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BİR ÜNİVERSİTEDE ÖĞRENİM GÖRMEKTE OLAN ÖĞRENCİLERİN ORTOREKSİYA NEVROZA YÖNÜNDEN DEĞERLENDİRİLMESİ

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Öz
Bu çalışma, bir üniversitede öğrenim görmekte olan öğrencilerin ortoreksiya nevroza durumunun değerlendirilmesi amacıyla yapılmıştır. Nicel araştırma tasarımında ve ilişkisel tarama modelinde olan araştırmada kesitsel yöntem kullanılmıştır. Araştırmanın evrenini, Doğu Anadolu Bölgesindeki bir kamu üniversitesinde 2019-2020 eğitim öğretim döneminde öğrenim gören öğrenciler oluşturmuştur (14.888 öğrenci). Örneklem büyüklüğünün hesaplanmasında "Evreni Bilinen Gruptan Örneklem Seçme" formülü kullanılmış ve minimum örneklem büyüklüğü 995 kişi olarak hesaplanmıştır. Araştırmada kullanılan anket formu iki kısımdan oluşmaktadır. Formun ilk kısmı tanımlayıcı özellikleri ve katılımcıların sağlık öykülerini belirlemeye yöneliktir ve buradaki sorular araştırmanın bağımsız değişkenlerini oluşturmaktadır. Formun ikinci kısmında yer alan Sağlıklı Beslenme Takıntısı Ölçeği -15 (Ortoreksiya Nervoza - 15 = ORTO-15) ve Yeme Tutumu Testi (YTT - 40) araştırmanın bağımlı değişkenlerini oluşturmuştur. ORTO – 15 ölçeğinin kesme puanına göre değerlendirildiklerinde, katılımcıların %7.9'unun (79 kişi) ortorektik olduğu belirlenmiştir. Bu çalışma ile genç üniversitelilerde ortoreksiya sıklığının azımsanmayacak durumda olduğu görülmüştür. Ortorektik belirti gösterenlerin oranı %7.9 olarak bulunmuştur. Öğrencilerin Ortoreksiya Nervoza konusunda da eğitim alarak farkındalıklarının artması sağlanmalıdır.

Anahtar Kelimeler: Ortoreksiya Nervoza, Sağlıklı Beslenme Takıntısı, Öğrenciler, Etkileyen Faktörler.

THE EVALUATION OF STUDENTS WHO STUDY IN A UNIVERSITY IN TERMS OF ORTHOREXIA NEVROSA

Abstract
This study was conducted to evaluate the orthorexia nervosa status of students studying at a university. The cross-sectional method was used in the study, which was in the quantitative research design and the relational survey model. The population of the research of students studying at a public university in the Eastern Anatolia Region in the 2019-2020 academic year (14,888 students). The formula "Selecting a Sample from a Known Universe" was used to calculate the sample size and the minimum sample size was calculated as 995 individuals. The questionnaire form used in the research consists of two parts. The first part of the form is aimed at determining the descriptive features and health histories of the participants, and the questions here constitute the independent variables of the research. The ORTO-15 questionnaire and the Eating Attitudes Test (EAT-40) in the second part of the questionnaire formed the dependent variables of the study. When evaluated according to the cut-off score of the ORTO-15 questionnaire, it was determined that 7.9% of the participants them (79 individuals) were orthorexic. In the current study, it was seen that the frequency of orthorexia in young university students was not to be underestimated. The rate of those with orthorexic symptoms was 7.9%.Students should be provided with training on Orthorexia Nervosa, and their individual awareness should be increased.

Keywords: Orthorexia Nervosa, Healthy Eating Obsession, Students, Influencing Factors.

1. INTRODUCTION

With the influence of the mass media, which is becoming more and more widespread, healthy nutrition is among the popular topics (1). Nutritionists, athletes, and health professionals share informative posts on healthy nutrition through various social media platforms. However, some people may be overly sensitive during the implementation of this information; therefore, they may have sharp thoughts about consuming certain foods and they may show avoidance behavior from these foods. This is where the obsession with healthy nutrition comes into play.

