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Breast and Cervical Cancer Related Practices of Female Health Care Workers at a Tertiary Hospital in Gaziantep, Turkey

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ABSTRACT

Breast and cervical cancer are common in women and they are largely preventable. This study was performed to determine the knowledge and practices of female health care workers (FHW) about breast and cervical cancers in a university hospital. This cross sectional study was conducted Gaziantep University Hospital. The data was collected with a questionnaire consisting of 21 questions. Chi-square and logistic regression analyses were used for statistical analyses. A total 412 women were included in the study. The mean age of the participants was 31.2 ± 7.7 years and 21.4% were doctors, 32.5% were nurses and 46.1% were working in other fields.It was found that 25.5% of the participants did not do breast self-examination (BSE), while 42.2% of them did it irregularly and 32.3% of them did it monthly. "Forgetting, neglect, and not having enough time" (47.1%) were cited as the most frequent reasons for not doing the BSE. 19.7% of the women had clinical breast examinations, 22.1% had breast ultrasound and 8.3% had mammography at least once. The rate of patients who had a Pap smear test was 22.8%. "Finding it unnecessary" (47.6%) was cited as the most significant reason for not having a mammography or a Pap smear test. The percentage of those who had heard about the HPV vaccine was 64.1%, while the rate of those who had had the HPV vaccine was 5.1%. It was concluded that the knowledge and practices on breast and cervical cancer screening methods among FHW need to be improved.

Keywords: Breast cancer, cervical cancer, cancer screening, health care workers

Introduction

Cancer is a significant global public health issue due to the increased burden of the disease and the mortality rate. According to data from Globocan, there were about 8.2 million estimated cancer deaths and 14.1 million new cancer cases worldwide in 2012 (1).

Breast cancer is the most common type of cancer amongst women worldwide and the most frequent cause of death due to cancer; it constitutes 25% of all cancer cases and 15% of cancer-related deaths. (1) In Turkey, breast cancer is the most common type of cancer amongst women, constituting 24.7% of all women's cancers (2). Breast cancer risk factors include the female gender, estrogen, aging, gene mutations, family history, early menarche, late menopause, late gestational age with first pregnancy, alcohol consumption and smoking, and excessive fat consumption (3).

Cervical cancer was the 4th most common type of cancer and the 4th most common cause of death amongst women in 2018, of which there were an estimated 570,000 cases and 311,000 deaths (4). In Turkey, cervical cancer ranks 9th among women's cancers and constitutes 2.5% of all women's cancers (2).

Cancer screenings are effective in reducing the burden of mortality caused by cancer by allowing breast and cervical cancer to be diagnosed at an early stage. Breast cancer screening methods include clinical breast examination (CBE), breast self-examination (BSE), and mammography (5). Despite controversy, BSE has a significant role in early diagnosis of breast cancer in resource-constraint settings where routine CBE and mammography may not be possible (6).

Cervical cancer can be effectively controlled by primary and secondary protection methods such as screening and the prophylactic HPV (Human PapillomaVirus) vaccine. Since Pap smear tests have begun to be offered as part of routine screenings, there has been a significant decrease in cervical cancer deaths in developed countries over the past 40 years (7).

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Cancer screening programs vary from country to country. Community based cancer screening standards have been determined for 3 cancers (breast, cervical, colorectal) in Turkey. Community based screenings are executed by Cancer Early Diagnosis, Screening and Training Centers (KETEM) and Family Health Centers. According to the latest data, there are 197 KETEM's in the country. However, data have shown that screening practices are under-used among Turkish women. The current containment rate in breast cancer screening programs is approximately % 30-35. It has been reported that only 20% of targeted women are enrolled in the cervical cancer screening program (8).

The National Cancer Screening program introduced in Turkey recommends BSE once a month for women older than 20 and CBE once every two years. It also recommends CBE once a year for women older than 40 and mammography once every two years. Pap smear or HPV test are suggested once in every five years among 30 and 65 years. The HPV vaccine is not included within the National Immunization Program in Turkey (9).

