Mediterranean Nursing and Midwifery

Mediterr Nurs Midwifery 2024; 4(3): 159-165 DOI: 10.4274/MNM.2024.24209

ORIGINAL ARTICLE

Searching for Health Information on the Internet; Determining the Relationship Between Nurses' Cyberchondria Levels, Health Anxiety, and Effective Factors

İnternette Sağlık Bilgilerinin Aranması; Hemşirelerin Siberkondri Düzeyleri ile Sağlık Kaygıları ve Etkileyen Faktörler Arasındaki İlişkinin Belirlenmesi

Seda Şahan[1], Elif Deniz Kaçmaz[2]

[1]Department of Nursing Fundamentals, İzmir Bakırçay University Faculty of Health Sciences, Nursing, İzmir, Turkey
[2]Department of Psychiatric Nursing, İzmir Bakırçay University Faculty of Health Sciences, Nursing, İzmir, Turkey

Abstract

Objective: Rapid technological developments have increased the search for health-related information on the internet. It has also affected nurses, who have high concerns about diseases due to the nature of their profession. This study was conducted to examine the relationship between nurses' cyberchondria levels and health anxiety and the influencing factors.

Method: Health anxiety inventory and cyberchondria severity scale were used as data collection tools in this study conducted with 388 nurses working in a state hospital in Turkey. The t-test, One-Way ANOVA, correlation, and logistic regression analyses were used in the data analysis.

Results: It was determined that the total score of the nurses on the health anxiety scale was 26.34±2.66 and the total mean score of the nurses on the cyberchondria severity scale was 34.92±3.77. A high positive correlation was found between cyberchondria and health anxiety (ρ=0.986; p=0.013). It was found that demographic variables significantly predicted cyberchondria scale scores and health anxiety.

Conclusion: Because of the analysis, it was determined that the health anxiety and cyberchondria severity of the nurses participating in the study were moderate. It is thought that nurses' professional knowledge and awareness of diseases increase their health anxiety, and they conduct more research on health problems via the internet. Considering the prevalence of internet use today, it is recommended to plan in-service training on internet literacy for nurses.

Keywords: Cyberchondria, health anxiety, nurse, online search, health information

Öz

Amaç: Tekonolojideki hızlı gelişmeler, internet ortamında sağlıkla ilgili bilgi arayışının artmasına neden olmuştur. Mesleğin doğasından kaynaklı hastalıklarla ilişkili kaygıları yüksek olduğu belirtilen hemşireleri de etkilemiştir. Bu çalışma hemşirelerin siberkondri düzeyleri ve sağlık anksiyeteleri arasındaki ilişkinin ve ektileyen faktörlerin incelenmesi amacıyla yapılmıştır.

Yöntem: Türkiye'de bir devlet hastanesinde çalışan 388 hemşire ile yürütülen bu araştırmada, veri toplama aracı olarak; hemşire bilgi formu, sağlık anksiyetesi envanteri, siberkondri ciddiyeti ölçeği kullanılmıştır. Verilerin analizinde sayı yüzdelik dağılımı, t-test. One-Way ANOVA, korelasyon ve lojistik regresyon analizleri kullanılmıştır.

Bulgular: Hemşirelerin sağlık kaygısı ölçeğinden aldıkları toplam puanın 26,34±2,66, siberkondri şiddet ölçeğinden aldıkları toplam puan ortalamasının ise 34,92±3,77 olduğu belirlenmiştir. Siberkondri ile sağlık kaygısı arasında yüksek düzeyde pozitif korelasyon bulunmuştur (ρ=0,986; p=0,013). Demografik değişkenlerin siberkondri ölçeği puanlarını ve sağlık kaygısını anlamlı düzeyde yordadığı bulunmuştur.

Sonuç: Araştırma sonucuna göre hemşirelerin sağlık kaygısı ve siberkondri şiddetinin orta düzeyde olduğu belirlenmiştir. Hemşirelerin hastalıklarla ilgili mesleki bilgi ve farkındalıklarının sağlık kaygılarını artırdığı, sağlık sorunlarına ilişkin internet üzerinden daha fazla araştırma yaptıkları düşünülmektedir. Günümüzde internet kullanımının yaygınlığı dikkate alındığında hemşirelere yönelik internet okuryazarlığı konusunda hizmet içi eğitimlerin planlanması önerilmektedir.

