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ORIGINAL ARTICLE

Evaluation of Orthorexia Nervosa Tendency and Social Media Addiction in University Students

Üniversite Öğrencilerinde Ortoreksiya Nervoza Eğiliminin ve Sosyal Medya Bağımlılığının Değerlendirilmesi

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ABSTRACT

Background/Aim: Developments in the Internet and smartphone technology have increased the use of social media in society. Content regarding healthy nutrition attracts great attention on social media. This situation can lead to various eating disorders, especially in university students who are in an important period of their lives and can be more easily affected by environmental stimuli. Intense exposure to such content on social media can be a trigger for Orthorexia Nervosa (ON), an obsession with healthy eating. This study aimed to determine the frequency of ON tendency in university students, to examine the effects of various factors on ON tendency, and to examine the relationship between social media addiction and ON tendency.
Methods: This research, planned as a cross-sectional and descriptive study, was conducted on undergraduate students studying at Alanya Alaaddin Keykubat University. The sample of the research consisted of 1153 students reached by simple random sampling method. Data was collected between September and December 2022 by applying online data collection tools through a structured survey created in Google Forms. Data were collected using a personal information form, the Orthorexia-11 scale (ORTO-11), and the Bergen social media addiction scale (BSMAS).
Results: The average age of the students was found to be 20.4±2.0 years. ON tendency was detected as 24%. A significant difference was found between the students' ORTO-11 scores and gender and Body Mass Index(BMI) ($p<0.05$). A statistically low significant negative relationship was found between ORTO-11 scores and BSMAS scores ($r=-0.058$, $p=0.048$). According to this result, as social media addiction increases, the ON tendency also increases.
Conclusion: This study showed that social media addiction can affect ON tendency. Social media users should be made aware of choosing experts in their field who provide accurate and reliable information. More detailed research would be useful to confirm these finding

Keywords: Eating behavior, orthorexia nervosa, social media, university students

ÖZ

Amaç: İnternet ve akıllı telefon teknolojisindeki gelişmeler toplumda sosyal medya kullanımını artırmıştır. Sosyal medyada sağlıklı beslenmeye yönelik içerikler yoğun ilgi görmektedir. Bu durum özellikle hayatlarının önemli bir döneminde olan ve çevresel uyaranlardan daha kolay etkilenebilen üniversite öğrencilerinde çeşitli yeme bozukluklarına yol açabilir. Sosyal medyada bu tarz içeriklere yoğun bir şekilde maruz kalınması bir sağlıklı beslenme takıntısı olan Ortoreksiya Nervoza (ON) için tetikleyici olabilir. Bu çalışmada, üniversite öğrencilerinde, ON eğilimi görülme sıklığının belirlenmesi, çeşitli faktörlerin ON eğilimine etkisi ve sosyal medya bağımlılığı ile ON eğilimi arasındaki ilişkisinin incelenmesi amaçlanmıştır.
Yöntem: Kesitsel ve tanımlayıcı bir çalışma olarak planlanan bu araştırma Alanya Alaaddin Keykubat Üniversitesinde öğrenim gören lisans öğrencileri üzerinde yürütülmüştür. Araştırmanın örneklemini basit tesadüfi örnekleme yöntemiyle ulaşılan 1153 öğrenci oluşturmuştur. Veriler, Google Formlar'da oluşturulan yapılandırılmış bir anket aracılığıyla çevrimiçi veri toplama araçları uygulanarak Eylül ve Aralık 2022 tarihleri arasında toplanmıştır. Ankette kişisel bilgi formu, Ortoreksiya-11 ölçeği (ORTO-11) ve Bergen sosyal medya bağımlılığı ölçeği (BSMBÖ) yer almıştır.
Bulgular: Araştırmaya katılan öğrencilerin yaş ortalaması 20,4±2,0 yıl olarak bulundu. ON eğilimi %24 olarak tespit edildi. Öğrencilerin ORTO-11 puanları ile cinsiyet ve Beden Kütle İndeksi (BKİ) arasında anlamlı farklılık bulunmuştur ($p<0,05$). ORTO-11 puanları ile BSMBÖ puanları arasında istatistiksel olarak düşük düzeyde anlamlı negatif ilişki bulunmuştur ($r=-0,058$, $p=0,048$). Bu sonuca göre sosyal medya bağımlılığı arttıkça ON eğilimi de artmaktadır.
Sonuç: Bu çalışma, sosyal medya bağımlığının ON eğilimini etkileyebileceğini göstermiştir. Sosyal medya kullanıcıları doğru ve güvenilir bilgi sağlayan, alanında uzman kişileri seçme konusunda bilinçlendirilmelidir. Bu bulguları doğrulamak için daha fazla ve detaylı araştırma yapılması faydalı olacaktır.

