RESEARCH COMMUNICATION

Do Turkish Nursing and Midwifery Students Teach Breast Self-Examination to Their Relatives ?

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Abstract

Aim: To describe health beliefs and breast self-examination (BSE) practice of Turkish female nursing and midwifery students and extent of teaching the screening method to their mothers, sisters and relatives. Design: In this definition survey, data were obtained from 113 nursing and midwifery students (n = 113) in third and fourth class and their mothers, sisters and other relatives in Turkey. Methods: Data were collected using a personal data form, a knowledge evaluation form for BSE (Maurer 1997) and the Champion's Health Belief Model Scale. Number percentage, Chi-square test were used in the evaluation of the data. Results: Students learned breast cancer and BSE in their lessons one or two years previously. Knowledge level scores of the students were 52.3 ± 9.6 (min:25,max: 75). Rate of having regular BSE was 32.7%. When health belief scale assessed; the average of susceptibility was 7.52±2.62, seriousness was 21.8±5.30, benefit was 16.7±4.45, barrier was 22.3±6.44, confidence was 40.3±6.67 and medical motivation was 26.6±4.22. The rate of having regular BSE and benefit, barrier scores were compared, they were statistically significant difference($p<0.05$). The majority (106, 91.3%) gave BSE training to their mother and sisters, and 42.6% (48) to relatives, 6.2% (7) to friends, and 5.4% (6) to patients. Conclusions: Knowledge about breast cancer and BSE repetition training programs should be planned for nursing/midwifery students, to increasae their sensitivity, beliefs and attitudes, and medical motivation for BSE.

Keywords: BSE - Turkish nursing/midwifery students - attitutes - teaching to others

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Introduction

Breast cancer is the most common type of cancer among women across the world (Darendeliler & Ağaoğlu, 2003; Ozmen, 2008). In Turkey, the incidence of breast cancer has increased recently and it is estimated that there will be more than 51.000 breast cancer cases by 2012 (Ozmen, 2008).

While breast cancer is encountered so commonly, it has a slow growth rate and notable treatment outcomes can be achieved by early diagnosis. Early diagnosis and treatment of breast cancer can both be effective in extending life expectancy, reducing mortality, increasing quality of life, and preventing physical pain and psychosocial problems in women (İğci & Asoğlu, 2003).

Screening methods such as mammography, clinical breast examination, and breast self-examination (BSE) are described as health improvement activities and play important roles in the early diagnosis of breast cancer (Semiglazov et al., 1999; Smith et al., 2003; Ministry of Health in Turkey, 2006). While mammography is the sole effective diagnostic method for reduction of mortality in breast cancer, it is not regarded as a suitable modality for poor countries due to its costly nature and requirement of technical specialty along with man power. Therefore, development of awareness and consciousness on breast health among women is considered to be the most effective and important action (Anderson et al., 2003; Smith et al., 2003; McCready et al., 2005). BSE is recommended to be performed routinely on a monthly basis in all the women aged above 20 years and the importance of raising awareness on breast cancer via BSE is noted (Smith et al., 2003).

Currently, while investigating the roles of beliefs and perceptions in preventive health behaviors such as BSE practice and undergoing mammography for breast cancer screening, the theoretical structure of Health Belief Model (HBM) is used (Jane, 1995; Wu, 2003; Gözüm et al., 2004).

Particularly in countries where Islam is the predominant religion, such as Turkey, generally women abstain from touching even their own breasts, do not want to go to a physician for breast examination, delay their visits for breast examination, and feel embarrassed of undergoing mammography and being examined by a physician (Rajaram and Rashidi, 1999).

In Turkey, where the vast majority of people are muslim, the aim of the education delivered to the students

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in nursing and midwifery schools at universities, is to raise the awareness of young girls towards their own body, establish a regular BSE pattern among them by having a positive influence over their health beliefs, and encourage them to share the related knowledge with their relatives and the public for maintaining a healthier community (Aydın Avcı and Keskin, 2005; Beydağ and Karaoğlan, 2007; Aydın Avcı et al., 2008).

In a study where the effect of health beliefs of midwifery students over BSE were analyzed, as the perceived susceptibility and confidence (self-reliability) were found to be at moderate level, health motivation and perceived benefits were found to be high, while perceived barriers was observed to be at low levels (Aydın Avcı et al., 2008).