The term orthorexia nervosa derives from the words orthos (right) and orexis (hunger) meaning obsession with healthy food and proper nutrition. Orthorexia nervosa (ON) is defined as "an eating disorder in which the individual is claimed to be interested in healthy foods at the maximum level" (2).

More studies are needed to distinguish orthorexia nervosa from other eating disorders, as some doctors and other healthcare professionals believe that orthorexia nervosa is a type of anorexia nervosa or Obsessive Compulsive Disorder (OCD) and does not require its own classification (3). Unlike anorexics or bulimics, Bratman claimed that the motivation of orthorexic individuals is not to lose weight but to achieve a sense of perfection or purity (4). Various nutritional deficiencies occur in people who pay attention to this way of eating for a long time. Since they also avoid eating in places other than their homes, their social relations may also deteriorate. Although orthorexia nervosa has not yet taken its place in the diagnostic criteria, new information is revealed as the symptoms on the subject are examined, and the studies are evolved (5).

There is a constant increase in eating disorders and the importance of healthy life today brings new eating disorders. This situation does not cause new health problems in the future, and it creates the need to correct the disorders that occur in individual-specific eating behaviors (6). In this sense, it is necessary to identify those in the risk group, determine the frequency of orthorexia nervosa, and examine its relationship with nutritional status. In order to eliminate this disorder in people who are determined to be in this risk group, it is necessary to provide various training to the professionals working in this field and to raise awareness.

This study was conducted to evaluate the orthorexia nervosa status of students studying at a university.

2. MATERIAL AND METHOD

2.1. Design, population, and sample of the research

The cross-sectional method was used in the study, which was in the quantitative research design and the relational survey model. The population of the research of students studying at a public university in the Eastern Anatolia Region in the 2019-2020 academic year (14,888 students). The formula "Selecting a Sample from a Known Universe" was used to calculate the sample size [$(n=Nt^2pq/d^2(N-1)+t^2pq)$, (N=14.888, p=0.5, q=0.5, d=0.03), t=1.96)] and the minimum sample size was calculated as 995 individuals. Then, according to the proportional stratified sampling method, the number of students to be sampled from the faculties was created within the table shown below.

Table 1. Total number of the students and number of students to be sampled

Name of the Faculty/Vocational School	Total Number of the Students (individuals)	Number of Students to be Sampled (individuals)
Vocational School of Healthcare Services	2466	165
Faculty of Health Sciences	648	43
Faculty of Engineering and Architecture	742	50
Vocational School of Health	125	8
Faculty of Agriculture	186	12
Faculty of Veterinary	302	20
Vocational School of Solhan	383	26
Faculty of Theology	851	57
Bingöl Vocational School of Technical Sciences	1387	92
Bingöl Vocational School of Social Sciences	1637	109
Vocational School of Physical Education and Sports	847	57
Faculty of Dentistry	70	6
Faculty of Economics and Administrative Sciences	454	30
Vocational School of Genç	506	34
Faculty of Arts and Sciences	4284	286
Total	**14.888**	**995**

2.2. Data Collection Tools

The questionnaire form used in the research consists of two parts. The first part of the form is aimed at determining the descriptive features and health histories of the participants, and the questions here constitute the independent variables of the research. The ORTO-15 questionnaire and the Eating Attitudes Test (EAT-40) in the second part of the questionnaire formed the dependent variables of the study.

