FARABİ TIP DERGİSİ
FARABI MEDICAL JOURNAL

Özgün Makale
Original Article

A Study on Nursing Students' Health Perception, E-Health Literacy and Cyberchondria in The Digital Age

Dijital Çağda Hemşirelik Öğrencilerinin Sağlık Algısı, E-Sağlık Okuryazarlığı ve Siberkondri Durumlarının İncelenmesi

Humeyra Hancer-Tok[1,a,*], Lutfıye Nur Uzun[1,b], Makbule Tokur-Kesgin[2,c]

[1]*Sivas Cumhuriyet University, Suşehri School of Health, Sivas, Türkiye.*
[2]*Bolu Abant Izzet Baysal University, Faculty of Health Sciences, Bolu, Türkiye.*

Corresponding author e-mail: hancertok@gmail.com
[a]*https://orcid.org/0000-0003-3283-4192*
[b]*https://orcid.org/0000-0002-8724-3843*
[c]*https://orcid.org/0000-0003-2729-8612*

ABSTRACT

This study aimed to examine the relationships among e-health literacy, health perception, and cyberchondria in nursing students. A descriptive and correlational research design was adopted. The sample of the study was determined using a known population sampling method. According to this method, the sample size to be included in the study was calculated as 259 nursing students. Data were collected using a personal information form, the E-Health Literacy Scale (E-HLS), the Short Form of the Cyberchondria Severity Scale (CSS-12), and the Health Perception Scale (HPS). Descriptive statistics, independent sample t-tests, and One-way ANOVA were used for data analysis. A 95% confidence interval and a significance level of p<0.05 were considered. The mean age of the participants was 20.61±1.7 years, and 79.9% of them were female. The mean scores of the students were found to be 28.46±5.4 for the E-HLS, 39.37±6.9 for the HPS, and 29.77±6.9 for the CSS-12. A statistically significant but weak positive correlation was found between students' age and their e-health literacy scores (p<0.001, r=0.217). Additionally, the e-health literacy and health perception scores of first-year students were found to be significantly lower than those of upper-year students (p=0.0001, p=0.047). The research findings indicate that the levels of e-health literacy, cyberchondria, and health perception among nursing students are at a moderate level. A statistically significant but weak positive correlation was found between students' age and their e-health literacy scores. However, no statistically significant relationship was found among the variables of e-health literacy, cyberchondria, and health perception. In order to develop these skills, it is recommended that content aimed at increasing e-health literacy and strengthening cyberchondria awareness be integrated into the nursing curriculum.

Keywords: Cyberchondria, E-health literacy, Health perception, Nursing students

ÖZET

Bu çalışma, hemşirelik öğrencilerinde e-sağlık okuryazarlığı, sağlık algısı ve siberkondri arasındaki ilişkileri incelemeyi amaçlamıştır. Araştırma, tanımlayıcı ve ilişki arayıcı desenle yürütülmüştür. Araştırmanın örneklemi, evreni bilinen örneklem yöntemi kullanılarak belirlenmiştir. Bu yönteme göre, çalışmaya dahil edilecek örneklem sayısı 259 hemşirelik öğrencisi olarak hesaplanmıştır. Veriler; kişisel bilgi formu, E-Sağlık Okuryazarlığı Ölçeği (E-HLS), Siberkondri Şiddeti Ölçeği Kısa Formu (CSS-12) ve Sağlık Algısı Ölçeği (HPS) kullanılarak toplanmıştır. Verilerin analizinde tanımlayıcı istatistikler, bağımsız örneklem t-testi ve Tek Yönlü ANOVA analizleri kullanılmıştır. Bulgular %95 güven aralığında ve p<0.05 anlamlılık düzeyinde değerlendirilmiştir. Katılımcıların yaş ortalaması 20.61±1.7 yıl olup, %79.9'u kadındır. Öğrencilerin aldıkları ortalama puanlar; E-HLS için 28.46±5.4, HPS için 39.37±6.9 ve CSS-12 için 29.77±6.9 olarak bulunmuştur. Öğrencilerin yaşı ile e-sağlık okuryazarlığı puanları arasında anlamlı ancak zayıf düzeyde pozitif bir korelasyon saptanmıştır (p<0.001, r=0.217). Ayrıca, birinci sınıf öğrencilerinin e-sağlık okuryazarlığı ve sağlık algısı puanları, üst sınıflara göre anlamlı düzeyde daha düşük bulunmuştur (p=0.0001, p=0.047). Araştırma bulguları, hemşirelik öğrencilerinin e-sağlık okuryazarlığı, siberkondri ve sağlık algısı düzeylerinin orta seviyede olduğunu göstermektedir. Öğrencilerin yaşı ile e-sağlık okuryazarlığı puanları arasında istatistiksel olarak anlamlı fakat zayıf pozitif bir ilişki olduğu bulunmuştur. Bununla birlikte, e-sağlık okuryazarlığı, siberkondri ve sağlık algısı değişkenleri arasında istatistiksel olarak anlamlı bir ilişki saptanmamıştır. Bu becerilerin geliştirilmesi amacıyla hemşirelik müfredatına e-sağlık okuryazarlığını artırmaya ve siberkondri farkındalığını güçlendirmeye yönelik içeriklerin entegre edilmesi önerilmektedir.

