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Research Article/Özgün Araştırma

Vocational school students' beliefs and attitudes towards breast cancer

Meslek yüksekokulu öğrencilerinin meme kanserine ilişkin inanç ve tutumları

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Abstract
Aim: The aim of this study was to determine vocational school students' beliefs and attitudes towards breast cancer.
Materials and Methods: The descriptive study was conducted with 255 female students at Kastamonu University Taşköprü Vocational School in the 2018-2019 Academic Year. Data were collected using a "Descriptive Characteristics Form" and Champion's Health Belief Model Scale" for breast cancer screening.
Results: The mean age of participants was 19.74±18.4 years and 48.6% were medical documentation and secretarial students. Participants' CHBMS subscale scores showed that they had high perceptions of benefits of breast self-examination, low perceptions of seriousness, barriers to performing breast self-examination and health motivation. Participants who performed breast self-examination had higher perceptions of benefits of breast self-examination and confidence/self-efficacy and lower perceptions of barriers to performing breast self-examination than those who had never performed breast self-examination before (*p*<0.01).
Conclusion: Training on health promoting behaviors should be added to curricula.
Keywords: Belief; Breast cancer; Student; Attitudes.

Öz
Amaç: Bu çalışma, meslek yüksekokulu öğrencilerinin meme kanserine ilişkin inanç ve tutumlarının belirlenmesi amacıyla yapılmıştır.
Gereç ve Yöntem: Bu çalışma, 2018-2019 Akademik yılında Kastamonu Üniversitesi Taşköprü Meslek Yüksekokulunda öğrenim gören kız öğrencilerle (N:255) tanımlayıcı tipte yapılmıştır. Verilerin toplanmasında "Tanıtıcı Özellikler Formu" ve "Champion'un Meme Kanseri ve Taramalarına İlişkin Sağlık İnanç Modeli Ölçeği" kullanılmıştır.
Bulgular: Çalışma kapsamındaki öğrencilerin yaş ortalaması 19,74±18,4 ve %48,6'sı Tıbbi Dökümantasyon ve Sekreterlik bölümündedir. Öğrencilerin sağlık inanç ölçeği alt boyutlarından aldıkları puanlar incelendiğinde; yarar algılarının yüksek, duyarlılık, ciddiyet/önemseme, engel ve sağlık motivasyonu algılarının düşük olduğu belirlenmiştir. Kendi kendine meme muayenesi yapan öğrencilerin kendi kendine meme muayenesi yapmayan öğrencilere göre yarar ve güven/öz etkililik algıları yüksek, engel algıları düşüktür (*p*<0,01).
Sonuç: Öğrencilere yönelik müfredat programlarına sağlığı koruma davranışlarına ilişkin eğitimlerin eklenmesi önerilebilir
Anahtar Kelimeler: İnanç; Meme kanseri; Öğrenci; Tutum.

Introduction

Breast cancer is a serious disease with high incidence and mortality rates among women. Breast cancer, which ranks first among women in Turkey (24.9%) among the types of cancer, is one of every four women's cancers.[1,2]

In our country, 45% of women diagnosed with breast cancer are in the 50-69 age range and 40% are in the 25-49 age range. Breast cancer mortality and incidence increased at age 35 and above, although 30 years before the tumor is seen due to late detection of the prognosis is reported to be worse.[3] The increase in breast cancer incidence increases the importance of identifying risk groups, breast cancer awareness and screening programs in society.[4] In 2014, the standards to be adhered to during community-based breast cancer screening program studies were set by the Public Health Authority of the Ministry of Health and published with the title 'National Standards for Breast Cancer Screening Program'. Breast self-examination, mammography and Clinical Breast Examination have been published as the major recommended screening methods for early diagnosis of breast cancer.[5] However, it is important for women to be responsible for their own health, to recognize their breasts and to adopt preventive health behaviors. Many medical organizations around the world recommend breast cancer early diagnosis.[6] Research has shown that women in developing countries are not well-informed about breast cancer, and that self-examination beliefs and practices are not adequate.[7-10]

Research also shows that health beliefs are critical factors affecting breast cancer screenings.[11,12] Since beliefs have a huge impact on health behaviors, the theoretical framework of studies on screening tests is based on health belief model (HBM).[12] Investigation of factors affecting attitudes and behaviors towards early diagnosis based on HBM and provision of HBM-focused health education may help women develop health behaviors to lower risk for breast cancer.[13]

It is of paramount significance to raise young people's awareness of breast cancer,

teach them about screening tests and help them develop health promoting behaviors. To achieve this, factors affecting their awareness should be identified, and health education curricula should be developed accordingly. The aim of this study was to determine vocational high school students' beliefs and attitudes towards breast cancer.

