

RESEARCH COMMUNICATION

Relations between Breast and Cervical Cancer Prevention Behaviour of Female Students at a School of Health and their Healthy Life Style

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Abstract

Regular breast self-examination (BSE) and pap-smear tests are the two of the positive health behaviors for improving, promoting and protecting the health of adolescent girls. The present quasi-experimental research was carried out with the purpose of analyzing the relations between breast and cervical cancer prevention behavior of female students at a School of Health and their health lifestyle. The research was conducted at Çanakkale Onsekiz Mart University School of Health between November 2008 and February 2009. A total of 77 female students attending the first and second grades were included in the sample. Education pertinent to the matter was provided and evaluation was made three months later. A knowledge evaluation form for breast and gynecological examination, the Healthy Life-Style Behavior Scale (HPLP), was used in data collection. Number percentages, the McNemar Bowker test, the t test and the Mann Whitney U test were used in the evaluation. Despite the information they had received, not all of the students performed regular breast self-examination (BSE) prior to the education. For 24.7% (n=19) the reason for not doing regular BSE was their having no symptoms and for 29.9% (n=23) it was due to thinking that they would not have breast cancer. The reason for not having pap smear test was a virgin status. Three months after the education, knowledge level scores of the students increased approximately three and a half times (from 23.8±9.8) to 81.2±8.0). The rate of having regular BSE was 88.3% after three months, however; there was no pap smear test probably due to the fact that it was a taboo. When the rate of having regular BSE three months after the education and HLPL scores were compared, the scores of those having it regularly and the scores of those not having it regularly were found to be close and no statistically significant difference was detected (p>0.05). In conclusion, consultancy service units should be established to comprehend the barriers perceived by adolescent girls who do not have regular health screening, to make appropriate strategic planning in order to eradicate the hindrances in Muslim societies and to enhance the motivation of youth with continuous education.

Key Words: Breast self examination - cervical cancer test - healthy life style - Turkish students

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Introduction

Cancer is one of the most important health problems today. Despite the countless number of research carried out on the matter, cancer, which is as old as the human history, continues to be the second leading cause of the deaths today. This makes it an important health problem for every society (Smith et al., 2003). The types of cancer encountered in women in Turkey are breast and cervical cancers just like all around the world (American Cancer Society, 2009). Learning that she has cervical or breast cancers may be the most devastating and stressful event for a woman because the term cancer has a life-threatening meaning. Considering the bad impressions which the loss of cervix and breast that are important for the woman will leave on her, more and more importance is attached to

early diagnosis (Platin, 1996). 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 and cervical cancer is the tenth with an incidence of 5.3/100,000. Early diagnosis is possible for both of them (Gözüm et al., 2004; Bilge and Çam, 2008), achievable through educating and informing the women on the matters and carrying out screening programs. Screening programs are beneficial only when they are carried out regularly. They are vital in decreasing and preventing the deaths due to cancer by ensuring early diagnosis through such methods as mammography, clinical breast examination and breast self-examination (BSE) in breast cancer and through the pap smear test for cervical cancer (Pillay, 2002; Fındık and Turan, 2004).

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Awareness increases in developing countries such as Turkey if adolescent girls start low-cost, easy-applicable BSE at the age of 20 and pap smear test at the age of 18. They can observe small changes in their breasts through BSE earlier (Platin, 1996; World Health Organization, 2006). Cervical cancer diagnosis is possible in the earliest stage if they have pap smear test regularly (World Health Organization, 2006; Cancer Council Australia, 2009).

Besides attaining vocational formation, adolescent girls attending university at their 20s undergo changes in their personal life and health behavior. This change is important especially in terms of attitudes and behaviors pertinent to health since the adolescent's attitudes and behaviors pertinent to health affect not only herself individually but also her present and future family, that is the society in general (Bati et al., 2003). Thus, awareness in breast cancer and cervical cancer could be enhanced both in these adolescent girls themselves and the society.

The rate of applying screening behaviors for early diagnosis of not only breast but also cervical cancer is too low in Turkey (Bolsoy and Senol, 2000; Aydın, 2004). This low rate of both BSE and pap smear among women could be explained with the fact that people do not have general check-up unless they have a health problem which hinders their activities (Janz et al., 2002; Matin and LeBaron, 2004; Norman and Brain, 2005; Karayurt and Dramali, 2007). Another factor affecting the cancer screening behaviors is perception of the individual regarding the benefit of screening. Benefits perception ensures that the individual focuses on the precautions to decrease the risk of getting any disease. When the level of benefits perception is low in an individual, the rates of suspecting cancer and participating in screening programs are decreasing (Gray, 1990; Holdroy et al., 2004).