Anahtar Kelimeler: Siberkondri, sağlık kaygısı, hemşire, çevrimiçi arama, sağlık bilgileri

Corresponding Author:
Seda Şahan, seda.sahan@bakircay.edu.tr

Received: January 01, 2024
Accepted: March 12, 2024

Cite this article as: Şahan S, Kaçmaz ED. Searching for Health Information on the Internet; Determining the Relationship Between Nurses' Cyberchondria Levels, Health Anxiety, and Effective Factors. Mediterr Nurs Midwifery. 2024; 4(3): 159-165

Introduction

Access to information by individuals worldwide and in our country is rapidly increasing in online environments. Online environments are seen as an essential source of health information due to the increasing access of individuals to online health support groups, websites containing health information, health institutions, ministry information sites, and health professionals over the internet (1). The concept of cyberchondria emerged as a reflection of the concept of hypochondria, which is seen as fear and anxiety due to different interpretations of bodily sensations, in online environments (2). Cyberchondria is the excessive and repetitive search for health information online for reasons such as reducing people's anxiety about their health status or dissatisfaction with health institutions. Cyberchondria includes self-diagnosis, searching for most health-related information on the internet instead of consulting experts, and online health research (3,4). Studies show that 75-89% of individuals search for health information online (5,6). Previous studies have shown that self-diagnosis behaviors cause unnecessary psychological stress, leading to anxiety about one's health status (7-9). When individuals search for health information online, their anxiety levels increase, the reliability of the information is questioned, and it turns into a cycle in which people's efforts to seek reassurance continue (10).

Health anxiety causes individuals to interpret their situation negatively because of searching online for diseases that are not life-threatening and have no severe symptoms. This situation negatively affects the physical health of individuals and increases their health anxiety (11). Health anxiety is often defined by excessive worry or fear based on the misappraisal of symptoms and bodily sensations (12).

Healthcare workers' health anxiety is reported to be higher than that in other occupational groups (13). Because of the nature of their work, nurses are exposed to various stress factors, such as caring for critically ill patients, long-term confrontation with dying patients, and feeling a high level of responsibility. These stress factors and the resulting devastating psychological and physiological effects can lead to more negative consequences that endanger human life, such as various diseases, decreased occupational performance, deterioration of emotional functions, reduced productivity, and increased anxiety (14).

Nurses should be able to search for disease-related content on the Internet because it is relevant to professional nursing knowledge (15,16). Nurses' online searches for health information may affect their participation in care, quality of care, commitment, or leaving their profession (7). Therefore, it is essential to determine nurses' cyberchondria and health anxiety levels. This study was conducted to reveal the relationship between nurses' cyberchondria status and health anxiety and to examine these situations according to various variables.

Main Points

- This study showed that nurses' health anxiety and cyberchondria severity were moderate, and there was a positive relationship between health anxiety and cyberchondria.
- It was found that socio-demographic variables, gender, unit of work, and presence of chronic disease affected health anxiety and cyberchondria levels.
- This study determined that chronic disease, an independent variable, was the most critical predictor of cyberchondria.

Material and Method

This study sought answers to the following research questions:

1. Which variables affect nurses' health anxiety levels?

2. What variables affect nurses' cyberchondria levels?

3. Is there a relationship between nurses' health anxiety and cyberchondria levels?

Design

This descriptive, cross-sectional study was conducted to determine the correlation between cyberchondria, health anxiety, and effective factors in nurses.

Participants and the Procedure

The study population consisted of nurses working in a state hospital. A purposeful sampling method was used in the study, and the sample size was determined using a computer program (G*Power 3.1 version). The G*Power analysis [confidence interval (CI) of 95%, an error rate of 5%, and an incidence of 50%] was conducted with 388 nurses for 98% power. The data were collected from November 2022 to February 2023 in Turkey.

Data Collection Process

The data of the study were collected using a nurse information form, cyberchondria severity scale, and the health anxiety inventory (HAI). The researcher informed all nurses about the purpose of the study. Written consent was also obtained from the volunteer nurses.

