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Original Article

Knowledge and attitudes of male nursing students towards male breast cancer and breast self-examination: An example from Turkish society

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Abstract

Aim: The aim of this study was to determine the knowledge and attitudes of male nursing students on male breast cancer and male breast self-examination.

Material and Methods: This descriptive was conducted with 490 students studying in the faculty of nursing at a university in Malatya, Turkey. The research was completed with 307 male students. Data were collected using a participant identification form and questionnaire form which was developed by the researchers. The results were expressed as number, percentage, mean and standard deviation.

Results: It has been determined that 83.4% of the students know that breast cancer can be seen in males, 72% and 67% were previously informed about male breast cancer and breast self-examination, respectively. In addition, it was found that 83.7% of the students have never performed breast self-examination, 82.1% know that breast cancer is rare in males and 88.3% know that early diagnosis of breast cancer is of important. 27.4% of the students stated that male breast cancer does not consider going to the doctor because it is a rare disease. 33.2 % also stated that they regard breast self-examination as a boring process.

Conclusion: It was determined that male nursing students have substantial knowledge about male breast cancer, more than half of them answered the questions about the literature on this subject correctly, but their attitude toward breast self-examination should be developed.

Keywords: Male breast cancer; male nursing students; nursing; breast self-examination; attitude

INTRODUCTION

Male breast cancer (MBC) is a rare disease that accounts for about 1% or less of all breast cancers (1, 2). Its annual prevalence in Europe is less than 1 % of all patients with breast cancer. This rate is above 6% in Central African countries. According to the International Association of Cancer Registries Turkey data, 0.37% of all cancer types among males are breast cancer (3). In recent years, the incidence of MBC has increased (4). It is stated that the number of MBC cases worldwide increased from 8.5 thousand in 1990 to 23.1 thousand in 2017 (5). Although the increase in incidence, it is known that because the possibility of breast cancer is overlooked among males, the diagnosis is made at advanced ages and late stages (6, 7). In addition, this type of cancer is still relatively unknown to both the community and the health and social care professionals (4).

Male breast cancer requires more aggressive treatment when diagnosed late and generally has a worse prognosis than those diagnosed early. There are no standard clinical practice recommendations for breast cancer screening in men. Diagnostic procedures, such as clinical breast examination (BSE), conventional or digital mammography, ultrasound, and needle or surgical biopsy, are also essentially the same for both sexes (8). In a study, it was stated that information about MBC was obtained from retrospective studies and treatment recommendations were obtained from studies on female breast cancer (3). Indeed, the literature review has shown that breast cancer is more emphasized in women and that studies are being conducted on this area (9-12). Given all these considerations, MBC appears to be an area that needs to be investigated.

According to a research, it was stated that if men knew

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they were at risk of developing breast cancer, they could learn their signs and symptoms, perform routine BSEs, and be more likely to seek care without delay if symptoms ocur (8). In Turkey and traditional societies, where there is a taboo, in which the breast is considered as an organ belonging only to women, most cases of MBC are concealed. Therefore, it is important for male nursing students to be educated about MBC. Thus, male nursing students will be able to provide more accurate guidance on MBC to men in the community and contribute to the early detection of cases.

In light of this information, this study was conducted to determine the knowledge and attitudes of male nursing students towards MBC and BSE. It is expected that this study is important in terms of contributing to the literature and especially to the nursing literature.

MATERIAL and METHODS

Design

This study was conducted as a descriptive study to determine the knowledge and attitudes of male nursing students on MBC and BSE.

Participants

This descriptive was conducted with male students studying in the faculty of nursing at a university in Malatya, Turkey. Approximately 290 students are enrolled in the nursing faculty every year. About 59% of these students are female and 41% are male. The population of the study consisted of a total of 490 male students who were receiving their education in their 1st, 2nd, 3rd and 4th years at the school of nursing. No sample selection method was used in the study. 490 male students who constitute the universe were tried to be reached, and were completed with 307 students due to the students who did not want to participate in the study and used the right to absenteeism.