In Muslim countries, particularly like Turkey, the beliefs and attitudes arising from the culture affect BSE and pap smear behaviors. Women may delay early diagnosis in breast cancer and cervical cancer due to such factors as sense of privacy, feeling shy about health care personnel, not consulting the physician early and not touching one's own body (Rajaram and Rashidi, 1999; 2000; Matin and LeBaron, 2004). Moreover, the issue of having pap smear test, which is used to diagnose cervical cancer, is not clear in terms of Islamic and cultural values for Muslim adolescent girls. Pre-marital sexual activities, virginity of adolescent girls and the taboo about these affect having a gynecological examination and pap smear test negatively and generally, adolescent girls do not have an examination (Matin and LeBaron, 2004). On the other hand, people have positive health behaviors such as protecting health and health formula, promoting and improving health (Maben and Clark, 1995). Having BSE and smear test at regular intervals is a positive health behavior and shows that adolescent girls adopt a healthy life-style to protect themselves from diseases (Bati, 2003; Baltas, 2004; Fındık and Turan, 2004; Matin and LeBaron, 2004; Çam and Babacan Gümüş, 2006).

The present quasi-experimental research was carried out with the purpose of analyzing the relations between breast and cervical cancer prevention behavior of female students at School of Health and their healthy-life style.

Materials and Methods

The research was conducted at Çanakkale Onsekiz Mart University, School of Health Sciences between November 2008 and February 2009. A total of 77 female nursing students who were attending the first and second grades and who had not had BSE and pap smear education were included in the sample.

Knowledge level of the students was measured before the education was provided. The researchers provided education on breast cancer, BSE use in cervical cancer and pap smear test and gynecological examination. Notices were hung up on the walls around the student hostels, houses and school as a stimulant. Knowledge level of the students was measured again three months after the education and related behaviors of early diagnosis in cancer were evaluated.

Knowledge evaluation form for breast and gynecological examination, question form to determine personal characteristics of the students, prepared after the literature review were used in data collection. Moreover, Healthy Life-Style Behavior Scale (HPLP) and Educational Activity Evaluation Form were used.

In personal characteristics form, questions on any familial history of breast and cervical cancer, knowledge of BSE, practice of BSE, frequency of having BSE, sexual experience and having pap smear test in addition to those on age and marital status were asked. Total score of knowledge evaluation form for breast and gynecological examination was 100.

Healthy Life-Style Behavior Scale (HPLP) was improved by Walker et al in 1987 and measures the behavior improving one's health in relation to their healthy life-style. A study of validity and reliability of the scale in Turkey was made by Esin in 1997 and the scale, which included 52 items in the original, was adopted for Turkish society and applied with 48 items. The questions in the scale measure the behaviors promoting one's health in relation to their healthy life-style. The scale includes six sub-scales; namely, self-actualization, health responsibility, exercise, nutrition, interpersonal support, stress management. Each sub-scale could be used separately. The score obtained overall displays the score of health life- style behaviors (Esin, 1997).

Self-actualization sub-group determines one's purpose of life, their individual ability to actualize themselves, and how much they know about themselves and how much they could satisfy themselves.

Health responsibility sub-group determines the level of responsibility one has for their health and how much they take care of their health.

Exercise sub-group determines how much one carries out exercises which are indispensable for a healthy life.

Nutrition sub-group determines one's values in selecting and arranging their meals and food selection.

Interpersonal support sub-group determines the level of one's communication with those with whom they have intimate relations and the continuity of this communication.

Stress management determines the level of one's familiarization with sources of stress and stress control

mechanisms.

All items of the scale are positive and were prepared in 4-point likert type. Each item is scored with the numbers 1 (never), 2 (sometimes), 3 (often) and 4 (regularly). Alpha reliability coefficient of the scale changes between 0.79 and 0.94. The minimum score is 48 and the maximum score is 192. The increase in the scores obtained from the scale shows that the person performs health behaviors at a high level. The amount of the items changes in sub-groups of the scale. Amount of the items and item numbers in the sub-groups are as follows (Esin, 1997).

Self-actualization (13 items); Health responsibility (10 items); Exercise (5 items); Nutrition (6 items); Interpersonal support (7 items); Stress management (7 items); Health life-style behaviors (48 items).

Nursing students' knowledge level were evaluated before and 3 months after education. Regular practicing situations of BSE before and after training was evaluated by McNemar test. All students' HLPL mean points were evaluated t test. Regularly of BSE and HLPL points were compared Mann Whitney U test.

Results

Average age of the students was 19.3 ± 1.16 (min: 17; max: 22). Some 42.9% of the students (n=33) were living in the city center for a long time and 57.1% (n=44) were living away from the city center. The percentage of the adolescent girls who had never touched her breast was 77.9% (n=60). The question on sexual activity was generally left unanswered or answered with no sexual activity. Students knowledge of BSE came to know by media (22.1%, n=17), nurses and midwives (29.9%, n=23). The percentage of those who had heard cervical cancer and pap smear test was 24.7% (n=19). Some 14.3% (n=11) heard cervical cancer and pap smear test from nurses and midwives and 14.3 % (n=11) from media. Before the education, almost all of the students did not perform BSE regularly despite the information they had heard and those who stated that they used to perform BSE performed it at any random day, did not examine each breast for five minutes, and used to do a random unsystematic examination and become anxious when they felt any pain in their breast during their ovulation period. For 24.7% (n=19), the reason for not having regular BSE was their having no symptoms and for 29.9% (n=23), it was due to thinking that they would not have breast cancer. The reason for not having pap smear test was virginity.

