

## RESEARCH COMMUNICATION

# The Effect of Breast Self-Examination (Bse) Education Given to Midwifery Students on Their Knowledge and Attitudes

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### Abstract

This study was conducted in a descriptive and half-experimental format in order to determine the effect of breast self-examination (BSE) education given to 103 midwifery students from Halic University Sciences of Health School Midwifery Department on their knowledge and attitudes. After legal permission was obtained from the institution and verbal participation consent from the students, data were obtained using demographic and knowledge surveys, applied twice before and after education by the researcher between May-June 2010 and evaluated with proportional calculations, Kruskal Wallis test, t-test and t-test for dependent groups. Mean age of the students is  $20.2 \pm 1.52$ ; 58.3% had no information about BSE and 73.8% were not doing BSE; 7.7% them stated that they had a family member with breast cancer. The knowledge level score was  $43.2 \pm 10.6$  before and  $68.4 \pm 10.5$  after the BSE education ( $p < 0.05$ ). A statistically significant difference persisted between the pre- and post-education scores taking knowledge, making BSE, and frequency of using BSE average scores of the students ( $p < 0.05$ ).

**Keywords:** Breast self-examination - knowledge and practise - education - Turkish midwifery students

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### Introduction

Cancer is one of the most important diseases which threatens human health nowadays. In the world, breast cancer is the most commonly seen type of cancer in woman. According to the recent data from Cancer Control Department of the Ministry of Health of Turkey (2005), breast cancer is the leading type of cancer in women with an incidence of 35.5/100,000. According to the research findings, each one of ten woman has a risk of having breast cancer, and one third of them have a risk of dying because of breast cancer (Harris et al., 1997; Demirhan et al., 2002; Tuna, 2002; Aydıntuğ, 2004; Kırdök et al., 2004). Early diagnosis and treatment of breast cancer can be effective in prolonging life expectancy, decreasing mortality, increasing life quality, and preventing the physical pain and psycho-social difficulties in woman (Stilman 1997; Mikail et al., 2001; Aygin et al., 2004; Uzun et al., 2004).

In the early diagnosis of breast cancer, breast self-examination (BSE) has an important part. In literature, it is stated that %90 of the times breast cancer is first noticed by the person herself (Simsek and Tug, 2002). BSE, is a type of examination which should be made by each woman after the age of 20. BSE, is an easy-to-apply, economical, safe, non-invasive procedure with no special material/tool requirements; and it is an effective diagnostic method for breast cancer which only takes five minutes to apply (Nahcivan and Secginli, 2003; Uzun et al., 2004).

College students may see BSE as unnecessary.

According to the results of the studies which were made among young people, it was determined that most of these people do not adopt BSE application due to seeing themselves as unlikely candidates for breast cancer or they apply it very rarely. Education these people for learning and using BSE application is quite important in order to make them aware about the breast cancer, which is a rapidly increasing disease in recent years, and help them to gain health improvement attitudes. Young people should be informed about the BSE education, which is one the most important steps in adopting the protective health attitudes, its necessity and application (Aydin, 2004).

This study was made in a descriptive and half-experimental format in order to determine the effect of breast self-examination (BSE) education given to the midwifery students on their knowledge and attitudes.

### Materials and Methods

The universe of this descriptive and half-experimental study was formed by the 110 midwifery students in the Halic University Sciences of Health School Midwifery Department. Before the sample selection, universe of the study was used completely; but due to the existence of students who did not give consent to participate in the study, and the unavailability of some students during the second time survey applications, 103 students were included in the sample. Legal permission was taken from the related institution; while verbal participation consent

was taken from the students by informing them about the research in the pre-research period.

Data were obtained by using demographic survey, which consisted of 13 questions about socio-demographic features, and “Knowledge Survey about Breast Cancer and Breast Self-Examination”, which consisted of 16 questions and was prepared in accordance with the literature . Questions in the knowledge survey were prepared in a multiple-selective format and each correct answer was calculated as 5 points. The lowest score in the knowledge survey was 0 (zero), and the highest score was 80 (eighty). Increase in the scores was interpreted as higher knowledge level. Before the survey application, surveys were tested on 10 people, and after the statements were reevaluated; first surveys were applied between the dates of May 3rd-10th 2010, and the second surveys were applied between the dates of May 31st-June 10th 2010. Survey was given to the students to be filled, and the researcher was present near the students while the survey was filled. Survey application was determined as an average period of 3-5 minutes, and each student was given an education by the researcher after the application of the surveys by using the BSE brochure, which included the questions prepared by the researcher and their answers, and the breast examination model.

