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Investigation of the Relationship Between Health Anxiety and Cyberchondria in Obese Cases

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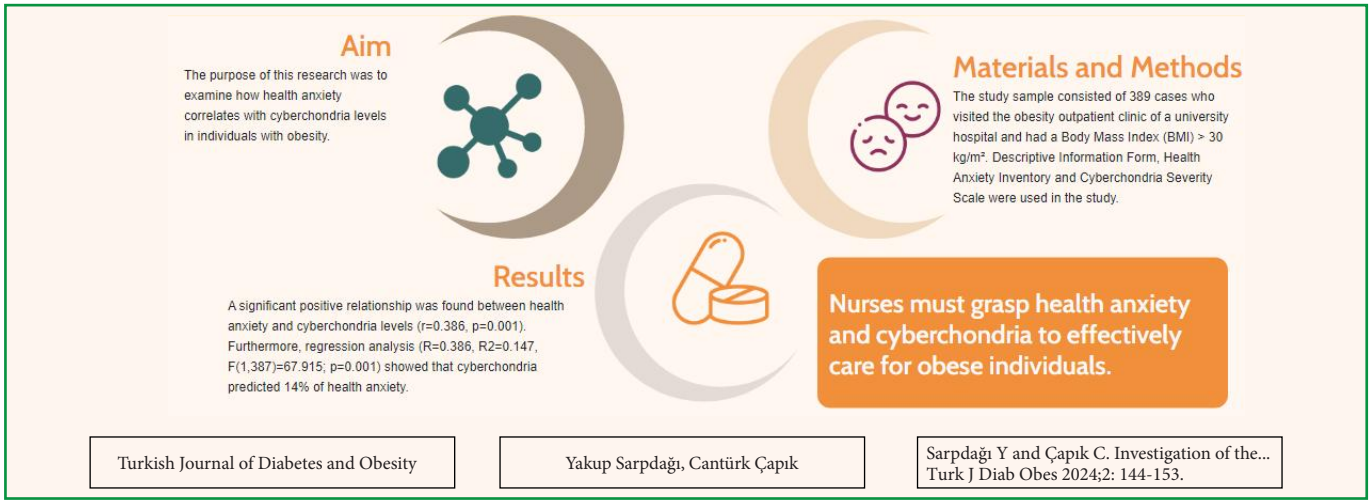
GRAPHICAL ABSTRACT



ABSTRACT

Aim: The purpose of this research was to examine how health anxiety correlates with cyberchondria levels in individuals with obesity.

Material and Methods: This descriptive and correlational study was conducted between 15 July and 21 November 2022. The study sample consisted of 389 cases who visited the obesity outpatient clinic of a university hospital and had a Body Mass Index (BMI) > 30 kg/m². Descriptive Information Form, Health Anxiety Inventory and Cyberchondria Severity Scale were used in the study. Data were collected and analysed using IBM SPSS statistical software (SPSS-22). In the analysis, various statistical methods were employed, including descriptive statistics such as counts, percentages, minimum and maximum values, means, and standard deviations, as well as Pearson Correlation and simple regression analyses.

Results: The total score of the participants in this study was 21.87± 9.70 on the Health Anxiety Scale and 81.37± 20.11 on the Cyberchondria Severity Scale. A significant positive relationship was found between health anxiety and cyberchondria levels (r=0.386, p=0.001). Furthermore, regression analysis (R=0.386, R2=0.147, F(1,387)=67.915; p=0.001) showed that cyberchondria predicted 14% of health anxiety.

Conclusion: Nurses working in public health and mental health need to comprehend health anxiety and cyberchondria to recognize possible attitudes and behaviors that may emerge in physical, social, and mental areas among obese individuals and to implement appropriate nursing interventions when required.