The ORTO-15 Questionnaire: It is a 15-item self-assessment questionnaire designed by Donini to evaluate the tendency for Orthorexia Nervosa (1). The Turkish validity and reliability study of the questionnaire was performed by Arusoğlu et al. (7) and the Cronbach's Alpha coefficient was reported as 0.62. The scoring table of the items was shown below:

Table 2. The scoring of the items (Part 1)

	Always	Often	Sometimes	Never
2, 5, 8, 9	4	3	2	1
3, 4, 6, 7, 10, 11, 12, 14, 15	1	2	3	4
1, 13	2	4	3	1

The items investigate the obsessive behaviors of individuals in preferring, purchasing, preparing, and consuming foods that they consider healthy. It was desired to evaluate the individuals who were applied both emotionally and rationally. The subscales of the questionnaire are Concerns Related to Healthy Eating: CRHE (items 1, 3, 4, 10, and 13), Food Preference, Eating Attitudes and Behaviors: FPEAB (items 2, 5, 8, and 9), and Food Preference and Value: FPV (items 6, 7, 14, and 15). A minimum of 15 and a maximum of 60 points can be obtained from the questionnaire. In the questionnaire, those who score “33 points” and below are defined as “orthorexic”, while the higher the score, the more the eating behavior approaches become normal from hypersensitivity.

The Eating Attitudes Test (EAT-40): It is a self-report scale developed by Garner and Garfinkel (1979) to evaluate a wide spectrum of attitudes and behaviors in anorexia nervosa (8). The validity and reliability study in Turkey was conducted by Savaşır and Erol (1989) (9). The test consists of 40 questions and the answers are evaluated in a six-step Likert-type as "always - never". The scoring table of the items was shown below.

Table 3. The scoring of the items (Part 2)

	Always	Usually	Often	Sometimes	Rarely	Never
1, 18, 19, 23, 27, and 39	0	0	0	1	2	3
2-17, 20-22, 24-26, 28-38, 40	3	2	1	0	0	0

It is evaluated in terms of pathology by giving 3 points for each extreme response, 2 and 1 points for other options. A maximum of 120 points can be obtained from the test. The discrimination score for the diagnosis of anorexia was determined as 30, and a score of 30 and above is directly related to eating disorders. The Cronbach's Alpha reliability coefficient of the scale was reported as .70 in the study of Savaşır and Erol (9).

2.3. Approval of the research ethics committee

Before the study, written consent was obtained from the Scientific Research Ethics Committee of X University (dated: 02/03/2020, numbered: E.2791) and from all faculty deans, and they were informed with the informed consent form attached to the questionnaire within the scope of Helsinki principles. The data of the study was collected between February 15 and March 15, 2020. To reduce the possibility of bias, data collection, data entry and data analysis were done by different researchers in the study.

2.4. Data Analysis

The data obtained were evaluated with the Statistical Package for the Social Sciences-22 (SPSS-22) program, and error controls, tables, and statistical analyzes were made. Descriptive data was given as numbers and percentages. Normality analyzes were performed on the dependent variable scales, but it was observed that they did not fit the normal distribution. For this reason, in order to determine the independent variables that make a difference on the dependent variables, Mann - Whitney U and Kruskall Wallis tests were performed according to the category number of the variables. The Cronbach's alpha values of the scales were calculated and correlation analyzes were made. Type 1 error level was determined as 0.05.

3. FINDINGS

The mean age of the participants was 21.01±1.81 (Min: 17, Max: 35, Median: 21). Waist circumference measurements were also asked to the participants and it was seen that only 174 (17.48%) of the participants knew their waist circumference (Mean: 64.08 for waist circumference, Standard deviation: 7.21, Min: 49, Max: 86, Median: 62.00). The mean Body Mass Index (BMI) of the participants in the study was determined as 22.19 ± 2.77 (Min: 16.14, Max: 38.57, Median: 21.90).