Development of the Questionnaire

A participant identification form and a questionnaire form developed by the researchers were used to collect the data (2,3,4). The developed questionnaire form consists of three parts. The first part of the form consists of a total of 15 questions consisting of six questions that determine the socio-demographic characteristics of the students and nine questions that question knowledge sources and attitudes about MBC and BSE. The second part of the form consists of 12 items evaluating MBC knowledge, and participants can choose from these options: "right", "wrong" and "no idea" for each item. The third part of the form consists of 5 items evaluate the knowledge about BSE and 7 items that evaluate attitudes, and participants can choose from these options: "I fully agree", "I agree", "I am undecided", "I do not agree", "I strongly disagree". The reliability of the questionnaire form was calculated using Cronbach's alpha. Cronbach's alpha value was 0.75. The characteristics of the sample such as age, class, income level and knowledge level may have affected this result.

Data Collection

Data were collected from students via a questionnaire from during the 5 days of the week outside of class hours between March 2017 and May 2017. The filling of the questionnaire took an average of 10 minutes per student.

Data Analysis

The research data were coded using SPSS version 22 package software and evaluated on the computer. Using the literature, researchers prepared questions that evaluate information about MBC. The students were asked to mark any of the "right", "wrong" or "I have no idea" options to the prepared questions. According to the answers, MBC knowledge levels of the students were evaluated. In order to evaluate BSE and knowledge and attitudes, questions were prepared according to the literature. According to the answers of "I agree" and "I don't agree" to these questions, BSE knowledge and attitudes of the students were evaluated. The results were expressed as number, percentage, mean and standard deviation.

Ethical Considerations

A written permission was obtained from the Faculty of Nursing before starting the research. The students, who participated in the research, were informed about the research before collecting the research data and gave verbal consent after providing the information that the information given will be kept confidential and will only be used for research, that collected data will be used for scientific purposes only and that they can be withdrawn from the study at any time.

RESULTS

Participants' characteristics

Sociodemographic characteristics of students are given in Table 1. Of the students, 28.3% are in the second class, 49.8% are Anatolian High School graduates, 35.2% are residing in a city, 83.7% have moderate income status and 93.8% have no breast cancer in the family. The mean age was 21.24 ± 2.11 (Table 1).

Participants' knowledge and information sources

The examination of knowledge and information resources about MBC and BSE among students showed that 83.4% of the students know that breast cancer can be seen in males, 72% had previously received information about breast cancer and 67.8% have already received information about BSE (Table 2).

Assessment of participants' rate of BSE

The assessment of the rate of BSE practice among students showed that 83.7% of the students don't practice BSE, 3.3% of those who practice BSE perform once a month and 26.4% of those who don't practice BSE think that BSE is not necessary for the males (Table 3).

Table 1. This table title should be changed to "sociodemographic characteristics of students (n = 307)"

Groups	Between groups
Descriptive Characteristics	Frequency (%)
Class	
1st class	84 (27.4)
2nd class	87 (28.3)
3rd class	82 (26.7)
4h class	54 (17.6)
High School	
Regular High School	131 (42.7)
Vocational High School	18 (5.9)
Anatolian High School	153 (49.8)
Science High School	5 (1.6)
Place of Residence	
Village-Town	85 (27.7)
District	65 (21.2)
City	108 (35.2)
Metropolis	49 (16.0)
Socioeconomic Level	
Low	40 (13.0)
Moderate	257 (83.7)
High	10 (3.3)
Individual with Breast Cancer in the Family	
Mother	6 (2.0)
Sister	1 (0.3)
Maternal aunt	4 (1.3)
Paternal aunt	8 (2.6)
None	288 (93.8)
Age (Mean ± SD)	21.24±2.11

Table 2. Knowledge and information sources about MBC and BSE among students (n = 307)

Variables	Frequency	%
Does breast cancer occur in men?		
Yes	256	83.4
No	51	16.6
Have you ever been informed about male breast cancer?		
Yes	221	72
No	86	28
Who is / what is the source of the information you have about male breast cancer?		
Health care professionals	142	46.2
TV/Radio	14	4.6
Magazine/Newspaper	5	1.6
School	60	19.5
Have you ever been informed about breast self examination?		
Yes	208	67.8
No	99	32.2
Who is / what is the source of the information you have about breast self examination?		
Health care professionals	133	43.3
TV/Radio	8	2.6
Magazine/Newspaper	7	2.3
School	60	19.5
Who / what should be the source of information about male breast cancer and breast self-examination?		
Health care professionals	282	91.9
TV/Radio	21	6.8
Magazine/Newspaper	4	1.3
School	0	0