Materials and Methods

Research Design

This was a descriptive study.

Population and Sample

The study population consisted of female students of the vocational school of Kastamonu University in 2018-2019 Academic year. No sampling was performed. Those who agreed to participate in the study (N:255) were included in the sample.

Data Collection

Data were collected using a "Descriptive Characteristics Form" and "Champion's Health Belief Model Scale" for breast cancer screening.

Descriptive Characteristics Form

The descriptive characteristics form consisted of 18 items on students' socio-demographic characteristics (age, area of study, grade and economic status), knowledge of breast cancer and performance of BSE, sources of information on breast cancer, reasons for not performing BSE and family history of cancer.[7-13]

Champion's Health Belief Model Scale For Breast Cancer Screening

Champion's Health Belief Model Scale for breast cancer screening (CHBMS) was developed by Victoria Champion in 1984 to examine nurses' beliefs about breast cancer and BSE, and was revised in 1993, 1997 and 1999. The Cronbach's alpha coefficient of the CHBMS subscales range from 0.69 to 0.90.[14] The CHBMS was adapted to Turkish by Karayurt and Dramali[15], Gözüm and Aydın[16], Secginli and Nahcivan[17]. In this study, the form made by Karayurt and Dramali[15] was used in the validity and reliability study of the scale. The Cronbach's alpha coefficient of the

CHBMS-TR range from 0.58 to 0.89. The CHBMS-TR was a valid and reliable tool that can be used to determine beliefs and attitudes towards breast cancer and BSE. The CHBMS is a 42 item scale including six concepts of HBM and consisting of six subscales. The subscale of "susceptibility to breast cancer" consists of 3 items on perceived risks of breast cancer. The subscale of "seriousness" consists of 7 items on degree of perceived threat posed by breast cancer. The subscale "benefits of BSE" consists of 4 items. The subscale "barriers to performing BSE" consists of 11 items. The subscale "confidence" consists of 10 items defining skills of BSE administration to detect abnormal breast lumps. The subscale of "health motivation" consists of 7 items on interests in, and concerns relating to, health status.[15]

The scale is a likert-type scale scored from 1 to 5. The statements in the scale are evaluated by giving "absolutely disagree" (1 point), "disagree" (2 points), "undecided" (3 points), "agree" (4 points) and "totally agree" (5 points). The sub-dimensions of the scale are calculated separately and are not combined in a single total score.[15]

Statistical Analysis

Data were analyzed using the Statistical Package for Social Sciences (SPSS, 18.0 for Windows). Number, percentage, mean, standard deviation and Mann Whitney U test were used for analysis. Cronbach's Alpha coefficient was calculated to determine the reliability of the scale for our sample. The Cronbach's alpha coefficient of the CHBMS subscales range from 0.68 to 0.89.

Ethical Considerations

Ethics committee approval was received for this study from Kastamonu University. Written permission was obtained from the university. Informed consent was obtained from participants according to the guidelines presented in the Declaration of Helsinki.

Results

The mean age of participants was 19.74±1.84, 63% were second graders, 48.6% were Medical Documentation and Secretariat (MDS) students, 43.1% were first aid students, 37.6% had an Anatolian high school degree, 34.1% spent most of their lives in a district and 66.3% had neutral income (income=expenses) (Table 1).

Of participants, 77.6% had no family members or friends diagnosed with breast cancer and 64.4% knew about breast cancer. The top three sources of information for breast cancer were media (29.8%), school (14.9%) and conferences (8.2%). 31.1% of participants stated that they performed BSE. Those who had never performed BSE stated that they did not know how to do it (51.4%), that it did not occur to them/they neglected to do it (34.7%) and that they were too young to have breast cancer (10.4%) (Table 2).

Participants' mean "susceptibility to breast cancer, "seriousness," "benefits of BSE," "barriers to BSE," "confidence/self-efficacy" and "health motivation" subscale scores were 7.61±2.36, 19.52±6.15, 15.56±5.26, 27.00±7.77, 30.21±8.88 and 25.41±6.19, respectively (Table 3).

There was no statistically significant relationship between CHBMS subscales mean scores and demographic characteristics. There was a statistically significant difference in "benefits of BSE," "confidence/self-efficacy" and "barriers to BSE" subscale scores between participants who performed BSE and those who had never performed BSE ($p<0.01$).Participants who performed BSE had significantly higher "benefits of BSE" (16.52±3.60) and "confidence/self-efficacy" (33.11±7.31) and lower "barriers to BSE" (25.25±7.71) scores than those who had never performed BSE (15.02±6.00, 28.48±9.18 and 28.04±7.66, respectively) ($p<0.01$) (Table 4).

