Determination of Skin Cancer and Sun Knowledge Status of Nursing Students

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Abstract

Aim: The purpose of this study was to assess nursing students' awareness of sun knowledge and skin cancer.

Method: The research is cross-sectional and descriptive. Through the use of an online questionnaire, 272 nursing students provided the study's data. Data were gathered using the Skin Cancer and Sun Knowledge Scale and a form asking participants to describe their personal information. The statistical application IBM SPSS 26.0 was utilized to analyze the data.

Results: The Skin Cancer and Sun Knowledge Scale total score (14.51±3.24) was determined to be higher than the middle level. The total score of the scale did not significantly correlate with the students' age, grade level, prior knowledge of skin cancer, or the existence of a family history of the disease ($p>0.05$). However, there was a significant correlation ($p<0.05$) between gender and the scale's total score. The students' ages and the scale's overall score did not significantly correlate ($p>0.05$).

Conclusion: According to the study's findings, most respondents have knowledge that is above the intermediate level. Even though the study's conclusions paint a generally positive picture, they also demonstrate the need for further development. At this point, more effective community awareness of skin cancer may result from evaluating and updating the methods and content of nursing education programs. Future work could focus on the development of more specific strategies to increase knowledge in this area.

Keywords: Cancer of the skin, sun, nursing student.

Hemşirelik Öğrencilerinin Deri Kanseri ve Güneş Bilgisi Durumlarının Belirlenmesi

Öz

Amaç: Bu çalışmanın amacı, hemşirelik öğrencilerinin güneş bilgisi ve cilt kanseri konusundaki farkındalıklarını değerlendirmektir.

Yöntem: Araştırma kesitsel ve tanımlayıcı niteliktedir. Çevrimiçi bir anket kullanılarak, 272 hemşirelik öğrencisi çalışmanın verilerini sağlamıştır. Veriler Deri Kanseri ve Güneş Bilgisi Ölçeği ve katılımcıların

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kişisel bilgilerini tanımlamalarını isteyen bir form kullanılarak toplanmıştır. Verileri analiz etmek için IBM SPSS 26.0 istatistiksel uygulaması kullanılmıştır.

Bulgular: Deri Kanseri ve Güneş Bilgi Ölçeği toplam puanının (14,51±3,24) orta düzeyin üzerinde olduğu belirlenmiştir. Ölçekten alınan toplam puan ile öğrencilerin yaşı, sınıf düzeyi, deri kanseri hakkındaki ön bilgileri ve ailede hastalık öyküsü olup olmaması arasında anlamlı bir ilişki bulunmamıştır (p>0,05). Ancak, cinsiyet ile ölçek toplam puanı arasında anlamlı bir korelasyon (p<0,05) vardı. Öğrencilerin yaşları ile ölçeğin toplam puanı arasında anlamlı bir ilişki bulunmamıştır (p>0,05).

Sonuç: Çalışmanın bulgularına göre, katılımcıların çoğu orta seviyenin üzerinde bilgiye sahiptir. Çalışmanın sonuçları genel olarak olumlu bir tablo çizse de, daha fazla gelişme ihtiyacını da ortaya koymaktadır. Bu noktada, hemşirelik eğitim programlarının yöntem ve içeriğinin değerlendirilmesi ve güncellenmesiyle deri kanseri konusunda daha etkili bir toplum bilinci oluşturulabilir. Gelecekteki çalışmalar, bu alandaki bilgi düzeyini artırmaya yönelik daha spesifik stratejilerin geliştirilmesine odaklanabilir.

Anahtar Sözcükler: Deri kanseri, güneş, hemşirelik öğrencisi.

Introduction

Skin cancer is becoming a more widespread global health concern. One of the main etiologic factors contributing to the development of skin cancer is repeated exposure to UV radiation[1-6]. The World Health Organization (WHO) estimates that 132,000 cases of malignant melanoma and 2-3 million cases of non-melanoma skin cancer are diagnosed worldwide each year[7]. Skin cancer mortality rates can be decreased and people's quality of life increased by early detection and prevention[8]. The nursing profession is essential to raising public health awareness, preventing illness, and enhancing community health as a whole. In this regard, concentrating on nursing students' understanding of skin cancer and sun exposure is an essential first step toward enlightening and bringing future medical professionals' attention to this significant problem.