Anahtar Kelimeler: Ortoreksiya nervoza, sosyal medya, yeme davranışı, üniversite öğrencileri

Introduction

In recent years, with the development of the Internet technology, the use of social media has become an indispensable part of life. While the correct use of social media facilitates interpersonal communication and socialization, its incorrect use causes some behavioral and psychological problems (1). Social media addiction is defined as individuals' excessive desire to use social

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media and feeling distressed when they do not use it. Social media addiction is seen in approximately 12% of social media users. Young people, who are part of the digital generation, are especially at risk for social media addiction (2). During this period, the desire for liberation and the lack of life experience make young people more easily affected by external stimuli. The university period, which covers the transition from adolescence to young adulthood, is a sensitive period in which lifestyle habits are shaped. In the meantime, it is important to be aware of the factors that lead to the acquisition of wrong habits (3).

Flawless images presented on social media increase the importance given to appearance and beauty by young people. This can increase their physical dissatisfaction and trigger their desire to be thinner and more beautiful. Individuals who are dissatisfied with their bodies have a higher risk of depression and eating disorders (1). A relationship has been found between time spent on social media networks and eating disorder symptoms (4). Interest in content related to healthy living and healthy nutrition on social media is increasing day by day (5). Dealing with these contents seems to be a beneficial action for protecting health in the first place. However, intense exposure to content related to healthy nutrition can also cause orthorexic behaviors (6). Individuals with orthorexic tendencies constantly strive to research, think, and plan the foods they will consume to be perfect and without error in healthy nutrition (7).

Orthorexia nervosa (ON) was first defined by Steven Bratman in 1997 as a term characterized by a pathological focus on healthy eating (8). Orthorexics tend not to consume processed foods containing pesticides and additives and are intensely concerned about the materials and preparation techniques used in food preparation (9). The strict attitude of individuals with ON towards eliminating impure and unhealthy foods from their diet may lead to problems in their nutrition, and social and academic functioning. (10).

When considered together with the topics of beauty and healthy nutrition being on the agenda on social media, it comes to mind that excessive social media use in young people may be a trigger for ON (11). Some studies conducted in recent years have shown a relationship between social media addiction and ON (11-15).

This study aims to determine the frequency of ON tendency in university students, to examine the effects of various factors on ON tendency, and to examine the relationship between social media addiction and ON tendency.

Material and Methods

The population of this study planned as a cross-sectional and descriptive study consisted of undergraduate students studying at Alanya Alaaddin Keykubat University Kestel campus in the 2022-2023 academic year. It was calculated that the participation of 1137 students from the study population would be sufficient for the sample of the research, with a 95% confidence interval and a 5% margin of error. The sample of the study consisted of 1153 university students reached by simple random sampling method. Those included in the study are volunteer students who are over 18 years old and do not have any health problems.

"Approval Date, No: 25.05.2022, 02/03" was received for the research from the "Alanya Alaaddin Keykubat Health Sciences Scientific Research and Publication Ethics Committee". The data was collected between September and December 2022 by applying data collection tools online through a structured survey created in Google Forms. The online survey link was shared in student "WhatsApp" groups through class representatives of the departments. Individuals participating in the research were provided with information about the purpose of the study and "voluntary participation consent" was obtained. This research was conducted under the Principles of the Declaration of Helsinki and the Research and Publication Ethics.

The data was collected using a personal information form, the Orthorexia-11 scale (ORTO-11), and the Bergen social media addiction scale (BSMAS).

The data form created by the researchers includes personal information data such as age, gender, height, body weight, faculty, economic status, and data inquiring about skipping meals, smoking status, and whether they do regular sports. When determining the economic status of students, those whose income is less than their expenses are determined as low, those whose income is equal to their expenses are determined as moderate, and those whose income is more than their expenses are determined as high. Anthropometric data were evaluated according to the classification of the WHO by calculating body

mass index (BMI) as kg/m² by using the body weight/ height (m²) formula. According to the World Health Organization (WHO), BMI classification was: BMI <18.5 kg/m2 as underweight; 18.5-24.9 kg/m2 as normal; 25-29.9 kg/m2 as preobese; ≥30 kg/m2 as obese (16).