Obtained data were evaluated with proportional

**Table 1. Evaluation of the Students Included in the Research Towards Breast Cancer and Breast Self-Examination (n:103)**

Variables	No.	(%)
Knowledge Status about Breast Examination		
None	60	58.3
Has knowledge	43	41.7
Frequency of Breast Self-Examination		
Never	76	73.8
Sometimes	15	14.6
Once a month	12	11.6
Reason of using Breast Self-Examination		
No usage	76	73.8
Using as a precaution	20	19.4
Using because of non-malignant breast disease	7	6.8
Breast Self-Examination		
Using BSE	27	26.2
Not using due to not having any knowledge	55	53.4
Not using due to seeing it unnecessary	21	20.4
Family history		
Has (mother, aunt, sister)	8	7.7
None	95	92.3
Non-malignant breast disease status		
Exists	4	3.9
No existence	99	96.1
Total	103	100.0

**Table 2. The Comparison of the Knowledge Level Score Averages of the Students in the Pre- and Post-BSE Education Periods (n:103)**

Knowledge level score average	S	X ± SS	min	max
Pre-BSE Education	103	43.14±10.57	5	70
Post-BSE Education	103	68.35±10.45	55	80
t		19,164		
p		0,000		

calculations, Kruskal Wallis test, t-test, Man Whitney U-test and t-test in dependant groups.

## Results

69.5% of the students included in the research were determined to be in the 20 or over age group, %41 of them were determined to be second grade students, %94.3 of them were determined to have no present occupation and %46.8 of them were determined to be living with their families. It was also determined that %67.6 of the students had health care personnel in their family/close environment.

Evaluations of the students included in the research towards breast cancer and breast self-examination are shown in Table 1. A comparison of the knowledge level score averages of the students in the pre- and post-BSE education periods is shown in Table 2. There is a statistically significant difference between the pre- and post-education score averages of the students (p<0.05). The comparison of the pre- and post-education knowledge levels of the students in accordance with their previous BSE knowledge status is given in Table 3. There is a statistically significant difference between the score averages of the pre- and post-education knowledge levels of the students in accordance with their previous BSE knowledge status (p<0.05). Knowledge levels of the students seemed to be increasing after the education, and in the advanced analysis, it was also determined that the knowledge levels of the students with no previous knowledge increased more and this was the cause of the statistically significant difference.

The comparison of the pre- and post-education knowledge levels of the students in accordance with their usage of BSE is given in Table 4. There is a statistically significant difference between the score averages of the pre- and post-education knowledge levels of the students in accordance with their usage of BSE (p<0.05). In the advanced analysis, it was determined that the knowledge levels of the students with no usage of BSE increased more after the education compared to the other groups.

The comparison of the pre- and post-education knowledge levels of the students in accordance with their frequency of BSE usage is shown in Table 5. There is a statistically significant difference between the score averages of the pre- and post-education knowledge levels of the students in accordance with their frequency of BSE usage (p<0.05). In the advanced analysis, it was determined that the knowledge levels of the students with no usage of BSE increased more after the education compared to the other groups.

## Discussion

In this study, which was made in order to determine the effect of breast self-examination (BSE) education given to the midwifery students on their knowledge and attitudes, it was determined that %58.3 of the students had no knowledge about breast examination, %73.8 of them were not using BSE, %53.4 of them were not using BSE due not having any knowledge about it (Table 1). It is such

**Table 3. The Comparison of the Pre- and Post-Education Knowledge Levels of the Students in Accordance with Their Previous BSE Knowledge Status (n:103)**

Previous BSE Knowledge Status	n	Pre-Education	Post-Education
		X ± Ss	X ± Ss
None	43	54.10±11.07	69.03±11.43
Has Knowledge	60	33.00±10.37	63.01±11.35
Total	103	43.14±10.57	68.35±10.45
T		t:-5.541	t: 52.653
p		p:0.000	p:0.001

**Table 4. The Comparison of the Pre- and Post-Education Knowledge Levels of the Students in Accordance with Their Usage of BSE (n:103)**

BSE Usage Status	n	Pre-Education	Post-Education
		X ± Ss	X ± Ss
Using BSE	27	55.24±11.79	70.48±12.35
Not Using BSE	76	34.02±10.08	58.20±11.60
Total	103	43.14±10.57	68.35±10.45
MU		MU: 196.500	MU: 192.000
p		p:0.000	p:0.032