Keywords: *Obesity, Health anxiety, Cyberchondria*

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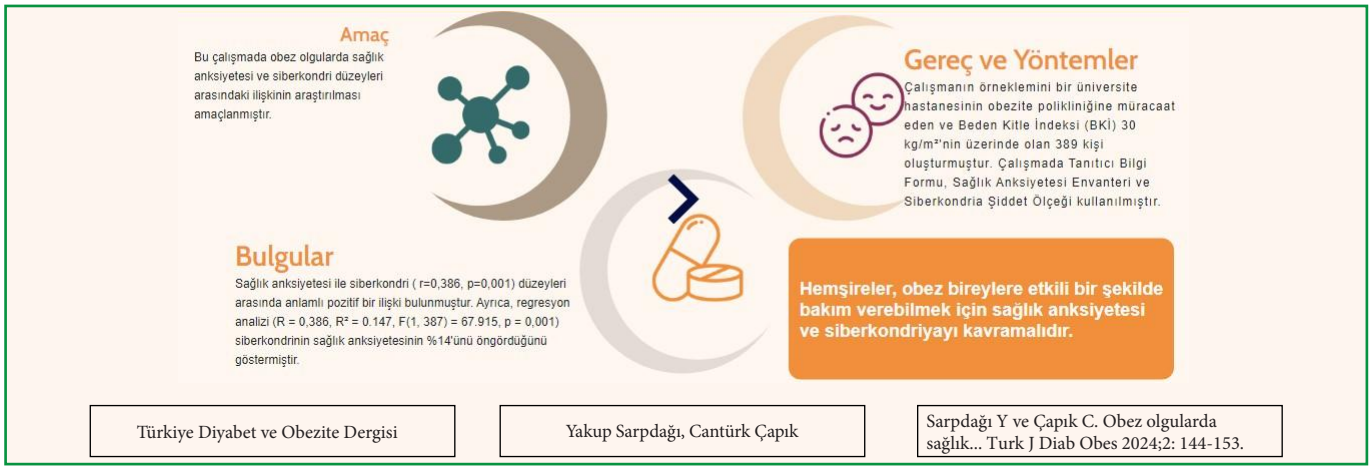
Obez Olgularda Sağlık Anksiyetesi ve Siberkondri Arasındaki İlişkinin İncelenmesi

GRAFİKSEL ÖZET



ÖZ

Amaç: Bu çalışmada obez olgularda sağlık anksiyetesi ve siberkondri düzeyleri arasındaki ilişkinin araştırılması amaçlanmıştır.

Gereç ve Yöntemler: Tanımlayıcı ve ilişkisel nitelikteki bu çalışma 15 Temmuz-21 Kasım 2022 tarihleri arasında yürütülmüştür. Çalışmanın örneklemini bir üniversite hastanesinin obezite polikliniğine müracaat eden ve Beden Kütle İndeksi (BKİ) 30 kg/m²'nin üzerinde olan 389 kişi oluşturmuştur. Çalışmada Tanıtıcı Bilgi Formu, Sağlık Anksiyetesi Envanteri ve Siberkondria Şiddet Ölçeği kullanılmıştır. Veriler, SPSS istatistik programı (SPSS-22) ile değerlendirilmiştir. Analizlerde, frekanslar, yüzdeler, minimum ve maksimum değerler, ortalama ve standart sapmalar, Pearson Korelasyon ve basit regresyon analizleri uygulanmıştır.

Bulgular: Bu çalışmaya katılan katılımcıların Sağlık Anksiyetesi Ölçeği'nde toplam puanı 21,87± 9,70 ve Siberkondri Şiddet Ölçeği'nde 81,37± 20,11 olarak bulunmuştur. Sağlık anksiyetesi ile siberkondri (r=0,386, p=0,001) düzeyleri arasında anlamlı pozitif bir ilişki bulunmuştur. Ayrıca, regresyon analizi (R=0,386, R^2=0.147, F(1, 387)=67.915, p=0,001) siberkondrinin sağlık anksiyetesinin %14'ünü öngördüğünü göstermiştir.

Sonuç: Halk sağlığı ve ruh sağlığı alanında çalışan hemşireler, obez olgularda fiziksel, sosyal ve zihinsel alanlarda ortaya çıkabilecek tutum ve davranışları belirlemek ve gerektiğinde hemşirelik müdahalelerini uygulamak için sağlık anksiyetesi ve siberkondriyi anlamalıdır.

Anahtar Sözcükler: *Obezite, Sağlık anksiyetesi, Siberkondri*

INTRODUCTION

Obesity is a rapidly growing public health issue that affects an increasing frequency of countries worldwide, creating significant economic and health burdens (1). According to the World Obesity Atlas 2023, it was reported that there were 988 million people globally classified as obese, with a Body Mass Index (BMI) of 30 kg/m² or greater, in 2020. In addition, according to the report, this rate is estimated to be 1 billion 249 million in 2025, 1 billion 556 million in 2030 and 1 billion 914 million in 2035 (2). According to the World Health Organization (WHO) European Region Obesity Report 2022, Turkey has the highest rates of obesity within the WHO European Region. Specifically, 66.8% of adults in Turkey are classified as overweight, and 32.1% are categorized as obese (3).

