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Screening Knowledge and Attitudes of Breast, Cervical, and Colon Cancer Among Female Nurses at an Urban University Hospital in the Mediterranean Region of Turkey

Akdeniz Bölgesinde bir Kent Hastanesinde Kadın Hemşirelerin Meme, Serviks ve Kolon Kanseri Taraması Hakkındaki Bilgileri ve Tutumları

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Öz

Giriş ve Amaç: Hemşireler kanser tarama testleri ve kanser erken tanısı konusunda kadınlara en doğru bilgiyi verebilecek niteliğe sahip sağlık çalışanlarıdır. Bu çalışma ile kadın hemşirelerin meme, serviks ve kolon kanseri tarama testleri konusundaki bilgi düzeylerinin ve tutumlarının araştırılması amaçlanmıştır.

Gereç ve Yöntem: Bir kesitsel çalışma olarak tasarlanan araştırma, Başkent Üniversitesi Adana Uygulama ve Araştırma Merkezinde görev yapan 171 kadın hemşire ile yürütülmüştür. Veriler araştırmacılar tarafından literatür verilerine dayanarak oluşturulan bir anket formunun katılımcılar tarafından doldurulması ile toplanmıştır. Verilerin analizinde IBM SPSS istatistiksel paket programı kullanılmış ve tanımlayıcı istatistikler ortalama±standart sapma (min-maks) ve sürekli değişkenler frekans ve yüzde olarak ifade edilmiştir.

Bulgular: Katılımcıların yaş ortalaması 27,79±6,19 (aralık 18-55) idi. Çoğuluğu bekar (%62) ve yarıdan fazlası (%55) 5 yıldan daha az bir süredir görev yapıyordu. Katılımcıların %95,3'ü (n=163) mesleğinin kanser taramasında önemli bir yere sahip olduğuna inanırken, %62,6'sı (n=107) meme, kolon veya serviks kanseri taraması konusunda yeterli bilgiye sahip olmadıklarına inanmaktaydı. Katılımcıların %9,9'u (n=17) mamografi yaptırdığını, %24,6'sı (n=42) PAP smear yaptırdığını, yalnızca %14,6'sı (n=25) kolorektal tarama testlerinden herhangi birini yaptırdığını belirtti.

Sonuç: Çalışma hemşirelerin kanser taramasındaki önemli rollerinin farkında olduklarını ortaya koymuştur. Meme, serviks, kolorektal kanser risk faktörleri konusunda yeterli bilgi sahibi olduklatı ve hemen hemen tamamının belirti ve bulgular konusunda iyi düzeyde bilgiye sahip oldukları görülmüştür. Ancak bireysel tarama tutumlarının oranları çok düşük bulunmuş ve eğitime ihtiyaç duydukları kanısını duğurmuştur.

Anahtar Kelimeler: Kanser, tarama, hemşirelik, eğitim

Abstract

Aim: Nurses are health professionals who can give women accurate information about cancer. The study was planned to investigate knowledge and attitudes of breast, cervical, and colon cancer among female nurses.

Method: This cross-sectional study was conducted with 171 female nurses who were working at Başkent University Hospital in Adana, in the Eastern Mediterranean Region of Turkey. Data were collected by using a self report questionnaire developed by the researchers under the light of the literature. Data were analyzed by using IBM SPSS Statistics for Windows. Descriptive statistics were expressed as mean±standard deviation (min–max). Continuos variables were expressed as frequency and percentages.

Results: The mean age of participants was 27.79±6.19 years (range18-55). Most were single (62%) and more than half (55%) worked for less than 5 years. While 95.3% (n=163) believed that their job has an important place in cancer screening, 62.6% (n=107) believed that they have insufficient knowledge about screening for breast, colon, or cervical cancer. Of the participants, 9.9% (n=17) had performed mammography, 24.6% (n=42) stated that they performed PAP smear, and 14.6% (n=25) had performed the colorectal screening tests.

Conclusion: The present study has revealed that nurses are aware of their crucial role for cancer screening. They have a sufficient level of knowledge about the risk factors of women's cancers and almost all of them have a good level of knowledge about the signs and symptoms. However, the ratio of screening attitudes was found very low indicating their need for occupational development and education.

Keywords: Cancer, screening, nursing, education

1. Introduction

Breast cancer is the most common and most feared cancer in women both worldwide and in our country. Confrontation with lifelong breast cancer risk is one in nine. The risk increases from the fifth decade and younger women have also been diagnosed with breast cancer [1,2]. According to the data of the American Cancer Society, among females, the estimated number of new cases of breast cancer is 297, 790, the estimated number of deaths from breast cancer is 43,170 in the USA, these numbers are 13,960 and 4310 for cervical cancer, and 71,160 and 24,080 for colon and rectum cancers, respectively [3]. The GLOBOCAN 2020 data by the IARC (International Agency for Research on Cancer) reported 101,018 new cancer cases among females, of these cases, 24,174 (23.9%) are breast cancers, and 9202 (9.1%) are colorectal cancers [4].