Anahtar Kelimeler: E-sağlık okuryazarlığı, Hemşirelik öğrencisi, Sağlık algısı, Siberkondri

INTRODUCTION

In today's digital era, the rapid and convenient access to information via the internet has made online searches on health and illness increasingly appealing. This has highlighted the importance of e-health literacy, which refers to the ability to access reliable and meaningful health-related information through electronic means.[1,2] E-health literacy encompasses the skills necessary to seek, understand, and critically evaluate digital health information.[1,2] The internet now serves as a vast and significant platform for accessing medical content.[3] However, the ease with which health-related information can be accessed also presents certain risks, including exposure to inaccurate, misleading, or incomplete content from unverified sources, which in turn may lead to harmful health behaviors.[4]

The widespread use of the internet and the ease of access to health information have contributed to the emergence of cyberchondria, a recently recognized internet-related condition characterized by the compulsive searching of medical information.[4,5] Cyberchondria involves individuals seeking out information about real or potential health conditions in digital environments, often placing undue trust in the information found, attempting to self-diagnose, or searching for treatment options independently.[4,5] While accessing health-related information through online platforms can be beneficial, it simultaneously increases the likelihood of encountering incorrect or misleading content.[6] Furthermore, research has shown that extended engagement with online medical content can lead individuals to overanalyze their symptoms and potential diagnoses, contributing to heightened levels of health-related anxiety and cyberchondria.[4]

In this context, the concept of health perception—the way individuals evaluate their own health status—gains importance. Health perception reflects a complex assessment shaped by personal feelings, beliefs, biases, concerns, and expectations. It involves a subjective appraisal of one's current health and aims to foster healthy lifestyle behaviors.[1,7,8] Although health professionals have traditionally been the primary source of health information, ongoing technological advancements have led the general public to increasingly rely on the internet as a source of health-related knowledge. As a result, the ability to comprehend and apply such information now plays a crucial role in shaping individual health behaviors.[1]

Enhancing the levels of e-health literacy, cyberchondria awareness, and accurate health perception is essential not only for the general public but especially for healthcare professionals and those in training. Nursing students, as future members of the healthcare workforce, are expected to cultivate personal awareness in these domains. Given that today's nursing students largely represent Generation Z—who have grown up immersed in digital technology—it is anticipated that their e-health literacy, experiences with cyberchondria, and their perceptions of health will influence the quality of care they will eventually provide.

Although various studies have investigated e-health literacy, cyberchondria, or health perception independently in nursing students, there is a lack of research examining these three constructs collectively.[1,2,4,7,9] In recent years, studies have presented important findings examining the effects of the concepts of e-health literacy, cyberchondria, and health perception on nursing students. Kıbrıs and Kızılkaya have indicated that the level of e-health literacy has a significant effect on health perception and that this can enhance individuals' ability to evaluate health information and shape health behaviors.[1] Similarly, Mansur and Ciğerci, as well as Gürkan et al., have shown that the levels of e-health literacy among nursing students are associated with cyberchondria and can influence their behavior in searching for health information on the internet.[2,4] Additionally, Çaka et al. and Kuloğlu and Kamil have emphasized the interaction among these concepts, noting that health perception is closely related to the self-confidence and health literacy levels of healthcare workers.[7,9] Therefore, this study aimed to explore the relationships among e-health literacy, cyberchondria, and health perception in a sample of nursing students.