Obesity is stated to have destructive effects on both physical and mental health (4). In a systematic review, it is stated that obesity has a significant and adverse impact on physical and mental health, social relationships, environmental, and economic factors (5). Excess weight and obesity are well-established risk factors for the development of various chronic health issues, including cardiovascular diseases, type 2 diabetes, and various cancers (6). In a study, it was found that obesity is associated with physical fatigue, back and joint pain, shortness of breath, binge eating behavior, and irritability (4). Psychologically, the most common conditions observed in obese individuals are depression, burnout and anxiety (7,8). Depression and anxiety are associated with social stigma, negative body image, and low self-esteem (9,10). Studies focusing on obese individuals have indicated that

these individuals often exhibit elevated levels of anxiety and depressive symptoms relative to those who are not obese (11). In a meta-analysis, it was observed that individuals with obesity experience anxiety more frequently than those with normal weight (12,13). Although closely associated with various social factors, obesity is a leading cause of low quality of life, disability, and social disadvantage (14). Although previous studies have found an association between health anxiety and body symptoms, no published study is known to date that has specifically assessed this relationship among obese individuals (15).

Health anxiety, a type of anxiety disorder, refers to the condition where an individual interprets normal bodily changes as signs of a serious illness and experiences persistent excessive worry about their health (16). It has been observed that individuals who are particularly worried about their health are more likely to frequently seek health-related information online (17,18) and for longer periods (19). People utilize the internet, particularly to acquire knowledge on maintaining their health, investigating potential health risks, self-diagnosing, and obtaining information about their health conditions (20,21). Online resources related to obesity can provide assistance on topics such as diet tips, exercise plans, motivational resources, and support groups. However, accessing accurate and reliable information is crucial. However, due to the unregulated dissemination of information on the internet, encompassing both accurate and inaccurate content, individuals may encounter both reliable and misleading information about their health (22). While it is normal for individuals to experience some concerns about their health, these concerns can have a negative impact on their well-being when they become persistent (23). This situation can lead to cyberchondria.

Cyberchondria is characterized by an excessive pattern of online medical research, often accompanied by heightened levels of anxiety or distress (24). Online searches for medical information can result in encountering conflicting, inconsistent, and low-quality information, thereby elevating the perceived risk (25,26). The rapid dissemination of unfiltered information in this manner weakens public health measures and can lead to incorrect behaviors (27). There is substantial evidence indicating that cyberchondria may lead to various adverse effects, including diminished trust in medical professionals (28), functional impairment (29), a tendency to engage in self-diagnosis (30), and increased utilization of healthcare services (31).

Understanding the psychological aspects of obesity is an important part of providing more comprehensive healthcare and improving patient outcomes (32). There are differences in the extent of the link between health anxiety and cyberchondria; some studies report a weak connection (33), while others find a strong association. (34). There is no consensus on how seeking health information online correlates with health anxiety (35). Understanding the degree of association between health anxiety and seeking health information online, as well as the relationship between health anxiety and cyberchondria, is essential (34).

The goal of this study is to explore the connection between health anxiety and cyberchondria among individuals with obesity.

MATERIAL and METHODS

This descriptive and correlational study was conducted between July and November 2022 in the Obesity outpatient clinic of Van Yüzüncü Yıl University Dursun Odabaş Medical Center. Van province is one of the metropolitan cities in eastern Turkey.

Participants

Individuals with a Body Mass Index (BMI) >30, aged 18 years or older, literate, with internet access, without cognitive problems, and willing to participate were included in the study. Data were collected from 389 individuals who met the research criteria through face-to-face interviews conducted by the researcher. A post hoc power analysis was conducted to assess whether the sample size was sufficient, utilizing the G*Power 3.1 software.. According to the power analysis results, the power of the study was calculated to be 99% at a 0.05 significance level and a 95% confidence interval for a medium effect size (36). Pearson correlation test was used in the analysis and effect size calculations were made. The power analysis showed H1=0.621 correlation, -0.099 lower critical r, 0.099 upper critical r and 0.99 power."This value indicates that the sample is sufficient (37).