ORTO-11, a self-rating scale consisting of 11 items developed to detect orthorexia nervosa symptoms, was used in this study. The original form of the scale is a 15-item scale developed by Donini et al. in 2005 (17). The scale was adapted to Turkish by Arusoğlu et al. in 2008, the number of items was reduced to 11 and adapted as ORTO-11. The scale has a 4-point Likert-type structure. Answers to the questions are evaluated as "always" (1 point), "often" (2 points), "sometimes" (3 points) and "never" (4 points). Only the 8th question on the scale is reverse scored. The total scores that can be obtained vary between 11 and 44, and as the scores increase, it is interpreted as a decrease in the level of orthorexic tendency. The cut-off point method was used to evaluate the scale. The cut-off point of the study was determined as 24 points in the 25% slice, and 24 points and below were considered orthorexic tendencies (18).

In this study, the Bergen social media addiction scale, a self-assessment scale consisting of 6 items developed to determine social media addiction, was used. The scale was developed by Andreassen et al. in 2016 (19). The scale was adapted to Turkish by Demirci in 2019 (20). The scale has a 5-point Likert-type structure. Answers to the questions are evaluated as "very rarely" (1 point), "rarely" (2 points), "sometimes" (3 points) "often" (4 points), and "very often" (5 points). The total scores that can be obtained vary between 6-30, and it is stated that the higher the scores, the higher the level of social media addiction. The Cronbach's Alpha value of the single-dimensional scale was found to be 0.83 (20).

For statistical analyses of the data obtained, SPSS 25.0 for Windows software (SPSS, Chicago, Il, USA) was used. Frequencies (n), percentages (%), mean, and standard deviation (±Sd) were used for the descriptive statistics. Normal distribution of the data was assessed using the Kolmogorov-Smirnov test. In determining the differences between groups, the t-test and ANOVA tests were used to evaluate continuous variables. The correlation between the scales was analyzed with the Pearson correlation test. The significance level was assessed as $p<0.05$.

Results

A total of 1153 students with an average age of 20.4±2.0 years were included in the study. Of the students, 63.7% were female and 36.3% were male. When the economic status of the students was examined, it was determined that approximately half of them (48.4%) were at a low level. It was determined that most of the students (80.0%) did not smoke. While 29.9% of the participants stated that they did not skip meals, 48.4% stated that they sometimes skipped meals, and 21.7% stated that they skipped meals. More than half (68.1%) of the participants in the study stated that they did not engage in regular physical activity. The tendency to ON was found to be 24%. The mean ORTO-11 score of the students participating in the study was 27.3±3.6, while the mean BSMAS score was 16.9±4.6 (Table 1).

Table 1. Distribution of some personal information and eating habits of the students

Variables		**n**
Age (years) (mean±SD)		(20.4±2.0)
Gender, n (%)	Female	734 (63.7)
	Male	418 (36.3)
Faculty, n (%)	Health field	449 (39.0)
	Other field	703 (61.0)
Economic status, n (%)	Low	558 (48.4)
	Moderate	468 (40.7)
	High	126 (10.9)
Smoking, n (%)	Yes	230 (20.0)
	No	922 (80.0)
Skipping meal, n (%)	Yes	250 (21.7)
	Sometimes	558 (48.4)
	No	344 (29.9)
BMI, n (%)	Underweight	128 (11.1)
	Normal	878 (76.3)
	Preobese	126 (10.9)
	Obese	20 (1.7)
Regular physical activity status, n (%)	Yes	368 (31.9)
	No	784 (68.1)
ORTO-11 score distrubition, n (%)	ON tendency	276 (24.0)
	Without ON tendency	876 (76.0)
ORTO-11 score, (mean±SD)		(27.3±3.6)
BSMAS score, (mean±SD)		(16.9±4.6)

BMI, Body mass index; BSMAS, Bergen social media addiction scale, ON: Orthorexia nervosa; ORTO-11, Orthorexia-11 scale; ON tendency, ORTO -11 ≤24; SD: Standard deviation, Without

ON tendency, ORTO -11 >24

In this study, there was no significant difference between the students' ORTO-11 scores and faculty, smoking, skipping meals, and regular physical activity status (p>0.05). However, a significant difference was found between the students' ORTO-11 scores and gender and BMI (p<0.05). In our study, ORTO-11 scores of males were found to be significantly higher than females (p<0.05). When ORTO-11 scores were evaluated according to BMI, the differences were found to be significant among all groups (p<0.05), while the highest mean score was found in the underweight and the lowest mean score in the obese (Table 2).