METHODS

Type of Research

This study is descriptive and correlational.

Population and Sample of the Study

The sample of the study was determined using the known population sampling method from nursing department students. Based on the total population of 795 students in the department, the sample size was calculated as 259 students, considering a 95% confidence level and a 5% margin of error. This sample size was then selected using the stratified sampling method, taking into account the distribution of students across the four academic years (first, second, third, and

fourth years). Stratified sampling ensured that participants from each year were proportionally represented. Accordingly, the final sample included 63 first-year, 60 second-year, 64 third-year, and 72 fourth-year students, totaling 259 participants. Individuals were selected using a simple random number table. Only students who voluntarily agreed to participate were included in the study; those who declined participation were excluded.

Data Collection Tools
Personal information form, E-Health Literacy Scale, Cyberchondria Severity Scale Short Form, Health Perception Scale were used as data collection tools.[1,2,4,7,9]

Personal information form
The personal information form was prepared by the researchers and inquired about the participants' age, gender, and class of study.

E-Health Literacy Scale (E-HLS)
The Turkish validity and reliability of the scale developed by Norman and Skinner (2006) was conducted by Coşkun and Bebiş (2015). The scale is a five-point Likert scale consisting of 10 items related to internet use (2 items) and 10 items measuring attitudes towards internet use (8 items). The first two items in the scale are not included in the scoring and the score to be obtained varies between 8-40. A high score on the scale indicates a high level of e-health literacy and a low score indicates a low level of e-health literacy. While the Cronbach's Alpha coefficient of the Turkish scale was reported as 0.78 was calculated as 0.86 in this study.[10]

Cyberchondria Severity Scale Short Form (CSS-12)
The scale was developed by McElroy and colleagues (2019). The Turkish validity and reliability study of the scale was conducted by Söyler et al. The Turkish validity and reliability study was conducted by Söyler et al. The scale is a five-point Likert-style instrument consisting of 12 items. The score to be obtained from the scale varies between 12-60. The scale is evaluated on a total score. Cronbach's alpha value of the Turkish scale is 0.862 was found to be 0.80 in this study.[11]

Health Perception Scale (HPS)
 It was developed by Diamond, Becker, Arenson, Chambers, and Rosenthal (2007). The Turkish validity and reliability study of the scale was conducted by Kadıoğlu and Yıldız (2012). The scale consists of 15 items and is prepared in a five-point Likert scale. The

score that can be obtained from the scale varies between 15-75. A high score indicates a high perception of health. The Cronbach Alpha coefficient of the original scale was 0.70.[12] In this study, it was found to be 0.67.

Data Collection
Data collection was conducted during class hours at a date and time convenient for nursing students. Prior to administering the instruments, the purpose of the study and the expectations from participants were clearly explained. The measurement tools were then distributed, and participants were given adequate time to complete them. Upon completion, the forms were collected. The data were gathered over a two-month period, between November 15, 2023, and January 15, 2024.

Data Analysis
The data collected through the measurement tools in this study were analyzed using the IBM SPSS statistical software. Descriptive analyses included the calculation of frequency and percentage values. For continuous variables such as age, and the scores from the E-HLS, CSS-12, and HPS scales, means and standard deviations were reported. To assess the distribution of the data, normality tests including skewness, kurtosis, the Kolmogorov-Smirnov test, and visual histogram inspection were performed. Based on the normality results, parametric tests such as the independent samples t-test and One-way ANOVA were employed for group comparisons. Statistical significance was considered at the $p<0.05$ level within a 95% confidence interval.

Ethical Aspects of the Research
In order to conduct this study, official written permission was obtained from the university where the research was conducted, ethical approval numbered 2023/374 (07.08.2023) was obtained from the Bolu Abant İzzet Baysal University Human Research Ethics Committee in Social Sciences, informed consent was obtained from the participants, and permission for the measurement tools used in the research was obtained from the author via e-mail.