Table 3. The frequency of BSE among students and the reason for not doing (n = 307)

Variables	Frequency	%
Status of performing BSE		
Yes	50	16.3
No	257	83.7
Frequency of BSE		
During each shower	12	3.9
Once a month	10	3.3
Once every 3 months	7	2.3
Once every 6 months	6	2
Once a year	15	4.9
Reason for not doing BSE		
Do not know how to do it	55	17.9
Thinking that it is not necessary for males	186	26.4
Having medical examinations on a regular basis	16	5.2

Participants' responses to literature information on MBC and BSE

When the participants' responses to the literature information about MBC and BSE were examined, it was determined that 82.1% of the students know that breast cancer is rare in males, 81.1% know that those with a family history of breast cancer are in the risk group, 88.3% know that early diagnosis in MBC is important, 53.7% know that men who use estrogen hormone are at risk group and 52.4% know that MBC are diagnosed in advanced stages (Table 4).

Participants' knowledge and attitudes on MBC and BSE

The knowledge of the students on MBC and BSE are shown in Table 5. It was determined that, 23.8% of the students don't participate in the opinion of "I don't have enough knowledge about MBC", 49.5% fully agree with the opinion of "MBC is a disease that can cause death", and 34.5% didn't participate in the opinion of "BSE is a time consuming process".

The attitudes of the students on MBC and BSE are shown in Table 5. It was determined that 27.4% of the students don't participate in the opinion of "I don't consider going to a doctor because MBC is a rare disease", 43.3% agree with the opinion of "I can have a mammogram if I need to", 33.2% fully agree with the opinion of "BSE is a tedious process", 35.8% fully agree with the opinion of "I also teach my relatives after learning BSE", and 30.6% fully agree with the opinion of "I practice regularly after learning BSE".

Table 4. Students' responses to literature information on MBC and BSE (n=307)

	Right		False		No idea	
	Frequency	%	Frequency	%	Frequency	%
1. Breast cancer is rare in males.	252	82.1	17	5.5	38	12.4
2. A painless mass in the breast may be a tumor.	249	81.1	16	5.2	42	13.7
3. Those with a family history of breast cancer are at risk.	251	81.1	19	6.2	37	12.1
4. BSE gives an idea about changes in the breast.	229	74.6	24	7.8	54	17.6
5. Early diagnosis in male breast cancer is important for treatment.	271	88.3	20	6.5	16	5.2
6. Men who use estrogen hormone are at risk.	165	53.7	37	12.1	105	34.2
7. The rate of males with breast cancer is lower than 1% of all breast cancer patients.	147	47.9	37	12.1	123	40.1
8. Liver damage and alcohol use are risk factors for breast cancer.	148	48.2	34	11.1	125	40.7
9. Radiation therapy of the breast is a risk factor for breast cancer in men.	205	66.8	24	7.8	78	25.4
10. Breast cancer is often diagnosed in advanced stages in man.	161	52.4	43	14.0	103	33.6

Table 5. Knowledge and attitudes of students about male breast cancer and BSE (n= 307)