Data Collection Tools

Demographic information form: It was prepared by the researchers by reviewing the relevant literature (34,38-41). The form consists of two parts. The first part includes the participants' characteristics such as age, gender, marital status, and educational status, while the second part includes variables related to the disease

Health Anxiety Scale (HAS): Salkovskis et al. created it in 2002 (42). The Turkish validity and reliability of the scale were assessed by Aydemir et al. in 2013. The Health Anxiety Scale is a self-report tool comprising 18 items in total (43). Each item on the scale is rated on a scale from 0 to 3. A higher score on the scale reflects increased levels of health anxiety. The scale is divided into two factors. The initial 14 items constitute the first factor. This factor, known as hypersensitivity and anxiety towards physical symptoms, cap-

tures the dimension of sensitivity and worry about physical symptoms. The second factor, consisting of the final 4 items, addresses the impact of illness. This factor, called the negative consequences of the disease, represents the dimension related to the negative consequences of the disease (43). The internal consistency of the Turkish version was determined using Cronbach's alpha, which yielded a coefficient of 0.91. This ratio was 0.89 for the Body sub-dimension and 0.72 for the Negative Consequences of Illness sub-dimension (37). In this study, Cronbach's alpha was found to be 0.89 for the HAS, 0.88 for its sub-dimensions of hypersensitivity to physical symptoms and anxiety, and 0.72 for the negative consequences of the disease. In both studies, the overall Cronbach alpha values were high (0.91 and 0.89) and the sub-dimensions showed a similarly wide range.

Cyberchondria Severity Scale (CSS): It was developed by McElroy and Shevlin in 2014. It is a psychometric scale characterized by excessive health research on the Internet and is intended to measure cyberchondria (44). Turkish validity and reliability analyses were conducted by Uzun and Zencir in 2016 (45). The scale includes questions about how people conduct their health research on the internet and to what extent these researches affect them physically, socially and spiritually in daily life. The scale consists of 33 items and 5 sub-dimensions in 5-point Likert type. Sub-dimensions; Coercion, Distress, Excessiveness, Assurance and Distrust of the Medical Professional. The questions forming the "Mistrust of medical Professional" sub-dimension are reverse scored. There is no cut-off point. The total cyberchondria score is determined by adding up the scores from each question, with higher scores indicating a greater level of cyberchondria (45). The internal consistency of the Turkish version was assessed using Cronbach's alpha, which was determined to be 0.89. Cronbach alpha internal consistency coefficients for the 5 sub-dimensions in the scale vary between 0.65 and 0.85 (39). In this research, the Cronbach's alpha for the CSS was 0.91, and for its sub-dimensions, the values were as follows: compulsion 0.92, distress 0.84, excessiveness 0.83, reassurance 0.76, and mistrust of medical professionals 0.62. In both studies, the overall Cronbach alpha values were high (0.89 and 0.91) and the sub-dimensions showed a similarly wide range.

Statistical Analysis

The data were analyzed with IBM SPSS for Windows 22 package program. Frequency, percentages, minimum and maximum values, mean and standard deviations, Pearson Correlation Analysis and simple regression analysis were used to analyze the data. Normality distribution was determined by Kurtosis and Skewness coefficients and it was determined that all continuous variables in the study showed a normal distribution of ±1.50. Internal validity of the scales was determined by Cronbach α coefficient (46). For all analyses, $p < 0.05$ was set as the significance level.

RESULTS

Table 1 summarizes the demographic details of the participants.

As presented in Table 1, 58.4% of the participants were female, 32.1% were university graduates, 58.6% were married, and 47.6% had income less than expenses. 81.5% of the participants live in urban areas, 52.4% are obese to 1st degree, 78.7% do not have chronic diseases and 43.7% have moderate health perceptions. 45% of the participants are not ostracized by the society due to obesity, 69.7% have information about health problems that may develop due to obesity, 73.3% are concerned about their health due to their weight, 44.2% use the internet for 3-6 hours daily, 40.4% are negatively affected mentally due to the information about obesity obtained from the internet, and 57.1% sometimes make health-related decisions based on the information obtained from the internet. 49.6% of the participants were undecided about trusting health-related information on the internet, and the average age of the participants was 35.01±12.13 years.

The distribution of the scores obtained from the Health Anxiety Scale, Cyberchondria Severity Scale and its sub-dimensions is presented in Table 2.

