

Nursing Students' Awareness about the Warning Signs of Cancer

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ABSTRACT

Objective: Nursing students who take care of the patient in clinical area practices as a part of their internships in primary health care and clinical areas, should be aware of the warning signs of cancer so that they may inform the community about them. **Methods:** This study was conducted to determine the awareness of nursing students about the warning signs of cancer. The research was planned as a descriptive and cross-sectional study. The research was completed with 460 nursing students between February 2019 and May 2019. **Results:** The average age of the students participating in the study was 20.05 ± 2.04 years. Female nursing students were more familiar with the warning signs of cancer, than male nursing students. Second, third- and fourth-grade nursing students knew the warning sign of better than the first graders. More nursing students who had taken the

internal diseases nursing course knew the warning sign of better compared to the students who did not take the course. Nursing students with a family member with a history of cancer knew the warning better than those who did not have a family history of cancer. Thickening or lump in the breast or elsewhere” was the most known warning sign of cancer (92.6%), whereas the least known sign was “indigestion or difficulty in swallowing” (47.0%). **Conclusions:** Female nursing students those who had taken the internal diseases nursing course and those who had a family member with a history of cancer were more aware of the warning signs of cancer.

Key words: Awareness, cancer, nursing student, sign, warning sign

Introduction

Cancer is one of the most important public health problems both in Turkey and worldwide. It ranks the second among the causes of death across the world, and it is expected to increase rapidly in prevalence and take the first place by 2030.^[1] Cancer is a preventable disease and mortality can be avoided by cancer screening. The disease is caused by environmental factors in 90% and genetic factors in 10% of the cases. Environmental factors include tobacco and alcohol use, obesity, and infections.^[2] It is important to gain healthy lifestyle behaviors

in controlling environmental factors. Nurses play a key role in protecting health and preventing illnesses and in bringing healthy lifestyle behaviors to individuals, families, and society, as they are in constant communication with patients.^[3,4] Nurses should know the warning signs and screening programs of cancer, identify individuals at risk, and provide education to the community on early diagnostic methods.^[5] Taking part in community health education as a part of their internships in

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primary health care and clinical areas, nursing students should be aware of the warning signs of cancer so that they may inform the community about them. However, previous studies have reported low level of awareness about the warning signs of cancer in nursing students. According to these studies, nursing students had insufficient knowledge about the symptoms and prevention of breast cancer,^[6] had low level of awareness about cervical cancer and skin cancer symptoms,^[7,8] and nurses had insufficient information about cancer screening programs.^[5] The most studied topics in cancer awareness field with nursing students in our country are breast cancer awareness and self-examination, and there are no studies to determine the awareness of nursing students about the warning signs of cancer.^[9-12] Designed based on this deficiency, this study was conducted to determine the awareness of nursing students about the warning signs of cancer.

- Are nursing students aware of the warning signs of cancer?
- Does the awareness of nursing students about the warning signs of cancer differ according to students' identifying characteristics?

Methods

Sample and design

The research was planned as a descriptive and cross-sectional study. The universe of the study consisted of nursing students studying in the first, second, third and fourth grades of a public university. The total number of students in the nursing department in the Fall semester of 2018–2019 was 980. The formula that was used to determine the necessary sample size on the universe population^[13] determined that a minimum sample size of 276 nursing students' was required. The research was completed with 460 nursing students who agreed to participate in the study.

Abbreviations used in the formula:

$$n = N \times t^2 \times p \times q / d^2 (N-1) + t^2 \times p \times q$$

$$n = 980 \times 1.96^2 \times 0.5 \times 0.5 / 0.05^2 (980-1) + 1.96^2 \times 0.5 \times 0.5 = 276$$

n: Number of individuals to be sampled

N: The number of individuals in the target population

t: Theoretical value in the *t* table at a certain degree of freedom and at the determined error level (95% confidence level)

p: Frequency of occurrence of the event to be investigated (probability): 0.50

q: Frequency of nonoccurrence of the events to be investigated (1-*p*): 0.50

d: The desired deviation according to the occurrence frequency of an event.

Data collection

The data were collected between February 2019 and May 2019 through face-to-face interview method through "Student

Identification Form." The form was prepared by researchers based on a literature review. It consists of 13 questions in total, including items about their "age, gender, the grade they were in, whether they participated in an internal medicine nursing course, whether they received any education program related to cancer, presence of cancer in a family members," as well as items on the "Warning Signs of Cancer" published by the American Cancer Society.^[14] Before the questionnaire was given to students, it was given to two faculty members and three specialist nurses working in the field of oncology for their opinions regarding the content and comprehensibility of the statements. The form was finalized by making the necessary revisions in line with expert opinions.

Statistical analysis

Numbers and percentage, average, and standard deviation were used as descriptive statistics. The Chi-square test was performed to evaluate differences among groups.

Ethical approval

Ethics committee approval was obtained from the Department of Nursing and the Ethics Committee of the University (Approval No. 05, dated January 03, 2019). The purpose of the study was explained to the nursing students participating in the study, and their written consents were obtained with the "Informed Consent Form."