Table 2. Relationship between ORTO-11 score and BSMAS score of various variables

Variables		ORTO-11 score (Mean±SD)	p-value	BSMAS score (Mean±SD)	p-value
Gender	Female	26.9±3.7	**0.000***	17.1±4.9	0.063*
	Male	27.9±3.2		16.6±4.1	
Faculty	Health field	27.3±3.7	0.930*	17.0±4.1	0.569*
	Other field	27.3±3.5		16.8±4.2	
Smoking	Yes	27.6±3.7	0.140*	17.8±5.3	**0.003***
	No	27.2±3.6		16.7±4.4	
Skipping meal	Yes	27.4±3.3	0.158**	16.5±4.1	0.115**
	Sometimes	27.4±3.7		16.9±4.3	
	No	27.0±3.5		17.3±5.4	
BMI	Underweight	27.8±4.0[a]	**0.000****	16.8±5.3[a]	**0.000****
	Normal	27.3±3.6[b]		16.7±4.7[a]	
	Preobese	26.8±2.8[c]		18.3±3.4[b]	
	Obese	25.6±2.0[d]		19.6±3.6[c]	
Regular physical activity status	Yes	27.2±3.8	0.202*	16.6±4.2	0.069*
	No	27.4±3.5		17.1±4.8	

[a,b,c,d]Values shown with different letters in the same column where there are more than two groups are statistically different from each other. *Calculated with independent samples t-test. **Calculated by Anova test. BMI: Body mass index, BSMAS, Bergen social media addiction scale, ORTO-11: Orthorexia-11 scale; p<0.05, SD: Standard deviation

In this study, there was no significant difference between the students' BSMAS scores and gender, faculty, skipping meals, and regular physical activity status (p>0.05). However, a significant difference was found between the students' BSMAS scores and smoking, BMI (p<0.05). The BSMAS scores of smokers were found to be significantly higher than non-smokers (p<0.05). When BSMAS scores were evaluated according to BMI, the differences were found to be significant among all groups (p<0.05), only the difference between normal and underweight was not found to be significant (p>0.05) (Table 2)

The relationship between the participants' ORTO-11 scores and BSMAS scores is given in Table 3. A low statistically significant negative relationship was found between ORTO-11 scores and BSMAS scores (r=-0.058, p=0.048). According to this result, as social media addiction increases, the tendency toward orthorexia also increases (Table 3).

Table 3. The correlation between scores of the ORTO-11 and BSMAS

	BSMAS score	
	r	***p*-value**
ORTO-11 score	-0.058	0.048*

*p<0.05, r: Correlation coeffi ient, Pearson correlation analysis was applied. BSMAS: Bergen social media addiction scale, ORTO-11: Orthorexia-11 scale

Discussion

In this study, which was conducted to determine the frequency of ON among university students and to examine its relationship with various factors and social media addiction, the tendency to ON was found to be 24%. In a study conducted on Italian university students, the ON tendency was found to be 29% (21). Varga et al. (22) found that 56.9% of Hungarian university students tended to orthorexia. In a study conducted on Spanish and Polish university students, it was determined that the ON tendency was 10.9% in

Spanish students and 10.3% in Polish students. (23). In a study conducted on university students in France, the rate of students prone to ON was found to be 14.5% (24). According to the study conducted by Şanlıer et al. on Turkish university students, 59.8% of the students were found to be prone to ON (25). In the study conducted by Oğur et al. on Turkish university students, the rate of students with ON tendency was found to be 41.3% (26). In recent years, intense information has been shared in the media and social media around the world about food quality, naturalness, and its effects on health. The consumer's misunderstanding of the information or the publisher's misrepresentation of the information triggers the development of healthy eating obsession in people. It is thought that the high prevalence of ON in our study and many other studies may be affected by these factors. The reason why differences are observed between the ON tendency rates in different studies conducted on university students may be due to the use of different ON scales in these studies.