Nursing students undergoing breast cancer and BSE education, perform BSE more regularly than those who do not take these lessons. However, there are also educated students who still perform BSE irregularly or not at all because of forgetfulness, embarrassment, fear and lack of knowledge, considering one's age early for starting breast examination, or disregard (Uzun et al., 2004; Aydın Avcı and Keskin 2005).

Nurses and midwives who are taught with a philosophy of maintaining and developing public health, play an important role in teaching and promoting BSE among women. Since the nursing and midwifery students trained on BSE are around their twenties, it is expected from them to perform BSE each month and begin to share their knowledge on this subject with the public during their undergraduate years. Defining the beliefs of students with regard to breast cancer may shed a light on future studies focusing on changing wrong beliefs and increasing the efficiency of public health trainings that will be given by them. Therefore, this is a descriptive survey investigating health beliefs and BSE teaching status of nursing and midwifery undergraduate students who are taught on breast cancer and BSE .

Materials and Methods

Our survey was carried out on 113 third-year and fourth-year nursing and midwifery students between September - December 2009. Required permissions and approvals were obtained from the institutional governing bodies and students. Our study population had received information about breast cancer and BSE 1 or 2 years previously.

As a data collection method, socidemographic characteristics of the 113 students were determined. This form included information on students involving their age, university term, family history of breast cancer, frequency of BSE practice, and the factors influencing that frequency. Moreover, the students were evaluated in terms of providing information on BSE and breast cancer and teaching BSE.

The study population was consisted of 113 undergraduate students in a School of Health. 59.3% of the study group were third-year and fourth-year midwifery students (n=46), whereas 40.7% were students of nursing (n=67). Sociodemographic characteristics were analyzed by reviewing the related literature. We used the 20-item breast cancer and BSE knowledge form (8 on breast cancer and 12 on BSE) with a score range of 0-100 which was created by Maurer in 1997. This form was adapted to Turkish language by Tuna Malak and Dicle in 2007 (Maurer, 1997; Tuna Malak and Dicle, 2007).

Champion's Health Belief Model Scale (CHBMS) was used in order to examine the influence of health beliefs of students over BSE practice.

Champion's Health Belief Model Scale (CHBMS) is an instrument for measuring the beliefs and attitudes of women towards breast cancer and breast self-examination. This 42-item test was developed by Champion in 1984 and revised in the following studies (1993; 1997; 1999).

Susceptibility domain (or subscale) has 3 items and is about the degree of perceived risks and vulnerability. Seriousness domain has 7 items and indicates the degree of perceived consequences of developing breast cancer. Benefits domain has 4 items and indicates perceived advantages associated with BSE. Barriers domain has 11 items and indicates the perceived barriers associated with BSE. Confidence domain has 10 items and indicates the perceived capability or efficiency in practicing BSE for detection of breast masses. Health motivation domain has 7 items and indicates the general interest and concerns towards personal health status.

Reliability and validity studies of the original scale was carried out by Victoria Champion. Cronbach alpha coefficient (reliability coefficient) of the scale was found to be 0.69-0.90 for the subscales. Test-retest for the subscales of the survey varies between 0.45-0.70. The scale shows construct and content validity (Champion, 1993; Champion and Scott, 1997; Champion, 1999). Adaptation to Turkish language was performed by Gozum & Aydin (2004), Karayurt & Dramali (2007), and Secginli & Nahcivan (2004).

In this study, we preferred to use the Turkish form of CHBMS created by Karayurt Dramali (2007). In order to evaluate the reliability of this scale, item statistics and Cronbach alpha coefficients were analyzed. Since item-total correlations were above 0.30, no item was excluded. The consistency of the scale over time was evaluated by test-retest correlation and was observed to be between 0.89-0.99 for the subscales. Cronbach alpha reliability coefficients varied between 0.58-0.89. Confirmatory factor analysis was performed for evaluation of the construction validity and 6 factors similar to the ones in the original scale were found. Turkish adaptation of CHBMS was found to be a reliable and valid instrument for determination of beliefs and behaviors associated with breast cancer and BSE.