Results

The average age of the students participating in the study was 20.05 ± 2.04 years, and 82.6% of them were female. Third-grade nursing students made up 30.7% of the students participating in the study and 72.6% of the students had taken the internal diseases nursing course. Of them, 67.4% had not participated in any training program on cancer, and 67.2% told that there were no individuals in their family with a history of cancer.

Female nursing students were more familiar with "change in bowel or bladder habits" ($P < 0.05$), "unusual bleeding or discharge" ($P < 0.05$), "thickening or lump in the breast or elsewhere" ($P < 0.01$), "indigestion or difficulty in swallowing" ($P < 0.01$), "obvious change in a wart or mole" ($P < 0.01$), "nagging cough or hoarseness" ($P < 0.05$) than male nursing students [Table 1].

Second-, third-, and fourth-grade nursing students knew the warning sign of "change in bowel or bladder habits" ($P < 0.001$), "a sore that does not heal" ($P < 0.05$), "unusual bleeding or discharge" ($P < 0.05$), "indigestion or difficulty in swallowing" ($P < 0.001$), "obvious change in a wart or mole" ($P < 0.001$), "nagging cough or hoarseness" ($P < 0.05$) better than the first graders [Table 1].

More nursing students who had taken the internal diseases nursing course knew the warning sign of "change in bowel or bladder habits" ($P < 0.001$), "a sore does not heal" ($P < 0.01$), "unusual bleeding or discharge" ($P < 0.05$), "indigestion or difficulty in swallowing" ($P < 0.001$),

Table 1: Nursing students' knowledge of the warning signs of cancer according to identifying characteristics

Identifying characteristic, n (%)	Change in bowel or bladder habits		A sore that does not heal		Unusual bleeding or discharge		Thickening or lump in the breast or elsewhere		Indigestion or difficulty in swallowing		Obvious change in a wart or mole		Nagging cough or hoarseness	
	Yes, %	No, %	Yes, %	No, %	Yes, %	No, %	Yes, %	No, %	Yes, %	No, %	Yes, %	No, %	Yes, %	No, %
Gender														
Female (n=380; 82.6%)	86.8	13.2	85.3	14.7	90.8	9.2	94.2	5.8	65.5	34.5	86.8	13.2	78.2	21.8
Male (n=80; 17.4%)	72.5	27.5	82.5	17.5	81.3	18.8	85	15	47.5	52.5	73.8	26.3	67.5	32.5
Test (χ^2 , P)	10.297, 0.001**		0.391, 0.532		6.208, 0.013*		8.191, 0.004**		9.152, 0.002**		8.678, 0.003**		4.152, 0.042*	
Grade														
First grade (n=114; 24.8%)	64.9	35.1	76.3	23.7	82.5	17.5	96.5	3.5	42.1	57.9	71.9	28.1	64	36
Second grade (n=109; 23.6%)	91.7	8.3	91.7	8.3	88.1	11.9	88.1	11.9	69.7	30.3	88.1	11.9	83.5	16.5
Third grade (n=141; 30.7%)	91.5	8.5	85.8	14.2	93.6	6.4	91.5	8.5	70.9	29.1	91.5	8.5	75.2	24.8
Fourth grade (n=96; 20.9%)	88.5	11.5	85.4	14.6	91.7	8.3	94.8	5.2	65.6	34.4	85.4	14.6	84.4	15.6
Test (χ^2 , P)	43.959, 0.000***		10.574, 0.014*		8.935, 0.030*		6.782, 0.082		27.292, 0.000***		20.204, 0.000***		16.158, 0.001**	
Taking internal disease nursing course														
Yes (n=334; 72.6%)	91	9	88	12	91	9	92.5	7.5	68.9	31.1	89.5	10.5	80.2	19.8
No (n=126; 27.4%)	66.7	36.3	76.2	23.8	84.1	15.9	92.9	7.1	45.2	54.8	71.4	28.6	65.9	34.1
Test (χ^2 , P)	41.092, 0.000***		9.930, 0.002**		4.484, 0.034*		0.016, 0.900		21.760, 0.000***		22.943, 0.000***		10.443, 0.001**	
Participated in a cancer-related education program														
Yes (n=150; 32.6%)	129	21	91.3	8.7	93.3	6.7	93.3	6.7	64	36	87.3	12.7	79.3	20.7
No (n=310; 67.4%)	259	51	81.6	18.4	87.1	12.9	92.3	7.7	61.6	38.4	83.2	16.8	74.8	25.2
Test (χ^2 , P)	0.460, 0.498		7.403, 0.007**		4.058, 0.044*		0.171, 0.679		0.245, 0.620		1.307, 0.253		1.129, 0.288	
Having a family member with a history of cancer														
Yes (n=151; 32.8%)	84.1	15.9	84.1	15.9	90.1	9.9	92.7	7.3	72.8	27.2	90.7	9.3	84.1	15.9
No (n=309; 67.2%)	72.5	27.5	85.1	14.9	88.7	11.3	92.6	7.4	57.3	42.7	81.6	18.4	72.5	27.5
Test (χ^2 , P)	7.567, 0.006**		0.080, 0.778		0.203, 0.652		0.004, 0.951		10.474, 0.001**		6.542, 0.011*		7.567, 0.006**	

*P<0.05, **P<0.01, ***P<0.001

“obvious change in a wart or mole” ($P < 0.001$), “nagging cough or hoarseness” ($P < 0.05$) better compared to the students who did not take the course [Table 1].