Data Collection Tools

Nurse information form: The form prepared by the researchers in light of the literature is composed of seven questions related to nurses' demographic information (age, gender), professional experience (working year, clinic), and illness (presence of illness, caregiving).

Cyberchondria severity scale: The short form of the cyberchondria severity scale was used in this study. Barke et al. (17) prepared the short form of the 33-item scale developed by McElroy and Shevlin (16), and the Turkish validity and reliability of the short form were evaluated by Tuğtekin and Barut Tuğtekin (18). CSS-15 is a 15-item scale consisting of five dimensions (compulsion, distress,

excessiveness, reassurance, and mistrust of medical professional). The scale has no cut-off point, and higher scores indicate a higher level of cyberchondria. It is possible to obtain a score between 15 and 75 from the scale. The Cronbach's alpha value of the scale was found to be 0.88 in this study.

HAI: The short form of the HAI, developed to measure academicians' health anxiety, was created by Rode et al. (19) and is an 18-item self-report scale. The reliability and validity study of the scale for Turkish was done by Aydemir et al. (20). The first 14 items of the scale constitute the body dimension (questioning the mental state), and the other four items include additional dimensions related to the negative consequences of the disease (about how their mental state can be under the assumption of a severe illness). The scoring of the scale is between 0 and 3 for each item, and a high score indicates a high level of health anxiety. A maximum of 54 points can be obtained from the scale. The Cronbach's alpha value of the scale was found to be 0.76 in this study.

Statistical Analysis

The data were evaluated using the IBM SPSS.21 program with descriptive statistics, correlation analysis, binary logistic regression analysis, and independent sample t-test. ANOVA was used to create comparisons due to the normal distribution of the data. Binary logistic regression analysis was performed to determine the factors of cyberchondria and health anxiety levels in nursing. Statistical significance was defined as $p<0.05$. The effect estimates were provided as an odds ratio (OR) and a 95% CI. The degree to which nurses experienced health anxiety and cyberchondria was the dependent variable in this study; the independent variables were the potential predictor variables.

Ethical Considerations

The research received ethical approval before implementation from the İzmir Bakırçay University's Ethics Committee (date: 25.10.2022, no: 743). The hospital where the study was conducted granted institutional permission on November 1, 22. The nurses were given the opportunity to agree or decline participation in the research, along with the necessary information regarding the study, on an online form.

Results

A total of 388 nurses participated in the study. The mean age of the nurses was 41.2±5.15. Of the participating nurses, 68.3% (n=265) were female, 59% (n=229) had a bachelor's degree, 38.4% (n=149) had worked in the clinic for 6-10 years, and 30.6% (n=119) were working in the emergency department. Of the participants, 17.8% (n=69) had a chronic disease, 54.9% (n=213) had someone among their relatives with a chronic disease, and 35.6% (n=138) had a dependent person(s).

It was determined that the total score that the nurses obtained from the HAI was 26.34±2.66, while their score from the body dimension of the scale (hypersensitivity to somatic symptoms and anxiety dimension) was 21.48±2.13 and their score from the additional dimension (the dimension associated with adverse outcomes of the disease) was 4.95±1.63. The total mean score of the nurses from the cyberchondria severity scale was 34.92±3.77 (Table 1).

Comparison of gender and scale total score and sub-dimension scores showed a significant relationship between gender and the dimension of negative consequences of the disease ($t=-2.196$, $p=0.029$). A significant relationship was found between the total health anxiety mean score ($t=-2.313$, $p=0.021$) and total cyberchondria mean score ($t=-1.668$ $p=0.042$) It was identified that males had higher health anxiety and cyberchondria levels than females (Table 1).

A significant relationship was identified between the clinics where the nurses worked and their health anxiety total mean score ($F=3.896$, $p=0.047$) and cyberchondria total mean score ($F=3.953$, $p=0.009$). The health anxiety and cyberchondria levels of nurses working in ICUs were higher (Table 1).

With regard to the presence of dependents, a significant relationship was found between health anxiety total mean score ($t=3.478$, $p=0.03$) and cyberchondria total mean score ($t=4.106$ $p=0.017$), and nurses with dependents were found to have higher health anxiety and cyberchondria levels (Table 1).

