 | 57 | 10.6 | 86 | 15.9 | 540 | 82.2 |
| Good | 61 | 52.1** | 17 | 14.6 | 39 | 33.3 | 117 | 27.8 |
| Total | 458 | 69.7 | 74 | 11.3 | 125 | 19.0 | 657 | 100.0 |

Chi-square test; [a1]BSE Knowledge, [a2]performing BSE, *p<0.05 and **p<0.001

Table II. According to information source, the percentage of performing bse among 199 women that know BSE

| Information source | Performing BSE | | | | | |
| | Yes | | No | | Total | |
| | n | % | n | % | n | % |
|---|---|---|---|---|---|---|
| Health personnel | 47 | 73.4 | 17 | 26.6 | 64 | 32.2 |
| Media | 74 | 62.2 | 45 | 37.8 | 119 | 59.8 |
| Other (friend etc) | 4 | 25.0 | 12 | 75.0 | 16 | 8.0 |
| Total | 125 | 62.8 | 74 | 37.2 | 199 | 100.0 |

$\chi^2=12.91$, d.f.=2, p=0.0016. When the last two rows merged: $\chi^2=4.56$, p=0.033

Table III. The independent variables influence knowledge and performing of breast-self examination ratios and their analiysis according to logistic regression models*

| Variable | B | SE (B) | p | R | Odds ratio |
|---|---|---|---|---|---|
| | | | Knows BSE | | |
| Working status | 1.50 | 0.32 | 0.0000 | 0.16 | 4.47 |
| Prosperity | -0.26 | 0.25 | 0.3025 | 0.00 | 0.77 |
| Education level | 0.79 | 0.23 | 0.0006 | 0.11 | 2.19 |
| Constant | -1.02 | 0.24 | 0.0000 | | |
| | | | Performing BSE | | |
| Working status | 1.07 | 0.32 | 0.0007 | 0.12 | 2.92 |
| Prosperity | -0.21 | 0.28 | 0.4484 | 0.00 | |
| Education level | 1.09 | 0.25 | 0.0000 | 0.16 | 2.98 |
| Constant | -1.79 | 0.28 | 0.0000 | | |

*The independent variables determined significantly influenced the ratios of being informed and performing BSE had been processed with this model by "enter" method. These variables are:1.Working status (nominal, housewife/working+retired). 2.Prosperity (nominal, good/moderate+poor). 3.Education level (nominal, at least moderate school-graduated/others)

## Discussion

It came out that the ratios of knowledge and performance of BSE in this study group were far from desirable. But considering the studies both from our country and worldwide pertaining this subject, these results would not be found extraordinary. For example, in a study performed Chie et al. in Taiwan, they found out that only 8.4% of 3040 randomized sampled women had been performing BSE monthly (11).

Results that obtained from this study were compared to two discrete studies that was carried out in İzmir by Aydemir et al. In their first study the through information ratio about BSE was found 6.2% while the percentage of performance was found as 1.5% which was only 24.5% of the women who knows BSE (9). In their second study the percentage of women who know BSE were 53.7% while 39.0% were performing it (10). Indeed, the ratios that have been found in the latter are much greater than either in the former and in our study. The region of that study as being an education and research area should account for that prominent difference.

In a preview; Holtzman investigated (12); i) whether BSE was an efficacious method in determining cancer, ii) whether women performing BSE manage to discover abnormal masses earlier than others, iii) whether women performing BSE applied the stages properly and iv) whether they have definitive features. Among the correlation between BSE and socio-demographic features, the authors noticed that the majority of studies have shown negative correlation between BSE and aging. Also the majority reported positive correlation between BSE and education levels. In addition, the same authors found out that there were studies that reported positive correlation between both BSE education and regular performance.

In this study, women performing BSE were found more likely to be informed about BSE by health personnel and to have higher education levels. These findings are consistent with literature information; although no correlation between aging and BSE was found as Holtzman reported that it existed.

Consequently, knowledge and performance ratios of BSE were not satisfactory among women that included in this study. Considering the examples mentioned above; it is rational to think that public health education with well-defined strategies should bring desirable results.

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**Correspondence to:**

Yrd. Doç. Dr. Mustafa ÖZTÜRK

Süleyman Demirel Üniversitesi Tıp Fakültesi

Halk Sağlığı ABD,

32040 Isparta, TÜRKİYE