It has been determined that the ON rate is higher in groups such as healthcare workers and artists (27). In the study conducted by Fidan et al. (28) on medical students, it was found that 43.6% of medical students were prone to orthorexia. In a study conducted on Turkish nursing students, it was determined that 45.3% of the students were at risk for ON (29). In a study conducted on students studying in the nutrition and dietetics department in Turkey, it was determined that 72.2% of the students had an orthorexic tendency (30). In a study conducted on Turkish dietitians, the rate of individuals with a high risk of ON was found to be 41.9% (31). Alvarenga et al. (32) found that ON symptoms were observed with a frequency of 81.9% in Brazilian dietitians. The fact that students studying in health sciences departments have a higher ON tendency may be due to their sensitivity to being healthy due to the health and nutrition courses taught in these departments. The high orthorexic tendency seen especially in students studying in the field of nutrition can be attributed to the increase in anxiety about healthy nutrition as the level of nutritional knowledge increases. In this study, no significant difference was found between the ON tendency rates of students studying in the field of health and students studying in other fields. In addition to being more sensitive about healthy nutrition, students studying in the health field may not have higher ON tendencies because they are more capable of distinguishing the correct nutrition information presented in the media and social media in recent years.

In this study, the ON tendency of female students was found to be significantly higher than male students ($p<0.05$). Özkan et al. (33) similarly found that being male reduced the ON tendency. In their study in Italy, Ramacciotti et al. (34) reported that women were at twice the risk of ON compared to men. In the study conducted by Şanlıer et al. (25) on university students, the risk of ON in women was found to be 2.5 times that of men. Other studies show that female gender increases the tendency for ON (12,18,35,36). Contrary to these studies, there are also studies showing that the tendency towards ON is higher in men (28, 37). Some studies have shown that there is no significant difference between men and women in terms of ON tendency (27,38,39). In a meta-analysis study compiling 67 publications on ON, it was determined that tendencies towards orthorexic behaviors were similar between genders, but pathologies related to healthy nutrition were found to be more common in women (40). Women may be more interested in body image, healthy behaviors, and a healthy lifestyle than men, and they may be more influenced by content about healthy nutrition in the media and social media. However, as can be seen, the relationship between ON and gender is not clear in the literature.

It is stated that BMI may affect the tendency to ON through variables such as health status, diet, and eating habits (18). Gezer et al. found that the ON tendency was significantly higher in underweight individuals compared to those with normal body weight and obesity (41). In the current study, it was determined that orthorexic tendency increased significantly as BMI increased ($p<0.05$). Similar to our study, Fidan et al. (28) and Asil et al. (13) found that the risk of ON increased as the BMI value increased ($p<0.05$). The increased tendency towards ON in overweight or obese individuals can be thought to be due to the increased interest of these individuals in implementing weight loss diets and increasing the consumption of healthy foods. However, several studies do not find a relationship between ON and BMI (25, 42).

The use of social media, which has become widespread with the development of technology in recent years, has become central to life. Social media addiction is becoming increasingly common, especially among young people growing up in the digital generation (2). In this study, the BSMAS score

indicating social media addiction was found to be 16.9±4.6. In our study, social media addiction was found to be higher in female students than in males; however, the difference was not significant (p>0.05). There are other studies conducted in Turkey in which no significant difference was found between the social media addiction levels of male and female university students (43-45). This may be because men and women in this age group use social media for similar purposes and have similar free time. However, there are also studies in the literature showing that women's social media addiction levels are higher than men's (46-48). This may be due to differences in interests and work status between genders.

Time spent on social media can be a trigger for the development of eating disorders (4). It is thought that content about healthy nutrition on social media may lead to orthorexic tendencies (6). In this study, it was found that as social media addiction increases, the ON tendency increases significantly (p<0.05). In a study conducted on Turkish university students, it was determined that there was an opposite relationship between students' social media addiction and healthy eating attitudes (49). Again, in a study examining university students, it was determined that social media addiction significantly increased orthorexic tendency (p<0.05) (7). Other studies reveal that orthorexic tendency increases with the increase in social media addiction (12-15). Presenting thinness as a symbol of beauty and health on social media can trigger the development of other eating disorders in addition to the obsession with healthy eating. The fact that individuals who do not have sufficient knowledge about nutrition can easily share on social media is also a risk for the development of eating disorders.