RESULTS
Table 1 shows the mean scores of the nursing students from the scales. The mean score of the nursing students from the E-HLS scale was 28.46±5.4, the mean score from the CSS-12 scale and the mean score from the HPS scale were 29.77±6.9 and 39.37±6.9.

Table 1. Data on health literacy, cyberchondria and health perception scales of nursing students

	Minimum	Maximum	Mean±SD	Skewness	Kurtosis
E-HLS	11.00	40.00	28.46±5.4	-0.175	0.552
CSS-12	14.00	52.00	29.77±6.9	0.129	-0.262
HPS	19.00	64.00	39.37±6.9	0.039	0.860
Age	18.00	27.00	20.61±1.7		

E-HLS; E-Health Literacy Scale, CSS-12; Cyberchondria Severity Scale Short Form, HPS; Health Perception Scale.

Table 2. The relationship between some demographic variables of nursing students and e-health literacy, cyberchondria and health perception scales

Demographic	n (%)	E-HLS	CSS-12	HPS
Gender				
Woman	207 (79.9)	28.54±4.9	29.42±7.0	39.39±7.1
Male	52 (20.1)	28.17±6.9	31.21±6.3	39.30±6.1
Statistics *		t=0.441, df=257, p=0.659	t=1.666, df=257, p=0.097	t=0.077, df=257, p=0.939
Class of study				
1 class	63 (24.3)	25.77±4.8	29.36±5.7	37.69±7.6
2 classes	60 (23.2)	28.40±5.4	29.71±6.1	38.66±7.2
3 class	64 (24.7)	29.51±4.6	29.12±7.4	40.85±5.9
4 class	72 (27.8)	29.94±5.3	30.77±8.1	40.11±6.8
Statistics** **Post-hoc**		F=8.618, df=3 **p=0.0001[+]** 1<2,3,4	F=0.757, df=3 p=0.519	F=2.694, df=3 **p=0.047** 1<3,4

E-HLS; E-Health Literacy Scale, CSS-12; Cyberchondria Severity Scale Short Form, HPS; Health Perception Scale, *independent sample t-test, **One-way ANOVA, +p<0.05.

The average age of the nursing students who took part in the study was 20.6±1.7 years. The majority of participants were female, accounting for 79.9% (n=207) of the sample (Table 2). Table 2 also presents the findings regarding the association between certain demographic variables and the scores obtained from the measurement instruments. Statistical analysis showed no significant relationship between gender and the scores on the E-Health Literacy Scale (E-HLS), Cyberchondria Severity Scale-12 (CSS-12), or Health Perception Scale (HPS). However, it was found that first-year students had significantly lower scores in both health literacy and health perception when compared to students in higher academic years (Table 2).

Table 3 displays the correlation results between the age of nursing students and their scores on the measurement scales. A statistically significant but weak positive correlation was observed between students' age and their e-health literacy scores (r=0.217). However, no statistically significant associations were identified among the variables of e-health literacy, cyberchondria, and health perception (Table 3).

Table 3. Collinearity analysis data between age and scales of nursing students

	Age	E-HLS	HPS
E-HLS	0.217*	1	
HPS	0.116	-0.050	1
CSS-12	0.089	0.105	0.105

*p<0.001, E-HLS; E-Health Literacy Scale, CSS-12; Cyberchondria Severity Scale Short Form, HPS; Health Perception Scale.

DISCUSSION

The current study identified that the nursing students' level of e-health literacy was moderate (Table 1). This finding aligns with previous national and international research, which also reports moderate levels of e-health literacy among nursing students.[1-3] This suggests that students are reasonably well-adapted to the digital age and possess the skills to effectively utilize health-related information. It is believed that factors such as exposure to technology-integrated environments, frequentinternet use, and access to health-related content during undergraduate education may contribute to their awareness and knowledge in this area.