Discussion

Breast cancer is one of the most common cancers in women worldwide. It is, therefore, of paramount importance to raise women's awareness of breast health and BSE, increase their sensitivity to breast cancer and help them develop positive health beliefs and attitudes in order to diagnose breast cancer early and start treatment immediately.[18] The aim of this study was to determine vocational high school students' beliefs and attitudes

towards breast cancer. The sample profiles the young adult population, and therefore, provides information on what steps to take to achieve the aforementioned tasks.

Table 1. Participants' socio-demographic characteristics (N=255).

Demographic Characteristics	n	%
Mean Age	X±SS=19.74±1.84	
Grade		
First	94	36.9
Second	161	63.1
Major		
First Aid and Emergency	110	43.1
Medical Documentation and Secretariat (MDS)	124	48.6
Others*	21	8.2
Degree		
Anatolian High School	96	37.6
Health Vocational High School	73	28.6
Regular High School	26	10.2
Others**	60	23.5
Longest Inhabited City		
Village	45	17.6
District	87	34.1
City	66	25.9
Large city	57	22.4
Family Income		
Income < expenses	70	27.5
income = expenses	169	66.3
income > expenses	16	6.3

% Percentage
Mean, Standard Deviation
*Banking and insurance, organic agriculture, traditional handicrafts, computer programming.
** Vocational high school

Table 2. Participants' characteristics regarding breast cancer and BSE.

Characteristics Related to Breast Cancer and BSE	n	%
Anyone you know diagnosed with breast cancer		
Yes	57	22.4
No	198	77.6
Obtaining information on breast cancer		
Yes	152	64.4
No	84	35.6
Source of information for breast cancer		
Family	13	5.0
Friends	6	2.3
School	38	14.9
Conferences	21	8.2
Media	76	29.8
Finding knowledge of breast cancer adequate		
Yes	81	31.8
No	174	68.2
Performing BSE		
Yes	78	31.1
No	173	68.9
Reasons for not performing BSE		
I do not know how to perform it	89	51.4
It does not occur to me/ I neglect it	60	34.7
I am too young to have breast cancer	18	10.4
I have no time	2	1.2
I do not need it	4	2.3

% Percentage

Table 3. Participants' mean CHBMS subscale scores.

Scale	Subscales	X±SS	Min	Max
CHBMS	Susceptibility to breast cancer	7.61±2.36	3	15
	Seriousness	19.52±6.15	7	35
	Benefits of BSE	15.56±5.26	4	20
	Barriers to BSE	27.00±7.77	11	55
	Confidence/self-efficacy	30.21±8.88	10	50
	Health motivation	25.41±6.19	7	35

% Percentage
Mean, Standard Deviation
Min, max

Table 4. Comparison of mean CHBMS subscale scores based on BSE administration.

Subscales	BSE Administration	X±SS	Mean Rank	Z	p
Susceptibility to breast cancer	Yes	7.64±2.40	123.33	-.225	.822
	No	7.63±2.36	121.25		
Seriousness	Yes	19.43±5.85	122.43	-.071	.943
	No	19.49±6.26	121.76		
Benefits of BSE	Yes	16.52±3.60	143.63	**-3.645**	**.000***
	No	15.02±6.00	109.72		
Barriers to BSE	Yes	25.25±7.71	105.35	**-2.785**	**.005***
	No	28.04±7.66	131.45		
Confidence/self-efficacy	Yes	33.11±7.31	145.66	**-3.957**	**.000***
	No	28.48±9.18	108.57		
Health motivation	Yes	26.31±6.25	132.77	-1.804	.071
	No	24.92±6.17	115.89		

Mann Whitney U test
*Significance at *p*<0.01

64.4% of our participants know about breast cancer and 68.2% of them find their knowledge inadequate (Table 2). Kılıç et al.[19] reported that 33.5% of university students knew about breast cancer. Şekerci and Sohbet[20] determined that only 16.1% of female students (n=1114) from departments other than the healthcare knew about breast cancer. In another study conducted by Sohbet and Karasu[21] with women (n=233), the rate of women who stated that they had sufficient knowledge about breast cancer was 21.5%. Past research provides some evidence that general cancer knowledge may play a role in outcomes and receipt of treatment for some women.[22,23] Inadequate knowledge about breast cancer is documented as an important factor in preventing women visiting screening facilities, engaging in BSE, and delayed treatment, and thus contributes to the high morbidity and mortality rates.[24,25] There is an increased burden of breast cancer in both developed and developing countries including Turkey.

Our participants obtain more information about breast cancer than reported by previous studies. However, more than half of them consider their knowledge of breast cancer inadequate, and their top source of information is the media, which raises concerns about the quality of that information and its usability to develop preventive health behaviors related to breast cancer.