Recently, the GLOBOCAN 2020 data reported the worst breast cancer incidence and prevalence in 185 countries [4]. Screening for breast cancer reduces breast cancer-related mortality and earlier detection facilitates less aggressive treatment [5]. Screening tests for breast cancer include breast self-examination (BSE), clinical breast examination (CBE), and mammography (MMG). Breast self-examination was initially proposed as an intuitive, inexpensive, non-invasive, and universally accessible means of promptly identifying early-stage breast neoplasms. However, the current medical literature, most medical societies and academies do not support it in practice [6].

There is ongoing discussion relating to the efficacy of BSE and CBE in terms of mortality reduction, and some international organizations no longer recommend them as screening methods. However, they may still work in economically disadvantaged countries [7]. Mammography-based screening is highly beneficial and recommended for early detection of breast tumors [8].

Cervical cancer is another common female cancer. According to GLOBOCAN 2020 data, cervical cancer ranks the fourth among the most common cancers in females [4]. To eliminate cervical cancer, the World Health Organization has given the target of 70 per cent coverage of twice lifetime screening. A multitude of screening methods are available, including cytology, human papillomavirus (HPV) DNA testing and inspection tests [9].

According to The Turkish Ministry of Health data Colorectal cancers are in the third place among newly diagnosed cancers in both women and men in Turkey [10]. It is possible to diagnose the disease in its early stages with personal risk assessment and effective screening tools. its early stages by effective personal risk [11]. With colorectal screening, it is possible to detect precancerous polyps and to diagnose early disease, reducing related deaths [12].

The Turkish Ministry of Health recommends consultation for monthly BSE, CBE yearly, and MMG every two years for women between the ages of 40 and 69. Pap smear and HPV-DNA test are recommended at every 5 years for women between the ages of 30 and 65, and for colorectal cancer screening, occult blood testing is recommended at every two years and colonoscopy at every 10 years between the ages of 50 and 70 for both sexes. These tests can be performed at family health centers and early diagnosis, secreening, and education centers for cancer [13, 14].

Healthcare workers can play a principle role in elevating awareness of the public, and their knowledge needs to be assessed and regularly. Improving the knowledge of the community members can improve their attitudes and also potentially change their practices to seek healthcare early and embrace cancer screening [15].

The present study was conducted to evaluate the knowledge level and attitudes of nurses about the most common female cancers.

2. Materıal and Methods

2.1 Study design

This cross-sectional study was conducted with female nurses who were working at Başkent University Hospital in Adana, in the Eastern Mediterranean Region of Turkey. The research has approved by the Non-interventional Ethics Committee and Institutional Review Board of Baskent University (date: April 17, 2015, number KA15/09).

Inclusion criteria were being worked at the hospital and volunteers for participiation. The nurses who had been diagnosed or being treated for any cancers were excluded. The participants were informed about the method and the purpose of the study and they were ascertained about that the identity information would be kept anonymous. Their written and verbal informed consents were obtained. The study was conducted in accordance with the principles of the Helsinki Declaration.

2.2 Participants

A total of 280 eligible female nurses were invited to participate, 171 of them agreed for participation.

2.3 Questionnaire

A 36-item questionnaire prepared by the reserachers under the light of the literature was used to measure the knowledge and attitudes of the nurses (appendix). After the preliminary application was made with the sample of 20 participants, revisions were conducted to the questionnaire and its final form was given. There were both open-ended and multiple-choice questions in the questionnaire, which started with a short briefing letter. It took approximately 25 minutes to fill out the self-report questionnaire. While some of the questions had only "yes" or "no" response options, those evaluated the knowledge about the risk factors, signs and sypmtoms had multiple choice responses. The questionnaire has sub-domains related to breast, cervical and colorectal cancers.

2.4 Analysis

Data were analyzed by using SPSS v25.0 (IBM, 2022, New York, ABD) kullanılmıştır Descriptive statistics were expressed as mean±standard deviation (min–max). Continuos variables were expressed as frequency and percentages.

3. Results

The mean age of 171 participants was 27.79±6.19 years (range 18-55). Most were single (62%) and more than half (55%) worked for less than 5 years. The descriptive characteristics of the participants are presented in Table 1.