Three months after the education, knowledge level scores of the nursing students increased approximately three and a half times (the pre-education score was 23.8 ± 9.8 and it was 81.2 ± 8.0 three months after the education). Before the education, three students found lumps in their breast as a result of the BSE they had randomly; however, they could not be sure of the lumps due to the fact that they did not have BSE continuously and did not apply to any health-care institution. The lumps in the breasts of these three students were observed during the education and it was found out that there were no masses which could be felt with hand. No students had had pap smear test and gynecological examination before

Table 1. Adolescent Girls' Rate of Having BSE Regularly

	Pre-Education	Post-Education	McNemarTest	p
Regularly	0 (0%)	68 (88.3%)	67.000	0.01
Not Regularly	77 (100%)	9 (11.7%)		

There were no students undergoing pap smear pre- or post-education

Table 2. Comparison of All Adolescent Girls' Average Scores Of Healthy Life-Style Behaviors Before And Three Months After The Education (n=77)

	X	SS	t	p
Pre-Education	120.1	0.3	17.109	<0.001
Post-Education	131.8	6.1		

Table 3. Comparison of Adolescent Girls' Rate of Having BSE Regularly with Average HLPL Scores

	X	SS	t	p
Regularly (n=68)	123.4	17.2	248.5	0.280
Not Regularly (n=9)	129.2	17.2		

the education. The students who had boyfriends asked some questions on gynecological examination and virginity during the education; however, they stated that they did not have any gynecological examination and they attached much importance to virginity. It was found out that there were adolescent girls who did not want to talk about the issue in or outside the classroom since they were shy or they were afraid of being stigmatized. Some 93.5% (n=72) of the students were content with the education very much. They stated that they, as prospective health-care personnel and as women, would use the information they got during the education and it would be very useful.

Average total score of Healthy Life-Style Behavior Scale (HLPL) of all adolescent girls was 120.1 before the education and it was 131.8 after the education, and there was a statistically significant difference between them ($p < 0.05$) (Table 2). When the rate of having BSE regularly three months after the education and HLPL scores were compared, it was found out that the scores of those having it regularly and those not having it regularly were close to each other and there was no significant difference ($p > 0.05$) (Table 3). Because there was no pap smear test before and after, it was not compared with HLPL.

Discussion

It was found out that the rate of having pap smear test and BSE regularly was insufficient among the adolescent girls who were in their first year at the university before the education although they had heard about positive health behaviors for early diagnosis of the breast cancer and cervical cancer from the media and health-care personnel. This insufficiency could be explained with the fact that the adolescent girls did not have any health problems and symptoms related to breast and cervix (Gray, 1990; Holdroy et al., 2004). Additionally, BSE and smear caring of participating students may effect by health beliefs and cultural values of Muslim women (Rajaram and Rashidi, 1999; 2000; Matin and LeBaron, 2004). The perception of BSE as private may be due to the fact that

especially those adolescent girls who come from small towns had never touched their breast until that moment (77.9%). This shows that beliefs and social values could affect positive health behaviors negatively. In addition to this, the fact that the question on sexual activity was generally left unanswered or answered with no sexual activity may display that taboos on sexuality and the concept of virginity may prevent adolescent girls from having pap smear test in a Muslim society. Students' feelings such as chastity, shyness or being afraid of being stigmatized in the classroom may even be the reason for them to hesitate to have gynecological examination (Matin and LeBaron, 2004; Çam and Babacan Gümüş, 2006).

The fact that adolescent girls started to have BSE regularly three months after the education shows that the provided education was effective (Tuna Malak and Dicle, 2007; Karayurt et al., 2009). Moreover, continuous presence of the notices on which "Have you had your breast examination yourself this month?" is written as a stimulant on the walls of various departments of the school and bathrooms of the student hostels, interaction among the peers and social learning may have increased the effectiveness of this education (Bandura, 1977; Maurer, 1997; Tuna Malak and Dicle, 2007; Karayurt et al., 2009). In addition to this, total score of Healthy Life-Style Behavior Scale (HPLP) of all adolescent girls increased after the education.

The results of this research showed that discontinuous information on breast and cervical cancer obtained from media and other health-care units, insufficient stimulants on the issue and inexistence of the symptoms for these types of cancer decrease the rates of having pap smear test and BSE regularly. It was found out that the practice of providing education and hanging up notices should be continuous. It was understood that education on BSE and pap smear test could be more beneficial when accompanied by other seminars in which healthy life-style behaviors are taught.

In conclusion, it was considered that nurses could be guiding and a good counselor in comprehending the barriers perceived by the adolescent girls who have and do not have regular health screenings, in making appropriate strategic planning.

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