FHW are responsible for their own health as well as public health. They are role models for other women in society. FHW can bring about a meaningful change in the general approach of their female patients, regarding screening practices and positively influence their attitudes and beliefs. Therefore, it is important that the FHW themselves have sufficient knowledge and positive attitudes (10). This study was performed in order to establish practices and knowledge of female health personnel working at a university hospital about cervical and breast cancers.

Materials and Methods

This cross sectional study was conducted between September 2018 and February 2019 at the Gaziantep University Medical Faculty Training and Research Hospital. The hospital where the study is conducted has a total of 1023 FHW, including 186 doctors, 464 nurses and 373 staff working in other fields. It is sampling size, was calculated according to the sample size computation technique where population was known. For this study, the sample size was 50% frequency (expected frequency to reach maximum sample size was selected), 95% confidence interval was calculated based on 4% error and the result was calculated as 379. Considering 10% of the students' non-response rate, the number of students planned to be reached is 420. A systematic sampling technique was used within each department. We prospered in reaching all of selected participants.

Data were collected by the researcher through face to face interviews. There were no exclusion criteria and participation was voluntary.

The questionnaire, which was prepared by the researcher following a literature review (11-14), consisted of 21 questions. In the first section of the questionnaire, questions about age, position, number of children, family history, and marital status of cancer were asked. In the second section of the questionnaire, questions about BSE, CBE, breast ultrasound, mammography, frequency of going for a gynecological examination, Pap smear test and the HPV vaccine were asked.

The relationship between two independent variables at the categorical measurement level were tested with the chi-square test. In addition, logistic regression was applied to model the binary dependent variables with independent variables. The SPSS 24.0 software package was used for statistical analyses, and $p < 0.05$ was considered statistically significant.

Before initiating this study, approval was obtained from the hospital where the study was conducted and from the Ethics Committee of Gaziantep University, Faculty of Medicine (Decision no: 2018/238). All participants were informed by the researcher about the study, and written informed consent was obtained prior to participation.

Results

The survey was completed by 420 FHW however eight surveys were excluded from analysis due to missing data. The 412 surveys included in the analysis were collected from 88 (21.4%) physicians, 134 (32.5%) nurses and 190 (46.1%) other FHW (secretaries, technicians, pharmacists, laboratory workers, cleaning staff, other staff).

The age of the participants ranged between 20 to 60 and the mean age was 31.2 ± 7.7 years. 57.5% (237) of the women were married and 54.4% (224) had at least one child. 25.5% of the participants (105) had a family history of cancer. (Table1)

Forty four (10.7%) of the women in the study did not know how to perform BSE. It was found that 25.5% (105) of the participants had never performed BSE, 42.2% (174) performed it irregularly, and 32.3% (133) performed it monthly. "Forgetting, neglect, and not having

Table 1. Associations between Some Independent Variables and Performing BSE

Independent variables		n	Performing BSE number	%	χ2 p	Logistic Analysis OR(%95 CI)
Age groups	<40	350	255	72,9	0,067	1
	>=40	62	52	83,9		1,39 (0,65 3,01)
Mariatal status	Unmarried	153	98	64,1	0,001	1
	Married	237	189	79,7		1,98 (1,21 3,23)
	Widow-divorced	22	20	90,9		5,82 (1,25 27,14)
Profession	Doctor	88	71	80,7	0,001	1
	Nurse	134	113	84,3		1,18 (0,57 2,43)
	Other	190	123	64,7		0,42 (0,22 0,77)
Cancer in the family	No	307	231	75,2	0,562	1
	Yes	105	76	72,4		0,83 (0,49 1,41)

Table 2. Associations between Some Independent Variables and Performing Mammography