With regard to the status of having a chronic disease, there was a significant relationship between health anxiety total mean score ($t=3.768$ $p=0.041$) and cyberchondria total mean score ($t=3.855$ $p=0.033$), and there was a significant relationship between health anxiety and cyberchondria levels of nurses with chronic disease (Table 1).

Pearson correlation analysis was performed between the health anxiety and cyberchondria scale total scores. A high level of positive correlation was found between cyberchondria and health anxiety ($\rho=0.986$; $p=0.018$). There was a moderate positive correlation between the dimension of negative consequences of the disease and cyberchondria ($\rho=0.659$; $p=0.044$). There was no significant relationship between hypersensitivity and physical symptoms and anxiety and cyberchondria ($\rho=0.357$; $p=0.165$) (Table 2).

The detailed results of the logistic regression analysis among potential predictors are presented in Table 3. According to the regression analyses, the following four independent predictive variables exerted an influence on cybercondria and health anxiety. Among them, gender (OR: 1.217, 95% CI: 0.986-1.763, $p<0.05$), unit (OR: 1.852, 95% CI: 1.214-2.176, $p<0.05$), having a depend (OR: 2.158, 95% CI: 1.220-3.816, $p<0.05$), and having a chronic disease (OR: 1.958, 95% CI: 1.231-2.721, $p<0.05$) showed a positive relationship with cybercondria.

Table 1.
Comparison of Nurses' Demographic Characteristics, Cyberchondria, and Health Anxiety Levels

Variable	Health anxiety body dimension (total score mean SD =21.48±2.13)		Health anxiety additional dimension (total score mean SD =4.95±1.63)		Health anxiety total score (total score mean SD =4.95±1.63)		Cyberchondria total score (total score mean SD =34.92±3.77)	
	Mean ± SD	**Test**	**Mean ± SD**	**Test**	**Mean ± SD**	**Test**	**Mean ± SD**	**Test**
Gender								
Female	4.89±1.78	t=0.935 p=0.350	21.16±4.20	t=-2.196 **p=0.029**	26.06±4.61	t=-2.313 **p=0.021**	34.65±4.68	t=-1.668 **p=0.042**
Male	5.08±1.93		22.15±3.88		27.23±4.49		35.52±4.94	
Level of education								
High school	4.96±2.11	F=1.032 p=0.357	22.04±4.16	F=1.050 p=0.350	27.01±4.93	F=0.885 p=0.416	35.55±4.56	F=1.369 p=0.215
University	4.86±1.75		21.35±4.03		26.22±4.57		34.60±4.68	
Master's degree	5.21±1.71		21.21±4.37		26.43±4.80		35.20±4.29	
Unit types								
Internal unit	4.75±1.85	F=2.249 p=0.082	20.94±4.02	F=3.292 **p=0.038**	26.06±4.98	F=3.896 **p=0.047**	34.85±4.60	F=3.953 **p=0.009**
Insentive or critical care	5.39±1.84		21.97±4.21		27.00±4.67		37.85±5.60	
Surgical unit	4.76±1.65		21.31±4.47		26.29±3.88		33.83±4.46	
Emergency departmant	5.03±1.93		21.53±3.58		26.33±5.0		35.75±4.42	
Having a chronic disease								
Yes	4.75±1.71	t=-1.000 p=0.318	21.76±4.16	t=1.634 **p=0.058**	26.52±3.88	t=3.768 **p=0.041**	35.21±4.25	t=3.855 **p=0.033**
No	4.99±1.89		21.42±4.12		27.23±4.49		34.86±4.71	
Having a dependent								
Yes	5.05±1.83	t=0.833 p=0.405	21.22±3.97	t=1.153 p=0.128	26.52±4.63	t=3.478 **p=0.03**	34.94±4.19	t=4.106 **p=0.017**
No	4.89±1.82		20.62±3.62		25.28±4.74		34.92±5.07	

SD=standard deviation

Table 2.
Significant Correlations Among Variables

Score correlation	Pearson's correlation	Sig.
Health anxiety total score and cyberchondria total score	0.986	**0.018**
Health anxiety body dimension and cyberchondria total score	0.357	0.165
Health anxiety additional dimension and cyberchondria total score	0.659	**0.044**

In addition, gender (OR: 2.751, 95% CI: 1.665- 4.546, p<0.05), unit (OR: 1.848, 95% CI: 1.568-2.265, p<0.05), having a depend (OR: 1.632, 95% CI: 1.294-2.876, p<0.05), and having a chronic disease (OR: 2.416, 95% CI: 1.753-23.241, p<0.05) showed a positive relationship with health anxiety. All four predictors showed significant statistical differences (Table 3).