Six constructs of the health belief model formed the 6 subscales of the scale. Items were formatted with a 5-point Likert scale consisted of the following: (1) strongly disagree, (2) disagree, (3) undecided, (4) agree, (5) and strongly agree. Each domain of the scale is evaluated separately and they are not combined to obtain a total score. Thus, a score is acquired for each of the domains. While the length of time required to complete the scale depends on the number of domains used, generally it is finished within 12-15 minutes when all domains are

applied. The data were analyzed by SPSS 15.0 program. Sociodemographic data and BSE teaching status of students to the people around them were expressed by percentages and evaluated with the Student's t test.

Results

Personal characteristics of the students included in our study are shown in Table 1. Study population was comprised of students and the mean age was 21.4+1.43. All of the students were unwed. 59.3% (n=67) of them were nursing students, whereas 40.7% (n=46) were midwifery students. 2.7% had a family history of breast cancer, 2.7% had a history of symptoms, and 32.7% declared regular BSE practice. Mean BSE knowledge score was 52. 3 ± 9.63 (range: 25-75) for the entire study population. Reasons behind irregular BSE practice were sparing no time, perception of no susceptibility, feeling no need, fear of breast cancer diagnosis, and carelessness towards health.

The total number of mothers, sisters, relatives, friends, and patients taught about BSE practice by all the students, was 167. While 63.5% (n=106) taught BSE to their mothers and sisters, 28.74% (n=48) and 59% (n=6) taught their relatives and patients, respectively (Table 2).

There was a statistically significant difference between the regular BSE practice and susceptibility, barriers, and confidence domains ($p<0.05$). Students who practiced BSE regularly had higher susceptibility than those who did not. Students with high susceptibility were found to have taught BSE practice to their relatives and patients. Students with high confidence values were found to practice BSE regularly, as well. Students who had positive family and symptoms history, were also observed to practice BSE regularly and have high confidence values.

BSE barrier scores of students who considered themselves as incapable to practice regular BSEwere higher than those who practiced regularly. The significant difference in perceived BSE barriers was originating from the ones who did not practice BSE regularly. There was no significant difference between the perceived seriousness, health motivation, and BSE benefits in the entire study population ($p>0.05$) (Table 4).

Table 1. Data on Student Characteristics

Characteristics (n=113)	n	%
Third- and fourth-year students		
Nursing students	67	59.3
Midwifery students	46	40.7
Family history of breast cancer		
Positive	3	2.7
Negative	110	97.3
History of symptoms		
Benign breast mass	2	1.8
Discharge	1	0.9
Negative	110	97.3
Knowledge on breast cancer and BSE		
52. 34 ± 9.63 (range: 25 - 75)		
BSE practice pattern		
Regular	37	32.7
Irregular	76	67.3
Reasons behind irregular BSE practice*		
Sparing no time	14	18.4
Perception of no susceptibility	3	3.9
Feeling no need	17	22.3
Fear of breast cancer diagnosis	23	30.2
Carelessness towards health	19	25.0

* (n=76)

Table 2. People Who Received Instructions on BSE from the Students

Person who received instructions	n	%
Mother/Sister	106	63.5
Relative	48	28.7
Friend	7	4.2
Patient	6	3.6
Total number of people	167	100

Table 3. Subscale Scores of Health Belief Model Scale for BSE Among Nursing and Midwifery Students

Subscales	Number of items	Range of score	$\bar{X}$ ± sd
Susceptibility	3	3-15	7.52±2.62
Seriousness	7	6-30	21.8±5.30
Health motivation	7	5-25	26.6±4.22
BSE benefits	4	4-20	16.7±4.45
BSE barriers	11	8-40	22.3±6.44
BSE confidence	10	10-50	40.3±6.67

Discussion

The percentage of nursing and midwifery students in Turkey who practice BSE regularly each month, vary between 31-75.4% (Uzun et al. 2004, Kılıç et al. 2006, Aydın Avcı et al. 2008). Studies on nursing and midwifery students reveal that despite having knowledge on BSE, they fail to practice BSE on a regular basis. (Alsaif 2004, Plesnicar et al. 2004).