This study contains some limitations. Because it has a cross-sectional design, causal inferences are limited. Another limitation is that the data were collected through an online survey, and measurements such as body weight and height were based on self-reports from the participants. Additionally, there are some debates in the literature about the accuracy of the ORTO-11 scale used in the study in determining orthorexic tendencies. Also, this study shows the fact that it was performed in a single center limited its generalizability to the society.

Conclusion

According to the results of our study, the tendency for ON among university students was found to be 24%. The ON tendency of female students was found to be significantly higher than that of male students. It has been determined that as BMI increases, orthorexic tendency increases significantly. Our most important result, which was our starting point in the planning of our study, was that as social media addiction increased, the ON tendency increased significantly. Suggestions and posts that trigger eating disorders should be prevented from social media content. Users should be aware of choosing experts in their fields who provide accurate and reliable information. Awareness activities should be organized about thinness imposed as the ideal body image on social media. In addition, to solve the problems of body image and perfectionism, informative activities should be carried out, especially for students. It would be beneficial to conduct future studies with more comprehensive samples and different age groups.

Ethics Committee Approval

This research complies with all the relevant national regulations, institutional policies and is under the tenets of the Helsinki Declaration, and has been approved by the Health Sciences Scientific Research and Publication Ethics Committee of Alanya Alaaddin Keykubat University (Decision dated 25/05/2022 and numbered 02/03).

Informed Consent

Informed consent was obtained from all participants were included in the study.

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Conflict of Interest

The authors have no conflict of interest to declare

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References

1.He Z, Yang W. Impulsiveness as potential moderators of

the relation between social media dependence and eating disorders risk. BMC Psychology, 2022;10(1):1-7.

2.Mushtaq T, Ashraf S, Hameed H, Irfan A, Shahid M, Kanwal R, et al. Prevalence of Eating Disorders and Their Association with Social Media Addiction among Youths. Nutrients. 2023;15(21):4687.

3.Rounsefell K, Gibson S, McLean S, Blair M, Molenaar A, Brennan L, et al. Social media, body image, and food choices in healthy young adults: A mixed methods systematic review. Nutrition & Dietetics 2020;77(1):19-40.

4.Santarossa S, Woodruff SJ. #SocialMedia: Exploring the relationship of social networking sites on body image, self-esteem, and eating disorders. Soc Media Soc 2017;3(2):2056305117704407.

5.Ramírez AS, Freres D, Martinez LS, Lewis N, Bourgoin A, Kelly BJ, et al. Information seeking from media and family/ friends increases the likelihood of engaging in healthy lifestyle behaviors. J Health Commun 2013;18(5):527-542.

6.Mento C, Silvestri MC, Muscatello MRA, Rizzo A, Celebre L, Praticò M, et al. Psychological Impact of pro-anorexia and pro-eating disorder websites on adolescent females: A systematic review. Int J Environ Res Public Health 2021; 18(4): 2186.

7.Hamurcu P. Yeme Davranışı, Yeme Bozukluğu ve Ortoreksiya Nervoza Yordayıcıları Olarak Sosyal Medya Bağımlılığı ve Kullanım Amaçları: Genç Yetişkinler Üzerine Bir Çalışma. Bağımlılık Dergisi 2023;24(2):133-145.

8.Bratman S, Knight D. Health Food Junkies: Orthorexia Nervosa: Overcoming the Obsession with Healthful Eating. First Edition, New York: Broadway Books; 2001.

9.Skella P, Chelmi ME, Panagouli E, Garoufi A, Psaltopoulou T, Mastorakos G, et al. Orthorexia and Eating Disorders in Adolescents and Young Adults: A Systematic Review. Children 2022;9(4):514.

10.Oberle CD, Klare DL, Patyk KC. Health beliefs, behaviors, and symptoms associated with orthorexia nervosa. Eat Weight Disord 2019;24(3):495-506.

11.Turner PG, Lefevre CE. Instagram use is linked to increased symptoms of orthorexia nervosa. Eat Weight Disord 2017;22(2):277-284.