**Table 5. The Comparison of the Pre- and Post-Education Knowledge Levels of the Students in Accordance with Their Frequency of BSE Usage (n:103)**

Frequency of BSE Usage	n	Pre-Education	Post-Education
		X ± Ss	X ± Ss
Sometimes	15	41.12±10.33	58.57±12.11
Once a month	12	52.00±13.20	64.66±9.61
Never	76	34.02±10.08	58.20±11.60
Total	103	43.14±10.57	68.35±10.45
KW		KW: 22.385	KW: 7.125
p		p:0.000	p:0.025

a disappointing finding that more than half of the young females in their 20s and having college education have no knowledge about BSE, which is the most important diagnostic tool for the early diagnosis of breast cancer, and have never done BSE, which they should have done on a monthly basis in order to notice the changes in their own breast tissues. This is also a serious finding because almost half of these young females are having college education in an education faculty and they are expected to make the public aware of these health issues by taking jobs in different parts of the country in a few years time. In literature, there are also many similar studies which are consistent with our study findings. In the study made by Akkus, Cice, Sahan and Ulger (2005), it was determined that %60.2 of the college students staying in girls dorm were not using BSE (Akkus et al., 2005). In the study made by Aygin, Uludag, and Sahin (2004), it was found that %46.1 of the students were not using BSE (Aygin et al., 2004). In the study made by Aydin (2004), it was found that % 62.5 of the students were not using BSE due to not knowing how to do it (Aydin, 2004). These results are consistent with our study findings.

In the comparison of the knowledge level score averages of the students in the pre- and post-BSE education periods which are shown in Table 2; a statistically significant difference was determined between the pre- and post-education score averages of the students (p<0.05). It was also determined that the knowledge levels of the students with no previous knowledge increased more and this was the cause of the statistically significant difference (Table 3). It is a known fact that education given to the

individuals is effective in covering the lack of knowledge and correcting the incorrect previous knowledge. In the study made by Lierman, Young and Powel-Cope et al., (1994), they have stated that education has a positive effect on the breast self-examination application (Lierman et al., 1994). In the study made by Omerciklioglu (1996), it was found that getting education about breast cancer and BSE has a positive effect on the knowledge level (Omerciklioglu, 1996). In a study made by Budden on the college students (1999), education given on breast cancer and breast self-examination application was found to be effective on the improvement of behavioral change (Budden, 1999). In the study made by Tuna (2002), it was determined that the education given to the college students caused an increase in the knowledge levels, and a statistically significant difference was found between the pre- and post-education knowledge levels (Tuna, 2002). In the study made by Demirhan, Ozen, Bostanci and Zencir (2002), it was reported that the applications of the students got better after BSE education was given (Demirhan et al., 2002). Yarbro (2003) stated that the breast self-examination education given to the students has a positive effect on changing negative behaviors to positive behaviors (Yarbro, 2003). These results support our study findings.

It was determined that the knowledge levels of the students with no usage of BSE increased more after the education compared to the other groups (Table 4). In the early evaluations, half of the students have stated that they had no previous BSE knowledge. This result was interpreted as education given to the individuals is

effective in covering the lack of knowledge and students have changed this behavior into an attitude. In the study made by Parlar, Bozkurt and Ovayolu (2004), it was stated that people who use BSE have better knowledge (Parlar et al., 2004). In the study made by Gok Ozer, Beydag and Ozbay (2009), it was also determined that using BSE status has an effect on the knowledge level, and people who use BSE have better knowledge levels (Gok Ozer et al., 2009). These results support our study findings.

A statistically significant difference was determined between the score averages of the pre- and post-education knowledge levels of the students in accordance with their frequency of BSE usage (Table 5). It was seen that the knowledge levels of the students with no usage of BSE increased more after the education compared to the other groups. In the studies made by Lierman, Young, and Powel-Cope et al., (1994) and Budden (1995), the effect of frequent BSE examination on the knowledge level was stated (Lierman et al., 1994; Budden 1995). In the study made by Tuna (2002), it was found that there is a statistically significant relationship between the frequency of BSE usage and the knowledge level, and the knowledge levels of the people who are using BSE are better compared to others (Tuna, 2002). These results support our study findings.

In the light of these results, the following are advised;

- Planning educational programs which give information about the symptoms-findings of the breast cancer, the importance of BSE for the early diagnosis, and how it is done.
- Reaching a wider public audience by the interaction between the health care students who have sufficient knowledge about this subject and their peers about the education and this subject.
- Repeating the educational programs about this subject in previously defined time intervals.

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