Discussion

It is thought that the level of cyberchondria and health anxiety in nurses may affect nursing care (7,13). This study sought to explain the relationship between nurses' health anxiety and cyberchondria levels and the variables affecting them.

It is reported that the level of anxiety in nurses and other healthcare professionals is higher than that in other individuals (13). The studies examining nurses' health anxiety levels determined that their health anxiety scale mean scores were 51.43 (13), and 35.87±82 (21). This study determined that nurses' total health anxiety scale mean score was 26.34±2.66. Considering that the highest and the lowest points that can be obtained from the scale are 54 and 0, it can be argued that participating nurses' health anxiety mean scores were at a moderate level. In this study, it was determined that the health anxiety levels of nurses were lower than those obtained in other studies conducted with nurses. This difference can be explained by the fact that the studies whose findings were used in comparison were conducted during the Coronavirus disease-2019 pandemic.

Table 3.
The Results of Logistic Regression Analysis on the Effect of Demographic Characteristics on Nurses' Cyberchondria Severity Scale and Health Anxiety Inventory Scores

		Cyberchondria severity scale				Health anxiety inventory			
Predictors	**Variable**	**β**	**p**	**OR**	**95% CI**	**β**	**p**	**OR**	**95% CI**
Gender	Female (reference)								
	Male	0.867	**0.04**	1.217	0.986-1.763	1.012	0.034	2.751	1.665-4.546
Unit									
	Internal unit (references)								
	Insentive or critical care	0.945	**0.03**	1.852	1.214-2.176	1.165	0.002	1.848	1.568-2.265
	Surgical unit	0.095	0.525	1.100	0.820-1.475	1.029	0.120	1.671	1.346-2.761
	Emergency department	0.784	0.012	0.931	1.017-1.352	0.463	0.88	1.461	0.994-1.792
Having a dependent									
	Yes	0.769	0.008	2.158	1.220-3.816	0.837	0.024	1.632	1.294-2.876
	No (references)								
Having a chronic disease									
	Yes	0.915	0.021	1.958	1.231-2.721	1.117	0.027	2.416	1.753-23.241
	No (references)								

OR=odds ratio, CI=confidence interval

It is natural that nurses experienced high levels of health anxiety during the pandemic. It is thought that the decrease in the effect of the pandemic in Turkey during the data collection process and the stretching of the measures were essential factors in the moderate health anxiety levels of nurses.

Health anxiety is an important symptom, especially since it can cause changes in attitudes toward health, such as cyberchondria (22). This study determined that nurses' total cyberchondria mean score was 34.92±3.77. The average cyberchondria scores of the nurses participating in the research are at a medium level. The cyberchondria levels obtained in studies examining the levels of cyberchondria in different sample groups support our findings. The cyberchondria scale mean score was found to be 39.22±8.85 in a study conducted with academicians (23); 28.1±12.1 in patients who applied to the urology outpatient clinics (24). Because cyberchondria can provide misinformation and misguide individuals, it is essential that individuals have sufficient health information (25). lower levels of cyberchondria among nurses are related to the development of occupational health literacy.

When demographic variables were compared regarding the health anxiety and cyberchondria scale scores, it was determined that male nurses had higher mean scores on the health anxiety and cyberchondria scales. A study found that male academicians' health anxiety and cyberchondria scale mean scores were significantly higher (23). This study determined that gender, as an independent variable, was the most important predictor of health anxiety. There has been no comprehensive study on gender distribution in cyberchondria (26). This study suggests that male nurses conduct more online research on disease symptoms because of more significant health concerns.

Due to irregular and heavy work and shift conditions, insomnia, and caring for suffering and dying individuals, nurses have a high level of anxiety as a group. Nurses' constant communication with patients can increase their anxiety about their health (27). This study determined that the health anxiety mean scale scores and cyberchondria mean scale scores of nurses working in intensive care clinics were higher. Health anxiety is a critical factor that increases stress levels in intensive care nurses (28). Intensive care clinics are stressful units within health institutions where severely ill patients are present (29). It has been reported that nurses in intensive care units face more psychological burdens than other clinics and the general population (30). It is expected that nurses working in intensive care units have higher health anxiety.