12.Yurtdaş-Depboylu G, Kaner G, Özçakal S. The association between social media addiction and orthorexia nervosa, eating attitudes, and body image among adolescents. Eat Weight Disord 2022;27(8):3725-3735.

13.Asil E, Yılmaz MV, Ayyıldız F, Yalçın T. The effect of social media use on orthorexia nervosa: a sample from Turkey. Nutr Hosp 2023;40(2):384-390.

14.Yılmazel G. Orthorexia tendency and social media addiction among candidate doctors and nurses. Perspect Psychiatr Care 2021;57(4):1846-1852.

15.Yılmaz H, Ünal GA. Ortorektik Eğilimlerin Sosyal Medya Bağımlılığı, Yeme Tutumu ve Beden Algısı İle İlişkisi. Bağımlılık Dergisi 2024;25(2):203-215.

16.World Health Organization (WHO). BMI classificatio [Internet], Global Database on Body Mass Index. (2004) Available from: http://www.assessmentpsychology.com/ icbmi.htm. (accessed on 12 January 2024)

17.Donini LM, Marsili D, Graziani MP, Imbriale M, Cannella C. Orthorexia nervosa: validation of a diagnosis questionnaire. Eating and Weight Disorders-Studies on Anorexia, Bulimia, and Obesity 2005;10(2):28-32

18.Arusoğlu G, Kabakçi E, Köksal G, Merdol TK. Orthorexia Nervosa and Adaptation of ORTO11 into Turkish. Turkish journal of psychiatry, 2008;19(3):283-291

19.Andreassen CS, Billieux J, Griffiths MD, Kuss DJ, Demetrovics Z, Mazzoni E, et al. The relationship between addictive use of social media and video games and symptoms of psychiatric disorders: A large-scale cross-sectional study Psychol Addict Behav 2016;30:252–62.

20.Demirci İ. Bergen sosyal medyabağımlılığı ölçeğinin Türkçeye uyarlanması, depresyon ve anksiyete belirtileriyle ilişkisinin değerlendirilmesi. Anadolu Psikiyatri Dergisi 2019;20:15-22.

21.Gorrasi ISR, Bonetta S, Roppolo M, Abbate Daga G, Bo S, Tagliabue A, et al. (2020). Traits of orthorexia nervosa and muscle dysmorphia in Italian university students: a multicentre study. Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity 2020;25:1413-23.

22.Varga M, Máté G. Eating and body image related problems in orthorexia nervosa. The 17th International Conference on Eating Disorders: Abstract book; 2009. p. 39.

23.Brytek-Matera A, Onieva-Zafra MD, Parra-Fernández ML, Staniszewska A, Modrzejewska J, Fernández-Martínez E. Evaluation of Orthorexia Nervosa and Symptomatology Associated with Eating Disorders among European University Students: A Multicentre Cross-Sectional Study. Nutrients 2020; 12(12):3716.

24.Lasson C, Barthels F, Raynal P. Psychometric evaluation of the French version of the Düsseldorfer Orthorexia Skala (DOS) and prevalence of orthorexia nervosa among university students. Eat Weight Disord 2012;26: 2589–2596.

25.Sanlier N, Yassibas E, Bilici S, Sahin G, Celik B. Does the rise in eating disorders lead to increasing risk of orthorexia nervosa? Correlations with gender, education, and body mass index. Ecol Food Nutr 2016;55(3):266-78.

26.Oğur S, Aksoy A. Determination of the Orthorexia Nervosa Tendency in University Students. BEU Journal of Science 2015;4(2):93-102.

27.Varga M, Dukay-Szabó S, Túryfvan-Furth-Eric F. Evidence and gaps in the literature on orthorexia nervosa. Eat Weight Disord. 2013;18(2):103- 111.

28.Fidan T, Ertekin V, Işıkay S, Kırpınar I. Prevalence of orthorexia among medical students in Erzurum. Comprehensive Psychiatry. 2010;51(1):49- 55.

29.Arslantaş H, Adana F, Öğüt S, Ayakdaş D, Korkmaz A. Relationship Between Eating Behaviors of Nursing Students and Orthorexia Nervosa (Obsession with Healthy Eating): A Cross-Sectional Study. Journal of Psychiatric Nursing, 2017; 8(3):137-144.