Independent variables		n	Mammography number	%	χ2 p	Logistic Analysis OR(%95 CI)
Age groups	<40	350	12	3,4	0,001	1
	>=40	62	22	35,5		10,37 (4,5823,49)
Mariatal status	Unmarried	153	2	1,3	0,001	1
	Married	237	28	11,8		4,77 (1,0621,48)
	Widow-divorced	22	4	18,2		4,72 (0,6832,57)
Profession	Doctor	88	5	5,7	0,564	1
	Nurse	134	13	9,7		1,56 (0,465,24)
	Other	190	13	8,4		1,36 (0,444,34)
Cancer in the family	No	307	20	6,5	0,028	1
	Yes	105	14	13,3		1,70 (0,753,89)

enough time" (47.1%) were cited as the most frequent reasons for not doing the examination. There was a statistically significant relationship between the BSE, marital status and position variables ($p < 0.05$). The rate of BSE (90.9%) among widow-divorcedwomen was higher than that of women of other marital statuses. The BSE rate of nurses (84.3%) was found to be higher than that of other women (Table 1). 19.7% of the participants had had a CBE, 22.1% had had a breast ultrasound at least once, and 8.3% had had a mammography at least once. "Finding it unnecessary" (38.3%) was cited as the most common reason for not having a mammography. 45.9% of women knew that mammography were needed after 40 years of age. As shown in Table 2, the rate of mammography was significantly higher among widow-divorced women with a family history of cancer who were 40 years of age or older.

The rate of those having had at least one Pap smear was found to be 22.8%. 54.6% of the respondents reported having gone for a gynecological examination when they had complaints. As shown in the table 3 below, the rate of Pap smear tests was statistically significant among married women aged 40 years and over ($p=0.001$). 33.3% of the women did notknow how frequently they should have a Pap smear test. The rate of those who had a regular Pap smear test was 10.2%. "Finding it unnecessary due to a lack of any complaints" (47.6%) was cited as the most common cause for not having a Pap smear test. Even though the rate of those who had heard about the HPV vaccine was 64.1%, the rate of those who had had the HPV vaccine was 5.1%. 71.4% of the participants answered yes to the question of whether "they and their children would have the HPV vaccine." As seen in Table 4, there was no statistically significant relationship

Table 2. Associations between Some Independent Variables and Having Pap Smear

Independent variables		n	Having Pap Smear	%	χ^2	Logistic Analysis OR(%95 CI)
Age groups	<40	350	61	17,4	0,001	1
	>=40	62	33	53,2		3,60 (1,936,70)
Mariatal status	Unmarried	153	5	3,3	0,001	1
	Married	237	83	35,0		12,75(4,9632,77)
	Widow-divorced	22	6	27,3		5,83 (1,4822,92)
Profession	Doctor	88	20	22,7	0,813	1
	Nurse	134	33	24,6		0,77 (0,371,58)
	Other	190	41	21,6		0,80 (0,411,59)
Cancer in the family	No	307	63	20,5	0,562	1
	Yes	105	31	29,5		1,24 (0,702,18)

Table 4. Associations between Some Independent Variables and Having HPV vaccine

Independent variables		n	HPV vaccine	%	χ^2	Logistic Analysis OR(%95 CI)
Age groups	<40	350	17	4,9	0,599	1
	>=40	62	4	6,5		1,03 (0,31 3,42)
Mariatal status	Unmarried	153	6	3,9	0,539	1
	Married	237	13	5,5		1,29 (0,46 3,62)
	Widow-divorced	22	2	9,1		2,61 (0,4415,43)
Profession	Doctor	88	3	3,4	0,691	1
	Nurse	134	8	6,0		1,95 (0,487,82)
	Other	190	10	5,3		1,59 (0,435,98)
Cancer in the family	No	307	14	6,7	0,562	1
	Yes	105	7	4,6		1,52 (0,593,94)

among position, the age groups, family history of cancer and marital status.

Discussion

Cancer is the second leading cause of death in the world after cardiovascular diseases (15). This study found that 25.5% of the participants had relatives or family members who had been cancer patients. Other studies conducted in Turkey reported this rate to be 13.1% and 33.8% (12, 16). This may be related to the degree of closeness of individuals who had had cancer.