The information gained throughout their education, influences students' knowledge on BSE. Studies show that education has a positive effect over processes of knowing and acting (Attia et al., 1997; Thomas et al., 2002). However, students can pass on their knowledge on BSE more easily to their relatives. Although it is important that students teach their patients about BSE in terms of maintenance and development of public health,

Table 4. Comparison of Health Beliefs with Regard to Regular BSE Practice Among Students (n = 113)

Regular BSE practice	Susceptibility $\bar{X}$ ± sd	Seriousness $\bar{X}$ ± sd	Health motivation $\bar{X}$ ± sd	BSE benefits $\bar{X}$ ± sd	BSE barriers $\bar{X}$ ± sd	BSE confidence $\bar{X}$ ± sd
Yes (n=37)	8.45±3.61	21.97±5.26	27.45±4.35	18.29±3.65	19.56±8.31	42.13±5.72
No (n=76)	7.06±1.83	21.76±5.35	26.11±4.12	15.97±4.63	23.68±4.82	39.38±6.94
t	2.72	0.19	1.59	2.67	3.32	2.08
P*	0,002*	0,955	0.936	0.069	0.024*	0.046*

*P<0.05, Student's t test

the rate of students accomplishing this objective was very low (3.59%) in our study. In a study which supports our results, after providing BSE education to the students of a health school, the rate of BSE teaching to close relatives such as mother and sisters was observed to be higher than the rates determined prior to the BSE education (Gürsoy et al. 2009).

The susceptibility of regular BSE practicers was higher. Those students with higher perceived susceptibility taught their patients and relatives how to practice BSE. It is an expected behavior for a student with high perceived susceptibility to demonstrate care for public health and teach BSE to the relatives (Aydın Avcı et al. 2008).

BSE barrier scores of students who did not practice BSE regularly were higher than those who practiced regularly. The factors hindering BSE practice among students were; sparing no time, perception of no susceptibility, feeling no need, fear of breast cancer diagnosis, carelessness towards health.

As for the correlation between susceptibility and perceived barrier scores of students who did not practice BSE, a low level of relationship was determined ($r=0.15$, $p<0.05$). These results may indicate that students who do not practice BSE themselves have low perceived susceptibility levels for breast cancer (n=76), whereas training of the relatives (n=161) and family (n=13) by each student, suggests a sensitivity towards public health.

There was no statistically significant correlation between perceived seriousness, health motivation, and BSE benefits of students who perform regular or irregular BSE ($p>0.05$) (Table 4). This result indicates that students do not take breast cancer seriously due to their young age and thus exhibit low health motivation scores.

Other studies have also revealed the fact that Turkish students considered beginning BSE practice during university as early (Uzun et al., 2004; Memis et al., 2009).

In a study performed on a group with a culture other than Turkish, the BSE beliefs of nursing students were found to have high perceived benefits, susceptibility, and health motivation scores, while exhibiting low perceived barriers (Budden, 1999). This result isn't consistent with our results. It is evident that nursing and midwifery students from different cultures may have different health beliefs for BSE practice.

The reason behind informing their relatives and family about breast cancer, BSE, and importance of early diagnosis was their fear that their relatives would contract it. However, nursing and midwifery students clearly did not show the same behavior towards their patients. When students were asked about this biased and contradictory behavior, they mentioned differing individual priorities of their patients or failure to remember under working conditions.

Nursing and midwifery students tend to be more efficient in teaching positive health behaviors to their first-degree relatives, while experiencing difficulties in teaching those behaviors, such as BSE, to patients with poor health status and being inefficient to instruct them about health behaviors unrelated to their priorities.

In light of the results of our study, we can say that regular training sessions underscoring the importance of breast cancer and self-breast examination, will improve perceived susceptibility in students and their patients/relatives, while showing a positive impact over the health beliefs of students. Repeating the importance of regular BSE practice frequently to students and using warning posters and videos about BSE practice, may help to elevate the perceived susceptibility among students. Students should be encouraged to provide trainings to patients for teaching and promoting positive health behaviors.

In conclusion, midwifery students constitute an important group of the candidates in healthcare sector that will take over the fight for maintenance and development of public health in the future.

Particularly in countries with muslim people who may abstain from touching their own bodies or may not want to undergo mammography due to their beliefs, it is more important to educate midwifery and nursing students on the importance of preventive health behaviors. Promoting public health through teaching and applying preventive health behaviors, should be taught to those students as one of their responsibilities.

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