30.Çobanoğlu Z, Akman M. Consideration of healthy eating obsession (orthorexia nervosa) for students educated in nutrition and dietetics department. J Pharm Pharmacol 2021;9: 35-43.

31.Asil E, Sürücüoğlu MS. Orthorexia Nervosa in Turkish Dietitians. Ecology of Food and Nutrition, 2015;54(4): 303–313.

32.Alvarenga MS, Martins MC, Sato KS, Vargas SV, Philippi, ST, Scagliusi FB. Orthorexia nervosa behavior in a sample of Brazilian dietitians assessed by the Portuguese version of ORTO-15. Eat Weight Disord 2012;17: e29–35.

33.Özkan AN, Ülkücü A, Kanter T, Tapan ME, Turgutlugil B, Çaylan A. Evaluating orthorexia tendency among Trakya University Medical School students. Turkish Medical Student Journal 2015;2(1):1–4.

34.Ramacciotti CE, Perrone P, Coli E, Burgalassi A, Conversano C, Massimetti G, et al. Orthorexia nervosa in the general population: a preliminary screening using a self-administered questionnaire (ORTO-15). Eat Weight Disord 2011;16: e127–30

35.Koven NS, Senbonmatsu R. A neuropsychological evaluation of orthorexia nervosa. Open Journal of Psychiatry 2013; 3:214–22.

36.Dell'Osso L, Cremone IM, Chiarantini I, Arone A, Casagrande D, Massimetti G et al. Investigating orthorexia nervosa with the ORTO-R in a sample of university students with or without subthreshold autism spectrum: focus on dietary habits and gender differences. Front Psychiatry 2022;14(13):900880.

37.Donini LM, Marsili D, Graziani DMP, Imbriale M, Cannella C. Orthorexia nervosa: A preliminary study with a proposal for diagnosis and an attempt to measure the dimension of the phenomenon. Eating and Weight Disorders-Studies on Anorexia, Bulimia, and Obesity 2004;9(2):151–57.

38.Brytek Matera A. Orthorexia Nervosa an eating disorder, obsessive-compulsive disorder, or disturbed eating habit? Archives of Psychiatry and Psychotherapy 2012; 1:55–60.

39.Luck-Sikorski C, Jung F, Schlosser K, Riedel-Heller SG. Is orthorexic behavior common in the general public? A large representative study in Germany. Eat Weight Disord 2019;24(2):267–273.

40.Strahler, J. Sex differences in orthorexic eating behaviors: A systematic review and meta-analytical integration. Nutrition, 2019;67:110534.

41.Gezer C, Kabaran. S. The risk of orthorexia nervosa for female students studying nutrition and dietetics. S.D.U. Journal of Health Sciences 2013;4(1):14–22.

42.Cinosi, E., I. Matarazzo, S. Marini, T. Acciavatti, M. Lupi, M. Corbo, R, et al. Prevalence of orthorexia nervosa in a population of young Italian adults. European Psychiatry 2015;30 (Suppl 1):1330.

43.Gökbulut B, Bilen H. Examination of the Relationship Between Social Media Addiction and Depression, Anxiety and Stress of University Students. J Higher Edu Sci 2024;14(1):66-75.

44.Balcı Ş, Baloğlu E. The Relationship between Social Media Addiction and Depression: "A Survey among University Youth". Galatasaray University Journal of Communication 2018;(29):209-234.

45.Şahin E, Fulya T, Hamamcı Z. The Relationship Between Coping Attitudes of Depression, Anxiety and Stress Experienced During Covid-19 Pandemic and Social Media Addiction. Journal of Erciyes Communication 2022;9(1),165-186.

46.Korkmaz S. The Link between Positive and Negative Religious Coping, Social Media Addiction and Loneliness. Tasavvur Tekirdag theology journal, 2021;7(1),237-71.

47.Uslu M. The Analysis of Social Media Addiction and Usage in Turkey. Turkish Academic Research Review, 2021;6(2):370-96.

48.Arcan K. Influence of COVID-19 pandemic on social media addiction: Investigation among university students Journal of Clinical Psychology Research 2023:7(2):187-204.

49.Coşkun GG, Demir BA. Evaluation of Undergraduate Students' Healthy Eating Attitudes Related Social Media Addiction-A Case of a University in Istanbul Fenerbahce University Journal of Health Sciences 2021;1(3):195-205.