BSE are recommended as a valuable technique for early diagnosis of breast cancer (17). In this study, it was found that 74.5% of the participants performed BSE and 32.3% (133) performed it monthly. Studies conducted with FHW in Turkey puts the rate of those doing BSE at 75.6% and 79% while the rate of those doing BSE each month on a regular basis is reported to be 53% and 22% (18, 19). In a study conducted in Iran, the rate of those doing BSE was determined to be 39.5% (20). The findings of this study demonstrated similarities with other studies. According to the findings of our study, women working in the health sector in general are performing BSE, but only a few perform them regularly. In this study, the rate of BSE was found higher in nurses and widow-divorced women than in other women. This can be attributed to the tendency of nurses to take preventive medical practice and to take more time for widow-divorced to take care of themselves. In our study, and in similar studies, "forgetting, neglect, and not having enough time" were cited as the most common reasons for not doing BSE (12, 21, 22).

Mammography and CBE have been shown to be effective in reducing deaths from breast cancer, which is the leading cause of death among women worldwide (17). In this study, 19.7% of women had CBE and 8.3% had had a mammography. In

our study, the rate of mammography was found to be significantly higher in widow-divorced women over 40 years of age who had a family history of cancer. Similar to our study, a study conducted by Oran et al. found a significant relationship between a predilection for mammography and marital status, age, and family history of cancer (16). In a study conducted with nurses in India, the CBE rate was 32% and mammography was 7%.(23) In a study conducted in Sri Lanka, the rate of women who had CBE and mammography within the past year was 19.2% and 3.6%, respectively (24). In a study conducted by Akpinar et al. in Turkey, the rate of CBE was 24.8% and mammography was 10.1%. (21) The results of our study are similar to those of these studies and the fact that most of the participants were under the age of 40 is related to the low rates of mammography. In our study, women aged 40 and over made up 35.5% of study.

Cervical cancer can be effectively controlled by screening methods and the prophylactic HPV vaccine. Most of the women in this study (54.6%) had a gynecological examination when they had a medical complaint and the rate of those who had had at least one Pap smear test was 22.8%. This rate was significantly higher in married women and women over 40 years of age, 35% and 53.2%, respectively. This may be due to the fact that FHW tend to undergo cervical cancer screenings more frequently due to an increase in gynecological complaints after 40 years of age. The fact that "Finding it unnecessary due to lack of any complaints" (47.6%) was cited as the most common cause for not having a Pap smear test also supports this finding. In studies conducted with nurses, Pap smear test rates were reported by Nilaweera et al. to be 26.6% in Sri Lanka; while they were reported to be 62.4% in Taiwan by Su et al., and 17% in India by Shekhar et al. (24-26) As for studies conducted in Turkey, this rate was 13.9% in a study by Kabacaoglu et al., and 23.7% in a study by Ozdemir and Bilgili (12,27). These results are consistent with the results of this study.

HPV vaccine have been developed for the primary prevention of the virus after it was found that the most significant risk factor for the development of cervical cancer was sexually transmitted HPV. In many countries, HPV vaccination is recommended for 11 or 12-year-old girls, while in other countries it is recommended for both genders within their national vaccination program (28). In a study conducted by Gol et al. (29), 54.5% of the nurses were aware of the HPV vaccine and 1.8% of the nurses had had the vaccine. In another study, it was reported that 69.5% of medical students knew about the HPV vaccine and only 13.9% of them had had the vaccine (30). In this study, it was found that 64% of FHW had heard about the HPV vaccine and only 5.1% of them had been vaccinated. However, the fact that 71.4% of the participants answered yes to the question of whether "they and their children would have the HPV vaccine", shows a positive attitude towards the HPV vaccination. In a study by Ozcam et al. (19) it was find that 72% of the participants had heard of the HPV vaccine and 6.5% had had the HPV vaccination, similar to the findings of this study. The fact that the HPV vaccine is not yet included within the Turkish National Immunization Program is thought to have contributed to low levels of HPV vaccination. In this study, there was no statistically significant relationship among position, marital status, the age groups and family history of cancer.