Table 4. Socio-demographic and health characteristics of the participants (N = 995)

Characteristics		Number	%
Age range	22 years old and below	800	80.4
	Over 23 years old	195	19.6
Gender	Female	592	59.5
	Male	403	40.5
Marital status	Single	981	98.6
	Married	14	1.4
Educational level	Bachelor's degree	568	57.1
	Associate degree	427	42.9
Grade	Preparatory year	15	1.5
	First grade	76	7.6
	Second grade	329	33.1
	Third grade	377	37.9
	Fourth grade	88	8.8
	Fifth grade	110	11.1
Perception of weight	Slim	146	14.7
	Normal	619	62.2
	A little overweight	192	19.3
	Fat	38	3.8
Educational level of the mother	Illiterate	341	34.3
	Primary school graduate	327	32.9
	Middle school graduate	191	19.2
	High school graduate	96	9.6
	University graduate	40	4.0

Educational level of the father	Illiterate	102	10.3
	Primary school graduate	290	29.1
	Middle school graduate	277	27.8
	High school graduate	236	23.7
	University graduate	90	9.0
Place of residence	State dormitory	586	58.9
	Private dormitory	62	6.2
	Student house	167	16.8
	With family	147	14.8
	With relatives	33	3.3
Perception of income level	Income is low	389	39.1
	Income is equal to expenses	513	51.6
	Income is more than expenses	93	9.3
Type of the source of income	State scholarship	656	65.9
	Scholarship given by private entities	77	7.7
	Family support	262	26.3
Employment status	Employed	121	12.2
	Unemployed	874	87.8
Smoking habit	Existent	354	35.6
	Nonexistent	641	64.4
Alcohol habit	Existent	84	8.4
	Nonexistent	911	91.6
Chronic disease	Existent	48	4.8
	Nonexistent	947	95.2
The status of taking a nutrition course	Existent	387	38.9
	Nonexistent	608	61.1
Frequency of nutrition	1-2 meal/meals a day	284	28.5
	3 meals a day	571	57.4
	4-5 meals a day	140	14.1
The status of regularly applied diet	Existent	77	7.7
	Nonexistent	918	92.3
Snacking habit	In the form of frequent snacking	262	26.3
	In the form of occasional snacking	633	63.6
	Nonexistent	100	10.1
Fastfood habit	Once a day	210	21.1
	1-2 time/times a day	389	39.1
	Once a month	306	30.8
	Nonexistent	90	9.0
The perception of whether she/he is eating properly	I am eating properly	260	26.1
	I am not eating properly	735	73.9
The status of planning what to eat	Existent	108	10.9
	Nonexistent	887	89.1
The status of giving attention to nutrition	I pay a lot of attention	36	3.6
	I pay attention at a normal level	434	43.6
	I pay a little attention	404	40.6
	I don’t pay any attention	121	12.2
The status of physical exercise	I never do	271	27.2
	I take regular walks	212	21.3
	Sometimes I take a walk	400	40.2
	I go to the gym	87	8.7
	I am a professional athlete	25	2.5

When evaluated according to the cut-off score of the ORTO-15 questionnaire, it was determined that 92.1% of the participants (916 individuals) were normal and 7.9% of them (79 individuals) were orthorexic. In terms of the cut-off score of the EAT-40, it was observed that 88.2% (522 individuals) did not have an eating disorder, and 11.8% of them (70 individuals) had an eating disorder frequency. The score distributions of the scales and subscales used in the study were demonstrated in Table 2.

Table 5. Score Distributions of the EAT-40, the ORTO-15 and Its Subscales (N = 995)

	ORTO - 15	CRHE	FPEAB	FPV	EAT - 40
Mean ± SD	38.98 ± 3.50	18.10 ± 3.07	9.92 ± 2.06	10.95 ± 1.78	17.23 ± 14.45
Median	39	19.00	10.00	11	14.00
Minimum	27	8	4	4	2
Maximum	50	25	16	16	119
%95 CI	38.52 – 39.07	17.43 – 17.92	10.03 – 10.37	10.76 – 11.04	16.06 – 18.39

ORTO-15: A Questionnaire for the Diagnosis of Orthorexia Nervosa, CRHE: Concerns Related to Healthy Eating, FPEAB: Food Preference, Eating Attitudes and Behaviors, FPV: Food Preference and Value, EAT- 40: The Eating Attitudes Test

The characteristics that made a difference in the distribution of both the ORTO – 15 and EAT – 40 scores of the participants were shown in Table 3. The variables of age range, marital status, place of residence, type of the source of income, smoking habit, alcohol habit, the status of taking a nutrition course, the status of regularly applied diet, and the status of physical exercise did not make any statistically significant differences on both scales ($p > 0.05$). It was determined that the ORTO-15 mean rank was higher in males ($p = 0.043$), in those with associate degree education ($p = 0.001$), and in those whose fathers were middle school graduates ($p = 0.045$). It was determined that EAT-40 mean ranks had higher averages as the level increased ($p = 0.044$) and income increased ($p = 0.001$).