One type of cancer that typically results from extended sun exposure is skin cancer[1-6]. Therefore, a key component in preventing skin cancer is being aware of the possible risks associated with the sun and implementing preventative measures against these risks[6]. In order to effectively guide future patient care processes, it is imperative that nursing students possess adequate knowledge on this topic.

Finding out what nursing students knew about sun exposure and skin cancer was the goal of this study. The current state of affairs will be assessed in light of the study's findings, and the need for increased emphasis on these topics in nursing education will be explored. This evaluation will give nursing students a solid foundation for

understanding these crucial health issues and helping them deliver better care in the future.

Material and Methods

Study Design: The study's methodology is cross-sectional and descriptive.

Sample of the Research: A total of 272 nursing students who volunteered to take part in the study made up the sample.

Data Collection Method: The study's method of gathering data involved having participants respond to an online survey between November 30, 2023, and December 15, 2023.

Data Collection: Data for the study were gathered using the Skin Cancer and Sun Knowledge Scale and the participants' personal information identification form, which included information on gender, age, grade level, family history of cancer, and status of skin cancer education.

Skin Cancer and Sun Knowledge Scale

The 25 items on the Skin Cancer and Sun Knowledge Scale, created by Day et al.[9], evaluate adults' knowledge of sun safety and skin cancer. The development of the scale came about as a result of a methodical literature review of the scale items and current best practice research on sun health and skin cancer. The measure evaluates adults' knowledge in five areas: items 16–22 on sun protection, items 2–12 on tanning, items 13–14 and 23 on skin cancer risk factors, items 15–24 on skin cancer prevention, and item 25 on skin cancer symptoms. There are ten multiple-choice questions and fifteen true-false questions in the scale items. The right answer is matched with 1 for each item, and the wrong answer is paired with 0. The sum of the items yields a total score that ranges from 0 to 25 points, where a high score denotes a high level of knowledge. Reliability analysis using data from 514 university students yielded the internal consistency reliability coefficient (KR-20) = 0.69 and the test-retest reliability r (59) = 0.83 with a 2-week interval after the content validity of the original scale was determined with expert opinion. The scale's single-factor structure was validated by exploratory factor analysis, which was used to assess the construct validity of the scale. It was discovered that the scale had a high determinant power. Öztürk Haney et al. carried out the scale's validity and reliability study in Turkey[10]. The Turkish Skin Cancer and Sun Knowledge Scale had a content validity index (CVI) of 93.71%, an internal consistency

reliability coefficient (KR-20) of 0.51, and a test-retest reliability of 0.52 (n=34), p<0.001. A single-item test was used to assess the discriminant validity of the scale, and the results showed that discrimination was confirmed (p<0.001). The Cronbach's alpha for this study came out to be 0.71.

Data Analyses: The IBM SPSS statistics 26.0 program was used to perform the statistical analysis for the study. The study's data were assessed using descriptive statistical methods as well (mean, standard deviation, frequency, percent). When analyzing data that did not follow a normal distribution, the Mann-Whitney U test was employed, and when data did, the Student T-test was employed. One-way ANOVA and Kruskal-Wallis tests were used to evaluate more than two normally distributed and non-normally distributed variables, respectively. The correlation between the variables was assessed using Pearson and Spearman correlation analyses. The results were analyzed using the 95% confidence range and a significance level of p<0.05.

Ethical Considerations: On November 20, 2023, the Istanbul Gelişim University Ethics Committee Presidency approved the research project and gave it the research number 2023-09-73. The study participants were informed and given a consent form to sign before the survey.

Results

Table 1 displays the individual traits of the nursing students who took part in the research as well as the overall score on the Skin Cancer and Sun Knowledge Scale and the scores on its sub-dimensions. The study revealed that the mean age of the participants was 21.62±2.36 years, 30% were 4th-grade students, and 71.3% of the participants were female. Of the participants, 66.5% said that there was no family history of cancer, and 93% said they had never been educated about skin cancer. Table 1 indicates that the overall score of 14.51±3.24, which is above the middle level, was obtained from the Skin Cancer and Sun Knowledge Scale.