The current study determined that nurses with chronic diseases had higher mean scores on the health anxiety scale and cyberchondria scale. A study determined that the health anxiety scale mean scores of academicians with chronic diseases were significantly higher (23). Similarly, a review of studies in the literature showed that individuals with chronic diseases have higher anxiety levels than those without chronic diseases (19). A study conducted with university students reported that students with health problems had higher levels of cyberchondria (31). Chronic diseases cause stressors in individuals' lives due to treatment, drug use, pain, and deterioration in family relationships and increase their anxiety levels (23). This study determined

that chronic disease, an independent variable, was the most critical predictor of cyberchondria. In this case, it is thought that having professional knowledge, knowing the disease symptoms, diagnosis, and treatment process is an essential factor in increasing nurses' levels of health anxiety and cyberchondria.

It was determined in this study that nurses' health anxiety scale and cyberchondria scale mean scores were higher when they had dependents. It is stated that anxiety increases as caregiver burden increases (32). The presence of a dependent may result in feelings of increased anxiety for both the dependent person and their own health status. The fact that they and their dependents make online health searches related to their complaints may be related to this situation.

For those who experience health anxiety, searching for health information online is crucial. It has been reported that the higher an individual's health anxiety, the more likely they will search for health-related information and the higher the distress they will experience after this search (33). The negative outcome sub-dimension of health anxiety and the cyberchondria scale were positively and significantly correlated. A major disease impacts one's mental state, which is related to the bad result sub-dimension (23).

This result may indicate that if nurses had a severe illness, their health-related research on the internet would increase. A study suggested that individuals' health anxiety levels after searching for health information online were higher than their health anxiety levels before they started searching, which worsened the health anxiety situation (5). It has been reported that people with moderate and high levels of health anxiety experienced more health-related complaints when they searched for information online (34). It was determined that approximately 40% of individuals who searched for health information online experienced increased health anxiety after their search (35). This study found a high level of positive correlation between cyberchondria and health anxiety. When evaluated considering the literature, it is expected that as the health anxiety of nurse increases, the level of cyberchondria increases.

Study Limitations

Examining the health anxiety and cyberchondria levels of nurses working in a public hospital based on some variables was the limitation of this study. The results of this study are not generalizable due to this limitation.

Conclusion

This study showed that nurses' health anxiety and cyberchondria severity were moderate, and there was a positive relationship between health anxiety and cyberchondria. It is thought that nurses' professional knowledge and awareness of diseases increase their health anxiety, and they conduct more research on health problems via the internet. Considering the prevalence of internet use today, it is recommended to plan in-service training on internet literacy for nurses. It was concluded that socio-demographic variables, gender, unit of work, and presence of chronic disease affected health anxiety and cyberchondria levels. It is recommended to consider these variables when planning future trainings.

Implications of Nursing and Health Policies

Due to the nature of their work, nurses are exposed to various stress factors, such as caring for critically ill patients, facing dying patients for long periods of time, and feeling a high level of responsibility. These events and the resulting devastating psychological and physiological effects can lead to negative consequences such as various diseases, decreased professional performance, and increased anxiety. It has been observed that cyberchondria and health anxiety are especially higher in nurses working in intensive care and those with chronic diseases. In addition, the presence of a dependent may result in feelings of increased anxiety for both the dependent person and their own health status. The fact that they and their dependents make online health searches related to their complaints may be related to this situation. Considering the prevalence of internet use today, it is recommended to plan in-service training on internet literacy for nurses. However, while planning these trainings, factors such as gender, clinic, chronic disease status, and caregiving burden should be considered. For this reason, it is recommended that nurse managers conduct individual interviews with nurses to determine and prevent cyberchondria and health anxiety. After individual interviews, we can suggest personally prepared training programs.

Ethics Committee Approval: The research received ethical approval before implementation from the İzmir Bakırçay University's Ethics Committee (date: 25.10.2022, no: 743).