As seen in Table 2, the participants scored 17.12±7.77 on the Hypersensitivity to Physical Symptoms and Anxiety subscale, 4.75±2.83 on the Negative Consequences of Illness subscale, and 21.87± 9.70 on the Health Anxiety Scale total. The participants scored 16.02±6.65 on the Compulsion sub-dimension, 20.23±6.26 on the Excessive Anxiety sub-dimension, 21.88± 6.35 on the Excessiveness sub-dimension, 16.03±4.96 on the Relaxation sub-dimension, 7.21±3.03 on the Distrust of Physicians sub-dimension, and 81.37±20.11 on the total Cyberchondria Severity Scale.

As shown in Table 3, a statistically significant, positive, and low-level correlation exists between the Hypersensitivity and Anxiety to Physical Symptoms, Negative Consequences of Illness sub-dimension scores and the Health Anxiety Scale total score, as well as the Obsession, Overanxiety, Excessive Anxiety, Excessiveness, Relaxation sub-dimensions, and the Cyberchondria Severity Scale total score ($p<0.05$). As Hypersensitivity to Physical Symptoms and Anxiety, Negative Consequences of Illness sub-dimension scores and Health Anxiety Scale total score increase, so do Compulsion, Excessive Anxiety, Excessiveness, Relaxation sub-dimensions and Cyberchondria Severity Scale total score. There is no significant correlation between Hypersensitivity and

Table 1: Demographic Characteristics of Participants

Characteristics*		Findings (n=389)
Gender	Male	162 (41.6)
	Female	227 (58.4)
Education Status	Literate	52 (13.4)
	Primary school graduate	43 (11.1)
	Secondary school graduate	60 (15.4)
	High school graduate	109 (28.0)
	University graduate	125 (32.1)
Marital Status	Married	228 (58.6)
	Single	161 (41.4)
Income Level	My income is less than my expenses	185 (47.6)
	My income is equal to my expenses	173 (44.5)
	My income is more than my expenses	31 (8.0)
Settlement	Rural	72 (18.5)
	Urban	317 (81.5)
Body Mass Index	First-degree obese (30 - 34.9 kg/m^2)	204 (52.4)
	Quadratic obese (35- 39.9 kg/m^2)	128 (32.9)
	Third-degree obese (≥ 40 kg/m^2)	57 (14.7)
Chronic disease	No	306 (78.7)
	Yes	83 (21.3)
Health Perception	Very bad	25 (6.4)
	Bad	57 (14.7)
	Middle	170 (43.7)
	Good	107 (27.5)
	Very good	30 (7.7)
Social Stigma Due to Obesity	Yes	95 (24.4)
	No	175 (45.0)
	Partially	119 (30.6)
Information on Health Problems Related to Obesity	Yes	271 (69.7)
	No	118 (30.3)
Worrying About Your Health Because of Your Weight	Yes	285 (73.3)
	No	104 (26.7)
Daily Internet Usage Time	0-2 hours	150 (38.6)
	3-6 hours	172 (44.2)
	7-10 hours	46 (11.8)
	10 hours or more	21 (5.4)
Negative Psychological Effects Due to Information About Obesity Obtained from the Internet	Yes	136 (35.0)
	No	96 (24.7)
	Partially	157 (40.4)
Making Health Decisions Based on Information Obtained from the Internet	Never ever	90 (23.1)
	Occasionally	48 (12.3)
	Sometimes	222 (57.1)
	Frequently	10 (2.6)
	Always	19 (4.9)
Trusting Health Information Published on Websites	Yes	80 (20.6)
	No	116 (29.8)
	Undecided	193 (49.6)
Age, year±SD, (min.-max.)	35.0±12.1	(18.0 -65.0)

*Data are shown as n(%), **SD:** Standard Deviation

Anxiety to Physical Symptoms, Negative Consequences of Illness sub-dimension scores and Health Anxiety Scale total score and Distrust in Doctors sub-dimension score. The regression analysis between the Health Anxiety Scale and Cyberchondria Severity Scale is presented in Table 4.

As seen in Table 4, simple regression analysis was applied to reveal to what extent the Cyberchondria Severity Scale variable, which is thought to be effective on the participants' Health Anxiety, predicts Health Anxiety. This analysis revealed a significant relationship between the Cyberchondria Severity Scale variable and the Health Anxiety variable ($R = 0.386$, $R^2 = 0.147$, $F(1, 387) = 67.915$, $p = 0.001$). Cyberchondria Severity Scale score explained 14.7% of the change in Health Anxiety. Based on the regression analysis results, the equation predicting Health Anxiety is as follows: Health Anxiety = (0.186 x Cyberchondria Severity Scale) + (24.706).