Table 1. Personal characteristics of nursing students and total score of Skin Cancer and Sun Knowledge Scale (n=272)

	n	%
Gender		
Female	194	71.3
Male	78	28.7
Class level		
Freshman	38	14.0
Sophomore	73	26.8
Junior	55	20.2
Senior	106	30.0
Age (years)(mean)	21.62±2.36	
Presence of a family history of cancer		
No	181	66.5
1st degree relative	33	12.1
2nd degree relative	58	21.3
Receipt of education on skin cancer		
Yes	19	7.0
No	253	93.0
Skin Cancer and Sun Knowledge Scale sub-dimensions (mean scores)		
Sun protection	3.80±2.36 (min 0; max 8 score)	
Tanning	6.94±2.14 (min 0; max 11 score)	
Skin cancer risk factors	2.05±0.83 (min 0; max 3 score)	
Prevention of skin cancer	1.22±0.54 (min 0; max 2 score)	
Symptoms of skin cancer	0.49±0.50 (min 0; max 1 score)	
Skin Cancer and Sun Knowledge Scale total score (mean)	14.51±3.24 (min 0; max 25 score)	

Descriptive statistical methods (mean, standard deviation, frequency, percent)

Table 2 displays the correlation between the overall score on the Skin Cancer and Sun Knowledge Scale and the personal attributes of nursing students. The total score of the scale did not significantly correlate with the students' age, prior knowledge of skin cancer, grade level, or family history of the disease ($p>0.05$). However, there was a significant correlation between gender and the scale's total score ($p<0.05$). Women scored higher overall on the Skin Cancer and Sun Knowledge Scale than did men (Table 2).

Table 2. The relationship between personal characteristics of nursing students and total score of Skin Cancer and Sun Knowledge Scale (n=272)

	Scale total score	**p**
Gender		
Female	14.81±3.21	**.014**
Male	13.74±3.22	
Age		
≥21	14.60±3.18	.594
<21	14.38±3.33	
Presence of a family history of cancer		
No	14.23±3.21	.118
1st degree relative	15.33±2.96	
2nd degree relative	14.90±344	
Receipt of education on skin cancer		
Yes	13.68±3.28	.253
No	14.57±3.24	
Class level		
Freshman	14.50±3.58	.413
Sophomore	14.47±3.20	
Junior	13.93±3.14	
Senior	14.84±3.20	

Student T-test, Mann-Whitney U test, One-way ANOVA, Kruskal-Wallis

Table 3 displays the relationship between nursing students' ages and the sub-dimensions and overall score of the Skin Cancer and Sun Knowledge Scale. There was no discernible relationship (p>0.05) between the students' ages and the scale's overall score (Table 3). Knowledge of the risk factors for skin cancer (r=.218; p=.000) and sun protection and tanning (r=.124; p=.042) were found to be positively correlated. According to Table 3, there was a positive correlation between tanning and skin cancer risk factors (r=.279; p=.000) and prevention of skin cancer (r=.153; p=.012), prevention of skin cancer and risk factors (r=.122; p=.044) and symptoms (r=.153; p=.000), and prevention of skin cancer and symptoms (r=.121; p=.046).

Table 3. Correlation between age of nursing students and Skin Cancer and Sun Knowledge Scale

		Age	Sun protection	Tanning	Skin cancer risk	Prevention of skin	Symptoms of skin	Scale total score
Age	**r**	1	.042	.011	-.033	-.076	-.001	.002
	p		.495	.854	.592	.209	.982	.976
Sun protection	**r**	.042	1	.124	.218	.009	.057	.529
	p	.495		**.042**	**.000**	.878	.348	**.000**
Tanning	**r**	.011	.124	1	.279	.153	.080	.817
	p	.854	**.042**		**.000**	**.012**	.187	**.000**
Skin cancer risk factors	**r**	-.033	.218	.279	1	.122	.338	.596
	p	.592	**.000**	**.000**		**.044**	**.000**	**.000**
Prevention of skin cancer	**r**	-.076	.009	.153	.122	1	.121	.322
	p	.209	.878	**.012**	**.044**		**.046**	**.000**
Symptoms of skin cancer	**r**	-.001	.057	.080	.338	.121	1	.336
	p	.982	.348	.187	**.000**	**.046**		**.000**
Scale total score	**r**	.002	.529	.817	.596	.322	.336	1
	p	.976	**.000**	**.000**	**.000**	**.000**	**.000**	