Table 1. Descriptive characteristics of the participants

(n=171)		n	%
Marital status	Married	61	35.7
	Single	106	62.0
	Divorced/widowed	4	2.3
Department	Internal disease	44	25.7
	Surgery	66	38.6
	Gynecology and obstetrics	10	5.8
	Pediatrics	51	29.8
Years of experience	<5	94	55.0
	5 - 10	39	22.8
	10 - 15	25	14.6
	>15	13	7.6

There was a family history of cancer in 27.5% (n=47), and 87.7% (n=150) stated that they were talking about cancer with their family or friends. While 95.3% (n=163) believed that their job has an important place in cancer screening, 62.6% (n=107) believed that they have insufficient knowledge about screening for breast, colon, or cervical cancer. Of the women, 57.9% (n=99) thought that they were risky for breast cancer.

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The rates of answers about the risk factors, signs, and symptoms of breast cancer are given in Table 2.

Table 2. The answers about the risk factors, signs, and symptoms of breast cancer

(n=171)	No		Yes	
	n	%	n	%
Questions about the risk factors for BC				
Is advanced age a risk factor for BC?	75	43.9	96	56.1
Is early menarche a risk factor for BC?	123	71.9	48	28.1
Is late menopause a risk factor for BC?	110	64.3	61	35.7
Is a positive family history a risk factor for BC?	8	4.7	163	95.3
Is being nulliparous a risk factor for BC?	60	35.1	111	64,9
Is not breastfeeding a risk factor for BC?	51	29.8	120	70.2
Is using oral contraceptives or hormones a risk factor for BC?	118	69.0	53	31.0
Is obesity a risk factor for BC?	122	71.3	49	28.7
Is radiation exposure a risk factor for BC?	47	27.5	124	72.5
Questions about the signs and symptoms of BC				

Lump	2	1.2	169	98.8
Axillary mass	12	7.0	159	93.0
Asymmetrical breasts	39	22.8	132	77.2
Skin changes	22	12.9	149	87.1
Discharge/bleeding	31	18.1	140	81.9

BC: Breast cancer

Of the women, 97.7% (n=167) stated that BSE is important for early diagnosis, and must be done monthly (68.4%, n=117) beginning from the age of 20 (70.8%, n=121), preferably after the menstrual period (50.9%, n=87) reflecting a good level of knowledge about breast cancer. Although 80.7% (n=138) were doing BSE, 33 (19.3%) were not doing it. Most participants (74.9%, n=128) stated they did not experience CBE.

Most participants know that MMG is the periodical (60.8%, n=104), radiological (79.5%, n=136), painless (74.3%, n=127) examination of the breasts that is done beginning from the age of 40 (63.2%, n=108) that enables early diagnosis of breast cancer (78.9%, n=135) and 9.9% (n=17) had performed MMG.

The rates of answers about the risk factors, signs, and symptoms of cervical cancer are given in Table 3.

Table 3. The rates of answers about the risk factors, signs, and symptoms of cervical cancer

(n=171)	No		Yes	
	n	%	n	%
Questions about the risk factors for CC				
Is smoking a risk factor for CC?	51	29.8	120	70.2
Is early sexual intercourse a risk factor for CC?	88	51.5	83	48.5
Is having multiple partners a risk factor for CC?	36	21.1	135	78.9
Is a history of a sexually-transmitted disease a risk factor for CC?	51	29.8	120	70.2
Is HPV a risk factor for CC?	58	33.9	113	66.1
Is HBV a risk factor for CC?	140	81.9	31	18.1
Questions about the signs and symptoms of CC				
Pelvic pain	49	28.7	122	71.3
Coital pain	44	25.7	127	74.3
Hemorrhagic vaginal discharge	30	17.5	141	82.5
Intermenstrual bleeding	64	37.4	107	62.6
Postmenopausal bleeding	83	48.5	88	51.5
Fever	127	74.3	44	25.7

CC: Cervical cancer

Of the women, while 28.7% (n=49) thought that they were risky for CC, 71.3% (n=122) did not think to have risk factors for CC. Sixty-two (36.3%) women stated that PAP smear begins to be done 2-3 years after the first sexual intercourse, it is not a painful procedure (83.6%, n=143), 24.6% (n=42) stated that they performed PAP smear.

The rates of answers about the risk factors, signs, and symptoms of colorectal cancer are given in Table 4.

Table 4. The answers about the risk factors, signs, and symptoms of colorectal cancer

(n=171)	No		Yes	
	n	%	n	%
Questions about the risk factors for CRC				
Is advanced age a risk factor for CRC?	85	49.7	86	50.3
Is a positive family history a risk factor for CRC?	11	6.4	160	93.6
Is inflammatory bowel disease a risk factor for CRC?	62	36.3	109	63.7
Is having polyps a risk factor for CRC?	62	36.3	109	63.7
Is obesity a risk factor for CRC?	113	66.1	58	33.9
Is smoking and alcohol a risk factor for CRC?	49	28.7	122	71.3
Is consuming red meat a risk factor for CRC?	128	74.9	43	25.1
Is radiation exposure a risk factor for CRC?	69	40.4	102	59.6
Questions about the signs and symptoms of BC				
Altered bowel habits	25	14.6	158	85.4
Rectal bleeding	13	7.6	159	92.4
Abdominal pain	55	32.2	116	67.8
Weight loss	28	16.4	143	83.6
Discharge/bleeding	31	18.1	140	81.9

CRC: Colorectal cancer
Of the participants, 32.2% (n=55) thought that they had a risk for CRC.