Table 2: Distribution of Scores from the Health Anxiety Scale, Cyberchondria Severity Scale and Subscales

Scale and Subscales*	All Participants (n=389)
Hypersensitivity to physical symptoms and anxiety	17.12±7.77 (0-38.0)
Negative consequences of the disease	4.75±2.83 (0-12.0)
Health Anxiety Scale	21.87±9.70 (0-48.0)
Compulsion	16.02±6.65 (8.0-40.0)
Distress	20.23±6.26 (8.0-38.0)
Excessiveness	21.88±6.35 (8.0-40.0)
Reassurance	16.03±4.96 (6.0-30.0)
Mistrust of medical professional	7.21±3.03 (3.0-15.0)
Cyberchondria Severity Scale	81.37±20.11 (33.0-142.0)

* Data are shown as mean SD (minimum - maximum).
SD: Standard Deviation

DISCUSSION

In this section, the results related to the connection between health anxiety and cyberchondria in obese cases are discussed in the context of existing literature.

The mean score obtained in the health anxiety inventory, one of the dependent variables in this study, was 21.87± 9.70. Since no cut-off point was determined in the scale, the mean score obtained cannot be interpreted. However, a higher score on the scale corresponds to an increased level of health anxiety. Fergus et al. In their study conducted in the community health center of a city located in the south of the USA, they found that the mean score of obese cases on the health anxiety inventory was 22.60 ± 17.52 (15). Since there are not enough studies in the literature on the health anxiety of obese cases, the average scores obtained in the studies conducted on different sample groups were discussed. In the study conducted by Tamer and Güçlü on healthy individuals, 16.81±7.54 (47), In the research by Bozkurt et al. on women, 17.11±6.95 (48), and Mrayyan et al. found 19.08±7.8 in their study on students (49). We think that the reason why the mean score obtained in this study

Table 3: Investigation of the Relationship Between the Health Anxiety Scale and Cyberchondria Severity Scale and Its Subscales

		Compulsion	Distress	Excessiveness	Reassurance	Mistrust of medical professional	Cyberchondria Severity Scale
Hypersensitivity to physical symptoms and anxiety	r	0.237	0.456	0.258	0.270	0.056	0.377
	p	<0.001	<0.001	<0.001	<0.001	0.270	<0.001
	n	389	389	389	389	0389	389
Negative consequences of the disease	r	0.221	0.351	0.158	0.170	0.099	0.289
	p	<0.001	<0.001	<0.002	<0.001	0.052	<0.001
	n	389	389	389	389	389	389
Health Anxiety Scale	r	0.254	0.468	0.253	0.266	0.074	0.386
	p	<0.001	<0.001	<0.001	<0.001	0.147	<0.001
	n	389	389	389	389	389	389

(p<0.05*)

Table 4: Regression Analysis Between Health Anxiety Scale and Cyberchondria Severity Scale

	Beta	Standard Defect	Standard Beta	t	p	%95 Confidence Interval	
Constant coefficient	24.706	1.896	-	13.028	<0.001	20.978	28.435
Cyberchondria Severity Scale	0.186	0.023	0.386	8.241	<0.001	0.142	0.231

(p<0.05*)

was higher than the mean scores obtained in the aforementioned studies was that approximately half of the individuals in the study were obese in the second (32.9%) and third (14.7%) degree, and the aforementioned studies were conducted on healthy individuals. In addition, 69.7% of the participants had information about obesity, 73.3% were concerned about their health due to their weight, and 75.9% (yes 35.0%, partially 40.4%) stated that they were negatively affected mentally due to the information about obesity obtained from the internet, which supports the findings in this study.

The mean score obtained in the Cyberchondria Severity Inventory, another dependent variable of this study, was 81.37±20.11. A higher score obtained from the scale indicates a higher level of cyberchondria in the individual. When we look at the mean scores in the studies conducted on different sample groups using the Cyberchondria Severity Inventory in the literature; in the study conducted by Arsenakis et al. on adult individuals, the mean score was 73.1±23.1 (50) and Turhan Çakır found 78.54 ± 22.09 in their study on women with human papillomavirus. (51). The higher mean score of obese cases compared to the other sample groups can be interpreted as the fact that obesity is a condition that can often lead to various health problems and increase individuals' anxiety about their own health, that increased sensitivity to health-related symptoms and problems leads obese cases to constantly seek and follow health-related information, and that widespread prejudice and stigmatization of obesity in society may contribute to obese cases' excessive awareness and anxiety about their own health.