This study has a few limitations. One of the limitations of this study is the lack of studies regarding the construct validity of the data collection instruments. Our results are based on self- reports from the FWH and we cannot assess the accuracy of these reports. Another limitation of our study is that it was conducted at one center. Therefore results cannot be generalized.

It was concluded that FHW who need to be a positive role model for other women in the community do not pay enough attention to screening programs for cervical and breast cancers. In-service training programs should be planned to ensure FHW care more about their health, increase their knowledge of cancer screening tests and encourage positive behavioral changes with regards to health.

References

1. Torre LA, Bray F, Siegel RL, Ferlay J, Lortet-Tieulent J, Jemal A. Global cancer statistics, 2012. CA Cancer J Clin 2015; 65: 87-108.
2. Kara F. İlter H. Keskinkılıç B. Türkyılmaz M, Hacıkamiloğlu E, Deniz EB, et al. Republic of Turkey.Health Ministery Turkey Public Health Institution. Cancer Statistics 2015. Ankara; 2018; 21.
3. Sun YS, Zhao Z, Yang ZN, Xu F, Lu HJ, Zhu ZY, et al. Risk Factors and Preventions of Breast Cancer. Int J BiolSci 2017; 13: 1387-1397.

4. Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality World widefor 36 cancers in 185 countries. CA Cancer J Clin 2018; 68: 394-424.
5. Ifediora CO, Azuike EC. Tackling breast cancer in developing countries: insights from the knowledge, attitudes and practices on breast cancer and its prevention among Nigerian teenagers in secondary schools. J Prev Med Hyg 2018; 59: 282-300.
6. 6.Sama CB, Dzekem B, Kehbila J, Ekabe CJ, Vofo B, Abua NL, et al. Awareness of breast cancer and breast self-examination among female undergraduate students in a higher teachers training college in Cameroon. Pan Afr Med J 2017; 28: 91.
7. Abudukadeer A, Azam S, Mutailipu AZ, Qun L, Guilin G, Mijiti S. Knowledge and attitude of Uyghur women in Xinjiang province of China related to the prevention and early detection of cervical cancer. World J Surg Oncol 2015; 13: 110.
8. Keskinkılıc B, Gültekin M., Karaca AS, Öztürk C, Boztaş G, Zayıfoğlu Karaca M, et.al. editors. Turkey cancer control programme. The Ministry of Health of Turkey, Ankara.2016. p.39-47. https://www.iccp-portal.org/system/files/plans/Turkiye_Kanser_Kontrol_Program_English.pdf (Accessed 01.02.2020)
9. The Republic of Turkish Ministry of Health.General Directorate of Public Health.Department of Cancer.Cancer Screening. https://hsgm.saglik.gov.tr/tr/kanser-taramalari (Accessibility date 12.01.2019)
10. Heena H, Durrani S, Riaz M, AlFayyad I, Tabasim R, Parvez G, et al. Knowledge, attitudes, and practices related to breast cancer screening among female health care professionals: a cross sectional study. BMC Womens Health 2019; 19: 122.
11. Karadag G, Gungormus Z, Surucu R, Savas E, BicerF. Awareness and practices regarding breast and cervical cancer among Turkish women in Gazientep. Asian Pac J Cancer Prev 2014; 15: 1093-1098.
12. Kabacaoglu M, Oral B, Balci E, Gunay O Breast and Cervical Cancer Related Practices of Female Doctors and Nurses Working at a University Hospital in Turkey. Asian Pac J Cancer Prev 2015; 16(14): 5869-5873.
13. Deniz S, Kurt B, Oguzoncul AF, Nazlican E, Akbaba M, Nayir T. Knowledge, attitudes and behaviours of women regarding breast and cervical cancer in Malatya, Turkey. PLoSOne 2017; 12: e0188571.
14. Ahmadipour H, Sheikhizade S. Breast and Cervical Cancer Screening in Women Referred to Urban Health care Centers in Kerman, Iran. Asian Pac J Cancer Prev 2016; 17: 143-147.
15. Forman D, Ferlay J. Theglobal and regional burden of cancer. In: Stewart BW, Wild CP (eds). IACR World Cancer Report 2014. Lyon, France: International Agency for Cancer Reports (IACR) Publications; 2014: 16-53.
16. Oran NT, Can HO, Senuzun F, Aylaz RD. Health promotion lifestyle and cancer screening behaviors: a survey among academician women. Asian Pac J Cancer Prev 2008; 9: 515-518.
17. Taleghani F, Kianpour M, Tabatabaiyan M. Barriers to Breast Self-examination among Iranian Women. Iran J Nurs Midwifery Res 2019; 24: 108-112.
18. Çakmak R. Güngör G. Kadın Saglık Çalışanlarında Kanser Tarama Davranışları. Türk Jinekolojik Onkoloji Dergisi 2017; 4: 25-32.
19. Ozçam H, Cimen G, Uzuncakmak C, Aydın S, Ozcan T, Boran B. Kadın Saglık Çalışanlarının Meme Kanseri, Serviks Kanseri ve Rutin Tarama Testlerini Yaptırmaya İlişkin Bilgi Tutum ve Davranışlarının Değerlendirilmesi. Istanbul Med J 2014; 15: 154-160.
20. Reisi M, Javadzade SH, Sharifirad G. Knowledge, attitudes, and practice of breast self-examination among female health workers in Isfahan, Iran. J Educ Health Promot 2013; 2: 46.
21. Akpınar YY, Baykan Z, Nacar M, Gün I, Cetinkaya F. Knowledge, Attitudeand Practice regarding screening of breast cancer among female health care professionals: a study from Turkey. Asian Pac J Cancer Prev 2011; 12: 3063-3068.
22. Chang PN, Krishnan M, Hong CY, Swah TS. Knowledge and Practice of Breast Cancer Screening Amongst Public Health Nurses in Singapore. Singapore Med J 2002; 43: 509-516.
23. Fotedar V, Seam RK, Gupta MK, Gupta M, Vats S, Verma S. Knowledge of Risk Factors and Early Detection Methods and Practices to wards Breast Cancer among Nurses in Indira Gandhi Medical College, Shimla, Himachal Pradesh, India. Asian Pac J Cancer Prev 2013; 14: 117-120.
24. Nilaweera RI, Perera S, Paranagama N, Anushyanthan AS. Knowledge and practices on breast and cervical cancer screening methods among female health care workers: a Sri Lankan experience. Asian Pac J Cancer Prev 2012; 13: 1193-1196.