No significant association was found between gender and e-health literacy (Table 2). While some studies support this finding,[4-6] others have indicated that gender may play a role in influencing e-health literacy levels.[7-8] Thus, the literature remains inconclusive on the relationship between gender and e-health literacy. Moreover, this study revealed that as students' academic level and age increased, so did their e-health literacy. This is consistent with existing studies reporting a positive relationship between grade level, age, and health literacy scores.[9,10] Given that students accumulate more knowledge through their training in a health-related field, an increase in literacy levels with academic progression is both expected and desirable.

The study also showed that the cyberchondria levels of nursing students were moderate (Table 1). This may suggest that students approach online health information with caution and awareness. These findings are consistent with prior studies,[4,11] although one study noted that over half (57.6%) of students exhibited cyberchondriac tendencies.[12] The fact that these students experienced online education during the COVID-19 pandemic may have influenced their behavior, as increased reliance on digital platforms during that period may have affected their information-seeking patterns. Cyberchondria is characterized by excessive or compulsive searching for health-related information online to self-diagnose or understand potential illnesses.[4] It is often viewed as a problematic behavior in contemporary society and is influenced by various factors, including personal health history, technological engagement, and internet dependency.[13-16] Given these influences, divergent findings in the literature are not surprising. In this study, no significant association was found between cyberchondria levels and demographic variables such as gender, age, and academic year.

With regard to health perception, nursing students were found to have a moderate level of perceived health (Table 1). This implies a basic ability to assess their own health, although further awareness and knowledge may be needed. Similar findings were reported by Çilingir and Aydın,[17] while other studies have shown either higher[18,19] or lower levels.[20] Health perception, being a subjective evaluation of one's health, may be shaped by factors such as health education and the capacity to use digital or printed resources.[7,8,20] In the present study, no significant relationship was identified between demographic variables (gender, age, academic year) and students' health perception scores (Table 2). Çilingir and Aydın[17] suggested that the inability to assess their health effectively might explain such nonsignificant associations. Conversely, some studies indicate that these variables do impact health perception.[8,17] It is therefore recommended that health education efforts be expanded to improve students' understanding of health-related behaviors. Interestingly, the study found no significant associations between e-health literacy, cyberchondria, and health perception. This aligns partially with the findings of Gürkan et al., who also reported no link between e-health literacy and cyberchondria.[4] One possible explanation is that students' skills in critically evaluating the credibility of digital health information may not be developed enough to influence their cyberchondria tendencies.

In contrast, other studies have reported a significant positive correlation between e-health literacy and health perception.[4,21] These findings suggest that the ability to obtain and interpret health information can contribute to a more positive health perception. However, the absence of such a relationship in this study may indicate that students have not yet integrated health information into their personal perception of health or that other educational or environmental variables may be at play. Additionally, contrary to some findings in the literature, no significant relationship was found between cyberchondria and health perception in this study. Starcevic and Berle[22] proposed that an individual's perception of their health influences their tendency toward cyberchondria. Likewise, Baumgartner and Hartmann[23] and Muse et al.[24] suggested that lower health perception may be associated with higher cyberchondria due to increased reliance on internet resources for health concerns. The discrepancy observed in the current study may be attributed to the fact that nursing students, as future healthcare providers, tend to critically evaluate health information, reducing the direct impact of their health perception on their cyberchondria tendencies. In summary, no significant interrelationships were found between e-health literacy, cyberchondria, and health perception in this sample of nursing students. As digital natives, these students may not perceive online health information seeking as problematic and may be influenced by their training to assess such information critically. This finding indicates a degree of adaptation to the digital health environment and a developing competence in navigating digital health resources.[1]

Limitations of the Study

While this study provides valuable insights into the levels of e-health literacy, cyberchondria, and health perception among nursing students, it is not without limitations. First, the research was conducted with students enrolled in the nursing department of a single university, which may restrict the generalizability of the findings to students from other health-related disciplines or different geographical areas. Second, the cross-sectional design limits the ability to infer causal relationships among the variables studied. Future studies employing longitudinal designs could provide a deeper understanding of how these variables interact and evolve over time. Third, the data collection relied on self-reported questionnaires, which may introduce biases such as recall inaccuracies or social desirability bias. Moreover, although demographic variables like age and gender were examined, other potentially influential factors—such as socioeconomic status, digital access, or family health background—were not included in the analysis. In light of these limitations, it is recommended that future research involve larger and more heterogeneous samples, include a broader range of demographic variables, and adopt longitudinal methodologies. Such efforts would contribute to a more comprehensive understanding of how e-health literacy, cyberchondria, and health perception are interconnected among nursing students.