In this study, a significant positive relationship was found between obese cases' health anxiety and cyberchondria. In other words, as the health anxiety of obese cases increases, their cyberchondria levels increase. When the studies conducted on different sample groups in the literature are analyzed; (52-55) identified a strong positive association between health anxiety and cyberchondria. A recent meta-analysis of 20 studies revealed a positive link between health anxiety and cyberchondria (34). Considering the results of the correlation analysis, a basic regression analysis was performed to assess to what extent the cyberchondria severity variable, which influences health anxiety, predicts health anxiety. In the analysis, cyberchondria was found to be a significant positive predictor of health anxiety. However, although the relationship is significant, the fact that the correlation coefficient (R=0.386) is at a moderate level indicates that the strength of the relationship is not high and that there are other important factors that may be effective on Health Anxiety. Therefore, it can be suggested to increase the explanatory power by including additional variables in the model. When the studies in the literature were analyzed, it was found that cyberchondria was a significant positive predictor of health anxiety in the studies conducted by Doğan et al. and Nadeem et al. (53,56). Obese cases, who constitute the sample of this study, may be concerned about their health due to the change in their physical structure and some symptoms that occur with it. In fact, the fact that obesity is both a risk factor for many health problems and characterized as a chronic disease may cause negative physical, social and mental consequences in obese cases. Obese cases trying to overcome this may need medical information to feel safe. Aiken and Kirwan found that the Internet is considered a useful resource for self-managed healthy individuals, while it is interpreted as an important source of concern for susceptible individuals, given the increasing behavioral patterns of individuals to take responsibility for their "health biographies"(57). Therefore, cyberchondria has a positive correlation with health anxiety symptoms. (29). These results show that there is a significant relationship between Health Anxiety and Cyberchondria and Cyberchondria plays a determinant role on Health Anxiety. In other words, both that there is a significant relationship between Health Anxiety and Cyberchondria and that Cyberchondria is effective on Health Anxiety (are supported.

This study plays a crucial role in investigating the association between health anxiety and cyberchondria in obese cases. Since the study was conducted in a designated center, it is not appropriate to generalize the findings to the whole of Turkey.

The purpose of this study was to investigate the relationship between health anxiety and cyberchondria levels in obese cases. A notable positive correlation was observed between health anxiety level and its sub-dimensions and cyberchondria and its sub-dimensions (except for the dimension of distrust in doctors). In addition, cyberchondria predicts the level of health anxiety by 14% in the regression analysis. This result shows that obese cases may have high levels of health anxiety due to obesity and this may lead to an increase in the number of cyberchondriac individuals. In addition, it contributed to the literature in terms of raising awareness of nurses caring for obese cases.

This study may contribute to gaining insights into the connection between health anxiety experienced by obese cases and cyberchondria. Nurses working in the field of public health and mental health need to understand health anxiety and cyberchondria in order to identify attitudes and behaviors that may occur in obese cases in physical, social and mental areas and to apply nursing interventions when necessary. As a matter of fact, it is important for nurses, who

are an important member of the multidisciplinary team and are in the most communication with individuals in the society, to prioritize their roles as educators and researchers as well as caregivers. In addition, this study will contribute to nurses to raise awareness on this issue. In order to reduce the level of health anxiety and cyberchondria in obese cases; online cognitive therapy trainings, e-health literacy trainings and motivational interview trainings can gain momentum in a positive direction.

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Author Contributions
Study design: Y. S and C. C, Data collection: S. Y, Data analysis: C. C, Manuscript writing: S. Y and C. C

Conflict Interests
The authors declare there is no conflict of interest.

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Ethical Approval
Approval was obtained from Atatürk University Faculty of Nursing Unit Ethics Committee (dated 07.07.2022 and numbered 2022-6/4). Institutional permission (dated 28.06.2022 and numbered E-54355720-800-224423) was also obtained in the institution where the research was conducted. Participants were informed about the purpose, methodology, and the time commitment required for the study, ensuring that participation involved no harm and was entirely voluntary. Consent to participate in the research was obtained based on these statements.

Peer Review Process
Extremely and externally peer-reviewed.

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