Pearson and Spearman correlation

Discussion

The study's nursing students' overall Skin Cancer and Sun Knowledge Scale score (14.51±3.24) was determined to be higher than the middle range. (Table 1). The study conducted by Kartal and Karakaş investigated the skin cancer and sun knowledge of seasonal agricultural workers, revealing a low level of knowledge (10.38±2.31)[11]. In a study involving 200 nursing students, Iglesias et al. discovered a high degree of skin cancer and sun knowledge among the participants[12]. Students between the ages of 11 and 14 exhibited high levels of sun protection behavior, according to a study by Ergul and Ozeren. When UV sun rays were strong, the most popular behaviors among these were found to be looking for shade and dressing in light colors[13]. In their study with homeless men, Joseph et al. discovered that men's knowledge about sun safety and skin cancer was extremely low. They discovered in their study that men with black skin had less knowledge than men with white skin[14]. Öztürk Haney et al. examined the sun knowledge

and behaviors of people with liver transplants versus people in the general public. While liver transplant patients' sun knowledge was found to be lower than that of the general population, there was no discernible difference in their behavior[15]. The level of skin cancer and sun knowledge among 647 teachers in a study by Kuş et al. was found to be above the middle level (13.54±4.48). In terms of behavior in groups at risk for skin cancer and level of knowledge, they discovered that teachers scored higher than other participants[16]. It is believed that the research's findings differ depending on the sample groups when the study's findings are contrasted with those of the literature. Although the findings of this study and those of some other studies in the literature are similar, some studies have different findings. Women were found to have a higher level of knowledge than men in this study at the same time. The study's results and those from the literature may differ in part because of the varied percentage of female participants.

The gender of the students and the scale's overall score were found to be significantly correlated ($p<0.05$). Table 2 shows that women scored higher overall on the Skin Cancer and Sun Knowledge Scale than did men. In their study of people 18 years of age and older, Çelik and Öztürk discovered that women knew a great deal more about sun safety and skin cancer than did men[17]. Among the demographics that focus more on their appearance than men are women. The study's findings might have been impacted by the sensitivity of women.

The ages, grade levels, and scale knowledge levels of the students did not significantly differ from one another in this study ($p<0.05$). The study participants were relatively close in age, so it's possible that the outcome wasn't that noteworthy. The participants' knowledge levels on the scale were not significantly correlated with their family history of cancer, but those without such a history had lower knowledge than the other groups. This finding might nevertheless suggest that having a family history of cancer helps raise people's awareness levels. Raising people's knowledge and preventing skin cancer both depend on education. Nevertheless, there was no discernible correlation ($p>0.05$) between the participants' scale scores and their prior knowledge of skin cancer in this study. It is possible to argue that in this instance, the individuals' prior training were insufficient in terms of both content and duration.

Ethical Considerations

On November 20, 2023, the Istanbul Gelişim University Ethics Committee Presidency approved the research project and gave it the research number 2023-09-73. The study participants were informed and given a consent form to sign before the survey.

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Conflict of Interests

The authors declare no conflict of interest.

Conclusion

The study's findings indicate that most of the participants' knowledge was above the intermediate level. This illustrates nursing students' growing knowledge of skin cancer and their attempts to comprehend the health risks associated with exposure to the sun. Nonetheless, the study's conclusions also demonstrate that certain participants' knowledge is still lacking. At this point, nursing education programs ought to inform students more thoroughly and place a greater emphasis on these issues.

In summary, the results indicate that while the overall picture is encouraging, there is still room for improvement. Right now, improving and modernizing nursing education programs' approaches and content could help raise public awareness of skin cancer more successfully. Subsequent research endeavors might concentrate on formulating more precise tactics to elevate the degree of understanding in this domain.

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