Informational statements	Totally Agree		Agree		Undecided		Do not agree		Strongly Disagree	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
1. I don't have enough knowledge about male breast cancer.	59	19.2	55	17.9	73	23.8	**73**	23.8	47	15.3
2. Male breast cancer is a disease that can cause death.	**152**	49.5	81	26.4	52	16.9	17	5.5	5	1.6
3. BSE is important for early detection of male breast cancer.	**226**	73.6	58	18.9	18	5.9	0	0	5	1.6
4. Mammography is important for the diagnosis of breast cancer.	99	32.2	**115**	37.5	76	24.8	7	2.3	10	3.3
5. BSE is a time consuming process.	45	14.7	43	14.0	77	25.1	**106**	34.5	36	11.7
Attitude statements										
6. I don't consider going to a doctor because male breast cancer is a rare disease.	53	17.3	64	20.8	59	19.2	84	27.4	47	15.3
7. I could have been worried about breast cancer if I had a family history of breast cancer.	93	30.3	97	31.6	47	15.3	31	10.1	39	12.7
8. I can have a mammogram if I need to.	86	28.0	**133**	43.3	61	19.9	19	6.2	8	2.6
9. BSE is a tedious process.	41	13.6	63	20.5	70	22.8	**102**	33.2	31	10.1
10. I wonder if I have breast cancer while doing the BSE.	59	19.2	84	27.4	99	32.2	45	14.7	20	6.5
11. I also teach my relatives after learning BSE.	110	35.8	**112**	36.5	65	21.2	17	5.5	3	1.0
12. I practice regularly after learning BSE.	**94**	30.6	89	29.0	78	25.4	36	11.7	10	3.3

DISCUSSION

Because breast cancer in men is uncommon or people often assume that men can't get the disease, MBC has been ignored by the lay public, the media, and many health care professionals (8). In the light of this information, it is seen that it is important to determine the knowledge and attitudes of male nursing students towards MBC and BSE. The results of this study aiming to determine the knowledge and attitudes of male nursing students towards MBC and BSE have been discussed in the context of the relevant literature.

The evaluation of knowledge and information sources about MBC and BSE among students included in the study showed that the vast majority of students said "yes" for the question of "Does breast cancer occur in men?", and also, the vast majority said they had already been informed about MBC (Table 2). Likewise, in a study conducted by Kurtuncu et al. investigating cancer awareness among university students, it was found that most of the students answered yes to the question of "Can breast cancer develop in men?" (13). The knowledge of students on this subject was thought to be associated with studying in a section about health. It can be said that this information is important in terms of improving the awareness of society.

It has been reported in the literature that health care professionals constitutes approximately 50% of the sources of information about breast cancer, followed by the internet and media resources (14). In this study, it was determined that nearly half of the students stated that health care professional are the source of information about breast cancer. However, unlike the literature, in this study, it was reported that health care professional were followed by school lessons and media sources (Table 2). This difference has been attributed to differences in individual preferences regarding the use of internet and media resources.

In this study, it was determined that more than half of the students received information about BSE (Table 2). In a study conducted to examine the affective and cognitive triggers of testicular or BSE behaviors, it was reported that

the students have a good level of knowledge about BSE, which is similar to the result of our research (15). This result can be interpreted as it may have been achieved by obtaining information from healthcare professionals during books, internet, media resources, school lessons and hospital practices.

In another study evaluating the perceptions and opinions of breast cancer and the BSE among males, most of the participants stated that they received information about the BSE from media sources (4). This result, contradicting the results of our research, is attributed to the selection of the participants from the students in different departments. The literature review did not find any information on the information source that should be preferred about BSE. In this regard, it can be said that this study will shed light on future studies.

In this study, it was found that the majority of students did not perform BSE because they thought it was not necessary for men (Table 3). It is reported in a study that the majority of males believe that BSE is not important due to the thought that the likelihood of breast cancer in men is lower than in women (4). The results of this research support the results of our study. Literature review did not show data on the frequency of BSE practice in males (15, 16). In this respect, it can be said that this research contributes to the literature in terms of the frequency of BSE in men and that more studies on this subject should be carried out.

It was determined that the majority of the male students in the study know that MBC is a rare problem among men and that most of them know that those who have a family history of breast cancer are in the risk group (Table 4). In a study by Al Dasoqi and colleagues, most of the participants noted that breast cancer was seen only in women (11). In a study conducted by De Bocanegra and colleagues, most of the participants stated that genetic factors constitute the causes of breast cancer (17). The results of the above studys are similar to the results of our study. It can be said that increasing the awareness of MBC in male nursing students is important for increasing the awareness of the society.