The nursing students who had participated in a cancer-related education program knew the warning sign of “a sore that does not heal” ($P < 0.01$) and “unusual bleeding or discharge” ($P < 0.05$) better than who do not participate in such an education program.

Nursing students with a family member with a history of cancer knew the warning sign of “change in bowel or bladder habits” ($P < 0.01$), “indigestion or difficulty in swallowing” ($P < 0.05$), “obvious change in a wart or mole” ($P < 0.05$), and “nagging cough or hoarseness” ($P < 0.01$) better than those who did not have a family history of cancer [Table 1].

“Thickening or lump in the breast or elsewhere” was the most known warning sign of cancer (92.6%), whereas the least known sign was “indigestion or difficulty in swallowing” (47.0%).

Discussion

As a result of the study conducted to determine the awareness of nursing students about the warning signs of cancer, female students those studying in the second-, third-, and fourth-grades of the nursing department, those who had taken the internal medicine nursing course, and those who had a family history of cancer were more aware of the warning signs of cancer.

In our study, more female nursing students knew the warning signs of cancer compared to male nursing students. In studies conducted to determine the knowledge and awareness of the warning signs of cancer, women were reported to have better knowledge of the warning signs of cancer than men.^[15-17] Women may have to consult a physician about naturally progressing menstruation and reproductive processes as a result of their roles of being a woman. Besides, when women fall sick, they benefit from health-care services more than men to regain their health as soon as possible as they are expected to assume and maintain the care of others due to cultural norms.^[15,18]

Second, third- and fourth-grade nursing students knew the warning sign of better than the first graders. Erkin and Aygün reported that the awareness of nursing students about skin cancer leading symptoms increased after training on self-skin examination^[19] and added that providing education on cancer prevention in the curriculum increased the awareness of nursing students about the symptoms of cancer.^[16] Alsaraireh and Darawad further reported that the education given to female university students on breast cancer prevention resulted in a significant increase in the level of awareness of the students about breast cancer signs compared to preeducation levels.^[20] Consistent with

these results, the findings of our study indicate that nursing students’ taking “Oncological Diseases and Nursing Care” course within the scope of Internal Medicine Nursing course in the 2nd year, attending a training program about cancer, being in contact with cancer patients in their care, treatment and training during their clinical field work in the 4th year all contribute to increase their awareness.

The individuals with a family history of cancer had higher awareness about the warning signs of cancer.^[21] According to the studies; the individuals with a family history of cancer knew more risk factors^[22] and were more aware of the warning signs of breast cancer,^[23,24] whereas those with a family history of gastric cancer knew more about the symptoms of gastric cancer.^[25] Having a family history of cancer increases awareness about cancer, and awareness is an important prerequisite for a change in behavior.^[26] Hence, it is the individuals with high awareness who try to gain healthy lifestyle behaviors and seek medical attention timely when they get sick.^[27] People with a family history of cancer experience a fear of getting cancer, and they try to reform their lives to avoid risk factors that can cause cancer and maintain their lives as such in order not to get cancer.^[22]

The warnings sign of cancer most known by the nursing students was “Thickening or lump in the breast or elsewhere.” In studies conducted to determine the knowledge and awareness of cancer types, the most important source of information was the media (television, internet).^[7,16,28,29] It is believed that “Thickening or lump in the breast or elsewhere” being the most well-known leading symptom is because awareness programs for breast cancer are much more common than other cancer types in the social media.

Limitations

The study data were acquired based on personal statements of the nursing students. Hence, data reliability may have been affected from the attitude of the nursing students. Another limitation of the study is that it has been carried out at a single university.

Implication for practice and future research

Organizing activities at regular intervals about the warning signs of cancer at universities, including this subject in the content program at congresses attended by nursing students, and informing about the subject with in-service trainings in internship will be effective in raising awareness and ensure continuity of nursing students’ about the warning signs of cancer. It is recommended to conduct studies on a similar subject on students who are candidates for healthcare professionals studying in all health sciences.

Cancer prevention campaigns are usually directed toward breast cancer, which mostly concerns women. We believe that it is important to organize cancer prevention campaigns

also for lung, prostate, testicular, and colorectal cancers, which are more common in men.

Conclusions

Female nursing students those who had taken the internal diseases nursing course and those who had a family member with a history of cancer were more aware of the warning signs of cancer. “Thickening or lump in the breast or elsewhere” as a warning signs of cancer was more known by nursing students.

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Conflicts of interest

There are no conflicts of interest.

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