CONCLUSION

The findings of this study revealed that nursing students demonstrated moderate levels of e-health literacy, cyberchondria, and health perception. It was observed that as the students progressed in their academic years, their e-health literacy and health perception scores improved. However, no significant association was identified between students' e-health literacy, cyberchondria, and health perception levels. Additionally, gender and academic year were not found to significantly influence students' cyberchondria or health perception levels.

Given these findings, integrating curriculum components aimed at enhancing e-health literacy and raising awareness about cyberchondria may contribute positively to nursing education. Educational interventions should focus on equipping students with the ability to critically assess digital health information and utilize online health resources responsibly. Enhancing skills related to verifying the credibility of online health content is also essential.

To address cyberchondria and improve health perception, access to psychosocial support services should be strengthened. Such measures may aid students in managing health-related anxiety more effectively. Furthermore, nursing students should receive guidance on the informed and appropriate use of digital health applications, including their potential benefits and limitations. In this study, no statistically significant relationship was found among cyberchondria, health perception, and health literacy. However, it is recommended that future studies examine these relationships more comprehensively to better understand the interaction among these variables and to develop effective educational interventions.

Future studies involving diverse student populations and disciplines within health sciences are recommended to enhance the applicability and generalizability of these findings. Overall, these strategies could foster a more informed and competent generation of healthcare professionals in the evolving digital health landscape.

Authorship contribution statement

Consept and desing: HHT, LNU.

Acquisition of data: HHT, LNU.

Analysis and interpretation of data: HHT.

Drafting of the manuscript: HHT, MTK.

Critical revision of the manuscript for important intellectual content: HHT, MTK.

Declaration of competing interest

None of the authors have potential conflicts of interest to be disclosed.

Ethical approval

In order to conduct this study, official written permission was obtained from the university where the research was conducted, ethical approval numbered 2023/374 (07.08.2023) was obtained from the Bolu Abant İzzet Baysal University Human Research Ethics Committee in Social Sciences, informed consent was obtained from the participants, and permission for the measurement tools used in the research was obtained from the author via e-mail. This study has been prepared in accordance with the Declaration of Helsinki.

Availability of data and materials

All data generated or analyzed during this study are included in this published article.

Funding

The researcher(s) received no financial support for the research, authorship and/or publication of this article.