In our study, it was found that the vast majority of male students know that early diagnosis of MBC is important (Table 4). In a study conducted by Amoudi and Abduljabbar, it was reported that almost two-thirds of men stated that early detection of breast cancer increases the likelihood of recovery and it is a treatable disease (14). Although the results of that study were similar to the results of our study, this difference in participation rate is thought to arise from the differences in the sample group such as age, education, place of residence and working status.

In our study, we have found that more than half of the male students know that the men who were using the estrogen hormone are in the risk group and more than half know that the MBC is diagnosed in advanced stages (Table 4). No similar research has been found in the literature that explores the above issues. This finding shows that students' MBC awareness is high. In this respect, this finding coincides with the other findings we obtained regarding the level of knowledge of students about MBC.

In this study, it was determined that almost a quarter of the students do not participate in the opinion of "I don't have enough knowledge about MBC", whereas that the majority is inclined to agree with the opinion of "male breast cancer is a disease that can cause death" (Table 5). In a study by Al-Naggar et al. the majority of participants indicated that they needed more information about MBC (4). In another study by Al-Amoudi et al., half of the participants have defined breast cancer as fatal (18). The results of both studies are similar to those of our study. It can be said that more studies on MBC are needed to raise awareness among men.

In our study, it was determined that nearly half of the participants did not participate in the opinion of "BSE is a time consuming operation". In addition, nearly half of the participants did not participate in the opinion of "BSE is a tedious process" (Table 5). No similar research has been found in the literature that explores the above issues.

In this study, it was determined that less than one-third of the students did not participate in the opinion of "I don't consider going to a doctor because MBC is a rare disease" (Table 5). In a study by Al-Amoudi et al., 19% of participants stated that breast cancer may also be seen in males (18). In another study carried out by Al-Amoudi, about one-third of the participants stated that they believe that the examination did not prevent the disease (14). The results of the above study are similar to the results of our study. Starting from male nursing students, it can be said that more studies are needed to increase the awareness of all men in the society about MBC and to improve their attitude to go to the doctor.

Nearly half of the participants were found to have been participate in the opinion of "I can have a mammogram if I need to" (Table 5). In a study on Mexican immigrants by De Bocanegra et al., the question of "Do you believe that mammograms can detect breast cancer?" was answered by the majority of participants as "Breast cancer screening may reduce risks" (17). The results of the above study are comparable to the results of our study. With this result, it can be interpreted that the thoughts of male students about having mammography are positive and can be developed.

In our study, it was found that the majority of participants participated in the opinion of "I also teach my relatives after learning BSE" and more than half of the students participated in the opinion of "I practice regularly after learning BSE" (Table 5). In a study conducted by Brown-Kramer and Kiviniemi, where almost half of the participants were male, an expert advised participants to perform BSE and the participants believed that they should perform BSE (15). In a study by Al-Naggar et al. most of the participants stated that they would encourage family members to do

BSE (4). The results of the above study are comparable to the results of our study. It can be said that more studies should be conducted and trainings should be given on the subject in order to develop a positive attitude towards BSE behavior.

CONCLUSION

It was determined that male nursing students have substantial knowledge about MBC and BSE, more than half of them answered the questions about the literature on this subject correctly, but their attitude toward BSE was insufficient. Therefore, special attention should be paid to educate male students about attitudes towards MBC. Male nursing students are important individuals who will provide accurate information to their families and society on this subject. Moreover, raising the knowledge level of male nursing students about MBC and BSE creates individual awareness. Nursing students, who will be the future healthcare professionals, will be the individuals who most frequently encounter individuals in the community, so they can inform male individuals in the community about MBC. For this reason, it is important to realize knowledge and attitude awareness about MBC individually.

In addition, in order to increase the awareness of males in the community about MBC and BSE,

1. Further studies should be planned in different cities with larger sample volumes, dealing with MBC and BSE. Thus, situations in different sample groups can be observed and the subject may be more remarkable.
2. In addition, visual media that emphasize the importance of MBC and BSE should be designed.
3. Nursing students, who are future healthcare professionals, should be given training on MBC during their undergraduate education.
4. Correct resources should be developed to get accurate information about MBC.
5. Male individuals in the community should be informed about MBC symptoms, early diagnosis and treatment methods through healthcare professionals.

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