Informed Consent: The researcher informed all nurses about the purpose of the study. Written consent was also obtained from the volunteer nurses.

Author Contributions: Surgical and Medical Practices – S.Ş.; Concept – S.Ş.; Design – S.Ş., E.D.K.; Data Collection and/or Processing – S.Ş., E.D.K.; Analysis and/or Interpretation – S.Ş.; Literature Review – S.Ş., E.D.K.; Writing – S.Ş., E.D.K.

Declaration of Interests: No conflict of interest was declared by the authors.

Funding: The authors declared that this study received no financial support.

References

1. Brown RJ, Skelly N, Chew-Graham CA. Online health research and health anxiety: A systematic review and conceptual integration. Clinical Psychology: Science and Practice. 2020;27(2):e12299. [Crossref]

2. Elciyar K, Taşçı D. Application of cyberchondria severity scale to the students of Anadolu University Communication Faculty. AKAR. 2017;2(4):57-70. [Crossref]
3. Akhtar M, Fatima T. Exploring cyberchondria and worry about health among individuals with no diagnosed medical condition. J Pak Med Assoc. 2020;70(1):90-95. [Crossref]
4. Tyrer P, Cooper S, Tyrer H, Wang D, Bassett P. Increase in the prevalence of health anxiety in medical clinics: Possible cyberchondria. Int J Soc Psychiatry. 2019;65(7-8):566-569. [Crossref]
5. Starcevic V, Berle D, Arnáez S. Recent Insights Into Cyberchondria. Curr Psychiatry Rep. 2020;22(11):56. [Crossref]
6. Lee K, Hoti K, Hughes JD, Emmerton L. Dr Google and the consumer: a qualitative study exploring the navigational needs and online health information-seeking behaviors of consumers with chronic health conditions. J Med Internet Res. 2014;16(12):e262. [Crossref]
7. Rasouli M, Atayi Mirabadi N, Sarvi Hampa M, Borimnejad L. Cyberchondria in nursing students during the COVID-19 pandemic. JCCNC. 2022;8(1):9-14. [Crossref]
8. Jokic-Begic N, Lauri Korajlija A, Mikac U. Cyberchondria in the age of COVID-19. PLoS One. 2020;15(12):e0243704. [Crossref]
9. Khazaal Y, Chatton A, Rochat L, Hede V, Viswasam K, Penzenstadler L, et al. Compulsive Health-Related Internet Use and Cyberchondria. Eur Addict Res. 2021;27(1):58-66. [Crossref]
10. Mathes BM, Norr AM, Allan NP, Albanese BJ, Schmidt NB. Cyberchondria: Overlap with health anxiety and unique relations with impairment, quality of life, and service utilization. Psychiatry Res. 2018;261:204-211. [Crossref]
11. Norr AM, Allan NP, Boffa JW, Raines AM, Schmidt NB. Validation of the Cyberchondria Severity Scale (CSS): replication and extension with bifactor modeling. J Anxiety Disord. 2015;31:58-64. [Crossref]
12. Du X, Witthöft M, Zhang T, Shi C, Ren Z. Interpretation bias in health anxiety: a systematic review and meta-analysis. Psychol Med. 2023;53(1):34-45. [Crossref]
13. Javadi MH, Khoshnami MS, Noruzi S, Rahmani R. Health anxiety and social health among health care workers and health volunteers exposed to coronavirus disease in Iran (2020): A structural equation modeling. J Affect Disord Rep. 2022;8:100321. [Crossref]
14. Mokhtari R, Moayedi S, Golitaleb M. COVID-19 pandemic and health anxiety among nurses of intensive care units. Int J Ment Health Nurs. 2020;29(6):1275-1277. [Crossref]
15. Aulia A, Marchira CR, Supriyanto I, Pratiti B. Cyberchondria in first year medical students of Yogyakarta. Journal of Consumer Health on the Internet. 2020;24(1):1-9. [Crossref]
16. McElroy E, Shevlin M. The development and initial validation of the cyberchondria severity scale (CSS). J Anxiety Disord. 2014;28(2):259-265. [Crossref]