25. Su SY, Chiou ST, Huang N, Huang CM, Chiang JH, Chien LY. Association between Pap smear screening and job stress in Taiwanese nurses. Eur J Oncol Nurs 2016; 20: 119-124.
26. Shekhar S, Sharma C, Thakur S, Raina N. Cervical cancer screening: knowledge, attitude and practices among nursing staff in a tertiary level teaching institution of rural India. Asian Pac J CancerPrev 2013; 14: 3641-3645.
27. Ozdemir O, Bilgili N. Knowledge and practices of nurses working in an education hospital on early diagnosis of breast and cervix cancers. TAF Prev Med Bull 2010; 9; 605-612.
28. Kim HW, Lee HY, Kim SE, Ahn HY, Kim YH, Lee YJ. Perceptions of nurses on human papilloma virus vaccinations in the Republic of Korea. PLoSOne 2019; 14: e0211475.
29. Gol I, Erkin O. Knowledge and practices of nurses on cervical cancer, HPV and HPV vaccine in Cankiri state hospital, Turkey. J Pak Med Assoc 2016; 66: 1621-1626.
30. Maharajan MK, Rajiah K, Fang Num KS, JinYong N. Knowledge of human papilloma virus infection, cervical cancer and willingness to pay for cervical cancer vaccination among ethnically diverse medical students in Malaysia. Asian Pac J Cancer Prev 2015; 16: 5733-5739.