31.1% of our participants perform BSE. Those who do not perform BSE do not perform it because they either do not know how to do it (51.4%) or it does not occur to them/they neglect to do it (34.7%) or they think they are too young to have breast cancer (10.4%) (Table 2). Some studies conducted in Turkey was determined to do BSE, the majority of women. Kılıç et al.[19] reported that although 33.5% of university students knew

about BSE, only 19.5% performed BSE on a regular basis. Şekerci and Sohbet[20] reported that only 3.4% of female students performed BSE regularly. Alvur et al.[26] found that 22.7% of women (n=310) who were admitted to family health centers did not know about BSE. Koç and Sağlam[27] reported that 65% of female patients did not know about BSE and 65% did not perform BSE, mostly due to lack of information (73.8%), followed by fear of getting a bad result (6.15%), lack of time (4.61%) and fear of feeling pain (1.54%). Şekerci and Sohbet[20] reported that only a small proportion of students from departments other than the healthcare performed BSE, mostly due to lack of information. Therefore, not only the curricula of health sciences but also those of other faculties should offer courses on health promoting behaviors in order to raise students' awareness of breast cancer and of the benefits of BSE. Moreover, susceptibility to breast cancer projects should be made available to the public, especially through mobile apps.

According to our participants' CHBMS subscale scores, they have high perceptions of benefits of BSE, moderate perceptions of confidence, susceptibility to breast cancer, seriousness and barriers to performing BSE, and low perceptions of health motivation (Table 3). Kılıç et al.[19] reported students' "susceptibility to breast cancer," "seriousness," "benefits of BSE," "barriers to performing BSE," "self–efficacy to perform BSE" and "health motivation" subscale scores as 8.50±2.09, 21.68±4.34, 16.58±2.56, 16.29±4.43, 28.47±5.91 and 20.67±2.53, respectively. In Alvur et al.[26] women's "susceptibility to breast cancer," "seriousness," "benefits of BSE," "barriers to performing BSE" and "health motivation" subscale scores were 7.8±2.7, 20.3±3.9, 15.9±3.3, 27.6±7.8 and 20.4±3.9, respectively. Our participants' high perceptions of benefits of BSE indicate their beliefs in the perceived advantages of BSE in the protection of health. These results point out that vocational high school students believe in the benefits of BSE but suggest that they need help to perceive individual risks for breast cancer and to recognize that breast

cancer is a health-threatening condition and to adopt health promoting behaviors. Raising awareness and education about breast diseases is a key component of early diagnosis. Education programs, therefore, can help raise young women's awareness of breast cancer and encourage them to perform BSE on a regular basis. Besides, the fact that our participants have low "barriers to performing BSE" scores suggests that they are more likely to develop protective behaviors.

There is a statistically significant difference in "benefits of BSE," "barriers to performing BSE" and confidence/self-efficacy subscale scores between participants who perform BSE and those who have never performed BSE before ($p<0.01$). Participants who perform BSE have higher perceptions of benefits of BSE and confidence/self-efficacy and lower perceptions of barriers to performing BSE than those who have never performed BSE before. According to HBM, women who are susceptible to breast cancer and consider it a serious condition perform BSE more often.[20]

The present study also had some limitations: information was gathered by means of a questionnaire only. The results of this study were dependent on the accuracy and truthfulness of the participants' responses. Furthermore, this study included only women from vocational school of a university, therefore, findings cannot be generalized to all women.

Conclusion

Students have high perceptions of benefits of BSE, moderate perceptions of confidence, susceptibility to breast cancer, seriousness and barriers to performing BSE, and low perceptions of health motivation. These results show that their beliefs have an effect on whether they perform BSE or not and that they have inadequate knowledge and practice of BSE. Their beliefs should be improved to ensure that they perform BSE on a regular basis. In other words, they should believe in the benefits of BSE to perform it, which can also be helpful in teaching them health promoting behaviors.

Students should be provided with training on BSE on a regular basis to raise their awareness and help them develop health promoting behaviors. Mobile apps and websites can also be used to that end.

Ethics Committee Approval

Ethics committee approval was received for this study from Kastamonu University (Approval number: 2019/02)

Informed Consent

Informed consent was obtained from the participants.

Author Contributions

Conception–K.K., C.K.G.; Design-K.K., C.K.G; Supervision-K.K., C.K.G.; Materials-C.K.G.; Data Collection and/or Processing-C.K.G.; Analysis and/or Interpretation-K.K., C.K.G.; Literature Review–K.K.; Writer-K.K., C.K.G.; Critical Review–K.K., C.K.G.

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Conflict of Interest

No conflict of interest was declared by the authors.

Financial Disclosure

No financial disclosure was declared by the authors.

Statements

Awareness raising training strategies can be planned by determining the beliefs and attitudes regarding breast cancer in young women.

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