REFERENCES

1. Kıbrıs Ş, Kızılkaya S. E-sağlık okuryazarlık düzeyinin sağlık algısı üzerine etkisinin incelenmesi. Sağlık ve Sosyal Refah Araştırmaları Dergisi. 2023;5(2):241-250.
2. Mansur F, Ciğerci K. Siberkondri ve e-sağlık okuryazarlığı arasındaki ilişki. Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi. 2022;11(1):11-21.
3. Deniz S. Bireylerin e-sağlık okuryazarlığı ve siberkondri düzeylerinin incelenmesi. İnsan ve İnsan. 2020;7(24):84-96.
4. Gürkan AT, Özdelikara A, İnanlı TK. Hemşirelik öğrencilerinde e-sağlık okuryazarlığı ve siberkondri ilişkisi. Üniversite Araştırmaları Dergisi. 2023;6(4):474-480.
5. Tarhan N, Tutgun-Ünal A, Ekinci Y. Yeni kuşak hastalığı siberkondri: Yeni medya çağında kuşakların siberkondri düzeyleri ile sağlık okuryazarlığı ilişkisi. OPUS Int J Soc Res. 2021;17(37):4253-4297.
6. Barış K, Top FÜ. Hemşirelik öğrencilerinin dijital okuryazarlık, siberkondria düzeyleri ve ilişkili faktörlerin değerlendirilmesi. Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi. 2024;13(1):243-252.
7. Çaka SY, Topal S, Suzan ÖK, Çınar N, Altınkaynak S. Hemşirelik öğrencilerin sağlık algısı ile özgüvenleri arasındaki ilişki. J Human Rhythm. 2017;3(4):198-203.
8. Özdemir SÇ, Sağlam HY, Yiğit D, Arık RS. Hemşirelik öğrencilerinin meslek seçimi ile sağlık algısı arasındaki ilişki. Sağlık ve Toplum. 2021;31(3):128-136.
9. Kuloğlu Y, Kamil U. Geleceğin sağlık çalışanlarında sağlık okuryazarlık düzeyinin sağlık algısı üzerindeki etkisi. Doğuş Üniversitesi Dergisi. 2022;23(1):255-277.
10. Coşkun S, Bebiş H. Adolesanlarda e-sağlık okuryazarlığı ölçeği: Türkçe geçerlik ve güvenirlik çalışması. Gülhane Tıp Dergisi. 2015;57(4):378-384.
11. Söyler, Biçer İ, Çavmak D. Siberkondri ciddiyeti ölçeği kısa formu (CSS-12) Türkçe geçerlik ve güvenirlik çalışması. In: Uyar S, Kıraç R, eds. Davranışsal Boyutları ile Sağlık. 1st ed. Ankara: Nobel Yayın Evi; 2021:291-299.
12. Kadıoğlu H, Yıldız A. Sağlık Algısı Ölçeği'nin Türkçe çevriminin geçerlilik ve güvenilirliği. Turk Klin Tip Bilim Derg. 2012;32(1):47.
13. Kato H, Shimizu H, Shibue Y, et al. Clinical course of 2019 novel coronavirus disease (COVID-19) in individuals present during the outbreak on the Diamond Princess cruise ship. J Infect Chemother. 2020;26(8):865-869.
14. Kaynak S, Arat N, Yardımcı F, Şenol S, Yılmaz HB. Hemşirelik öğrencilerinin e-sağlık okuryazarlık düzeyi ile klinik karar verme becerileri arasındaki ilişki. Ege Univ Hemşirelik Fak Derg. 2022;38(3):229-237.
15. Şengül H, Çınar F, Çapar H, Bulut A, Çakmak C. Sağlık bilimleri fakültesi öğrencilerin e-sağlık okuryazarlığı düzeyleri ve internet kullanımına yönelik tutumları: Bir vakıf üniversitesi örneği. J Soc Humanit Sci Res. 2017.
16. Tubaishat A, Habiballah L. eHealth literacy among undergraduate nursing students. Nurse Educ Today. 2016;42:47-52.
17. Çilingir D, Aydın A. Hemşirelik bölümünde öğrenim gören öğrencilerin sağlık algısı. Flor Nightingale Hemşirelik Derg. 2017;25(3):167-176.
18. Evans AY, Anthony E, Gabriel G. Comprehensive health literacy among undergraduates: A Ghanaian university-based cross-sectional study. HLRP Health Lit Res Pract. 2019;3(4):e227-e237.
19. Tuğut N, Yılmaz A, Çelik BY. Hemşirelik öğrencilerinin sağlık okuryazarlığı düzeyleri ile sağlıklı yaşam biçimi davranışlarının belirlenmesi. Cumhuriyet Üniversitesi Sağlık Bilimleri Enstitüsü Dergisi. 2021;6(2):120-128.
20. Molu B, Ozpulat F, Bas MT. Investigation of nursing students' cyberchondria perceptions and health anxiety. Int J Caring Sci. 2023;16(1):72-79.
21. Zhu X, Zheng T, Ding L, Zhang X. Exploring associations between eHealth literacy, cyberchondria, online health information seeking and sleep quality among university students: a cross-section study. Heliyon. 2023;9(6):e14059.
22. Starcevic V, Berle D. Cyberchondria: Towards a better understanding of excessive health-related Internet use. Expert Rev Neurother. 2013;13(2):205-213.
23. Baumgartner SE, Hartmann T. The role of health anxiety in online health information search. Cyberpsychol Behav Soc Netw. 2011;14(10):613-618.
24. Muse K, McManus F, Leung C, Meghreblian B, Williams JMG. Cyberchondriasis: fact or fiction? A preliminary examination of the relationship between health anxiety and searching for health information on the Internet. J Anxiety Disord. 2012;26(1):189-195.