One hundred and twenty-five women (73.1%) stated that occult blood test in the feces is used for CRC screening, 91.8% (n=157) stated that endoscopic examination is used for screening, 69.0% (n=118) stated that blood tests are used for screening, and 80.7% (n=138) stated that it can be diagnosed through radiological tests. Only 14.6% (n=25) had performed any of the screening tests.

Most of the participants (80.7%, n=138) had recommended screening tests for breast, cervical, and colorectal cancer to their families, friends, or patients.

4. Discussion

The nurses in healthcare services have an effective role in informing and advising women about screening tests and for early detection of cancer. Therefore nurses may play a significant role in early diagnosis of cancers.
There are several research in the literature examining the knowledge and attitudes of nurses and healthcare workers regarding cancer screening tests. Some studies have shown that nurses have sufficient knowledge about cancer screening methods, risk factors and symptoms [16], and have more tendency to use screening tests [217].The results obtained in the research from different regions of the world, especially in developing countries, differ. For example, in a study conducted with nurses working in 6 centers that carry out the national cancer screening program in rural areas of China, it was shown that the personnel were not equipped with sufficient knowledge [18]. In a study from Africa a sufficient number of healthcare workers were found to be significantly knowledgeable about cervical cancer [19], but the rate of performing a cervical cancer screening test among them was low [19, 20]. A study conducted in a Middle Eastern country determined that knowledge, attitudes, and practices regarding breast cancer screening were lower than expected [21].

In research in one of the western provinces of Turkey, to determine nurses' knowledge about screening programs and their status of having screening tests in a tertiary healthcare hospital that their knowledge about screening programs is not found sufficient enough [22]. In the research conducted in one of the southern provinces of Turkey with over a thousand female physicians, midwives, nurses, health officers and medical secretaries in primary health care service indicated that healthcare workers are more knowledgeable about breast and cervical cancer screening than non-health workers [23]. In a general population study consisting of 668 volunteers of childbearing age, it was seen that the knowledge level of the participants about breast and cervical cancer was sufficient and it was higher especially in healthcare workers. However, the behavior of all women to have screening tests was insufficient [24]. In the study with a similar design to our study, it was observed that nurses had insufficient knowledge about cervical cancer symptoms and screening methods, whereas they had a adequate level of knowledge about breast cancer and its' risk factors [25].

We found that the study population had significantly higher levels of knowledge and awareness due to highly specific work experience at the university hospital. However, when we consider the generality of the studies, it is seen that it is not similar to the level of knowledge and awareness throughout the country. This difference may be since postgraduate education programs and corporate training practices are handled differently in each institution. The limitations of this study is the sample; consistent of a limited number of healthcare workers and whom working in a tertiary hospital where they encounter cancer diagnosis and treatment more frequently in their daily practices.

The study may have some basic background information on cancer screening awareness and in the risk factors for cancer in the health professions. And similar model of studies can be performed in other health professional groups.

It is estimated that the importance and value of cancer screening systems in developing countries are not known enough. Many people generally do not seek medical care unless they are sick, they are aware of the concept of screening for healthy adults. Nurses, especially in primary care, have an important duty to inform women about this screening concept and also about early signs and symptoms of cervical and colorectal, and breast cancer. A promotion will be achieved in the primary and secondary prevention behaviors of patients with their advice and training to patients. Encouraging women to regularly screen for breast and cervical cancer can have a significant impact in preventing cancer and accordingly as well can reduce the cancer related deaths. We should apply further training programs for nurses. Similar model studies can be conducted in other health professional groups

5. Conflict of Interest Statement and Ethical Approval

The authors have no conflicts of interest to declare.

In this study, the authors undertake that all the rules required to be followed within the scope of the "Higher Education Institutions Scientific Research and Publication Ethics Directive" are complied with and that none of the actions stated under the heading "Actions Against Scientific Research and Publication Ethics" are not carried out.

Since the use of the human phenomenon in research requires the protection of individual rights, the condition of informed consent has been fulfilled as an ethical principle. In addition, written consent was obtained from the Hospital Management. Preliminary data of the research were presented as abstract at the 20th Wonca Europe Congress (October 22-25 2015).

This study was approved by Baskent University Institutional Review Board dated 17/04/2015 and numbered KA15/09.

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