17. Barke A, Bleichhardt G, Rief W, Doering BK. The Cyberchondria Severity Scale (CSS): German Validation and Development of a Short Form. Int J Behav Med. 2016;23(5):595-605. [Crossref]
18. Tuğtekin U, Barut Tuğtekin E. Adaptation of Cyberchondria Severity Scale Short Form to Turkish, and Pre-Service Teachers' Excessive Online Information-Seeking Behaviors. Journal of Social Sciences of Mus Alparslan University. 2021;9(6):1747-1762. [Crossref]
19. Rode S, Salkovskis P, Dowd H, Hanna M. Health anxiety levels in chronic pain clinic attenders. J Psychosom Res. 2006;60(2):155-161. [Crossref]
20. Aydemir Ö, Kirpinar İ, Sati T, Uykur B, Cengisiz C. Reliability and Validity of the Turkish Version of the Health Anxiety Inventory. Noro Psikiyatr Ars. 2013;50(4):325-331. [Crossref]
21. Dargahi S, Ayadi N, Kiani A, Ahmadboukani S. The Moderating Role of Existential Thinking in the Association between Health Anxiety and Nurse Empathy with Covid-19 Patients. J Occup Health Epidemiol. 2022;11(2):114-120. [Crossref]
22. Tyrer P, Tyrer H. Health anxiety: detection and treatment. BJPsych Advances. 2018;24(1):66-72. [Crossref]
23. Özyıldız KH, Alkan A. A research on the relationship between academicians' health anxiety and cyberchondria levels. Süleyman Demirel University Visionary Journal. 2022;13(33):309-324. [Crossref]
24. Özkent MS, Kılınç MT, Hamarat MB, Yılmaz B, Göger YE, Özkent Y, et al. Digitalization and Urological Diseases: Severity of Cyberchondria and Level of Health Anxiety in Patients Visiting Outpatient Urology Clinics. Cyberpsychol Behav Soc Netw. 2023;26(1):28-34. [Crossref]
25. Demirhan H, Eke E. The Effects Of Digitalization On Health Information Search Behavior: An Investigation On Cyberchondria Disease. International Journal of Health Sociology (IJHESO). 2021;1(1):1-18. [Crossref]
26. Erdoğan A, Hocaoğlu Ç. Psychiatric aspects of infectious diseases and pandemic: A review. Turkish J Clin Psy. 2020;23(1):72-80. [Crossref]
27. Şimşekoğlu N, Mayda A. The level of health anxiety and the healthy lifestyle behaviors of nurses at a university research hospital. Journal of Duzce University Health Sciences Institute. 2016;6(1):19-29. [Crossref]
28. Jamshidian Y, Kiani A, Dargahi S. Relationship of cognitive emotion regulation and meaning in life with health anxiety among emergency nurses. Health in Emergencies & Disasters Quarterly. 2018;3(4):199-206. [Crossref]
29. Ergün R, Ergün D, Ergan B. Anxiety and depression in intensive care unit workers. Journal of Intensive Care. 2016;7(3):93-98. [Crossref]
30. Karanikola M, Giannakopoulou M, Mpouzika M, Kaite CP, Tsiaousis GZ, Papathanassoglou ED. Dysfunctional psychological responses among Intensive Care Unit nurses: a systematic review of the literature. Rev Esc Enferm USP. 2015;49(5):847-857. [Crossref]
31. Bati AH, Mandiracioglu A, Govsa F, Çam O. Health anxiety and cyberchondria among Ege University health science students. Nurse Educ Today. 2018;71:169-173. [Crossref]
32. Çelenk Z, Kumcağız H. Investigation of the Relationship Between Caregiver Burden and Anxiety Levels of Elderly Patient Caregivers. Istanbul Gelisim University Journal of Social Sciences. 2022;9(2):628-645. [Crossref]
33. Baumgartner SE, Hartmann T. The role of health anxiety in online health information search. Cyberpsychol Behav Soc Netw. 2011;14(10):613-618. [Crossref]
34. Doherty-Torstrick ER, Walton KE, Fallon BA. Cyberchondria: Parsing Health Anxiety From Online Behavior. Psychosomatics. 2016;57(4):390-400. [Crossref]
35. White RW, Horvitz E. Cyberchondria: studies of the escalation of medical concerns in web search. ACM Transactions on Information Systems. 2009;27(4):1-37. [Crossref]