Table 6. The characteristics of the participants that made a difference on both the ORTO – 15 and EAT – 40 score distributions (N = 995)

Characteristics		ORTO – 15 Mean Rank	Test value	EAT – 40	Test value's Mean Rank
Perception of weight	Slim	462.84[a]		343.34[a,c]	
	Normal	498.62	KW = 9.811	284.32[c,d]	KW = 16.948
	A little overweight	539.90[b,a]	**p = 0.020**	275.71[a,b]	**p = 0.001**
	Fat	411.34[b]		377.22[b,d]	
Educational level of the mother	Illiterate	492.94[a]		284.19[a]	
	Primary school g.	499.80[b,c]	KW = 12.881	308.03[b]	KW = 14.700
	Middle school g.	535.96	**p = 0.012**	268.54[b,c]	**p = 0.005**
	High school g.	491.96		317.18	
	University g.	359.63[a,b,c]		412.58[c,a]	
Employment status	Employed	573.74	U = 43712.50	253.87	U = 14917.00
	Unemployed	487.51	**p = 0.002**	302.03	**p = 0.029**
Chronic disease	Existent	505.08	U = 16019.50	289.56	U = 6147.00
	Nonexistent	358.24	**p = 0.001**	403.75	**p = 0.001**
Frequency of meals	1-2 meal/meals a day	451.86[a,b]		360.59[a,b]	
	3 meals a day	506.34[a]	KW = 13.945	257.09[a]	KW = 45.397
	4-5 meals a day	557.59[b]	**p = 0.001**	318.92[b]	**p = 0.001**
Snacking habit	Frequently	518.42[a]		304.63[a]	
	Occasionally	504.00[b]	KW = 11.383	284.78[b]	KW = 9.312
	Nonexistent	406.51[a,b]	**p = 0.003**	360.46[b]	**p = 0.010**
Fastfood habit	Once a day	507.17		324.64[a]	
	1-2 time/times a day	494.93[a,b]	KW = 15.629	295.81[b,c,d]	KW = 25.502
	Once a month	526.70[c]	**p = 0.001**	250.86[a,b]	**p = 0.001**
	Nonexistent	392.27[a,b,c]		387.18[c,d]	
The perception of whether she/he is eating properly	I am eating properly	457.02	U = 84896.00	333.89	U = 26986.00
	I am not eating properly	512.50	**p = 0.007**	284.37	**p = 0.002**
The status of planning what to eat	Existent	440.42	U = 41679.00	371.10	U = 13199.00
	Nonexistent	505.01	**p = 0.027**	286.33	**p = 0.001**
The status of giving attention to nutrition	A lot	334.18[a,b,c]		420.48[a,c,e]	
	Normal	499.58[a]	KW = 12.448	303.41[b,d,e]	KW = 39.930
	A little	508.03[c]	**p = 0.006**	255.64[a,b,c]	**p = 0.001**
	Any	507.60[b]		366.94[d]	

a, b, c, d, e indicate the groups from which the difference originates. ORTO-15: A Questionnaire for the Diagnosis of Orthorexia Nervosa, EAT- 40: The Eating Attitudes Test

Table 7. The Correlation between Some Characteristics of the Participants and their ORTO – 15 and EAT - 40 Scores* (N =995)

Variables		Age	BMI	ORTO - 15	EAT - 40
Age	rho	1.00			
	p				
BMI	rho	.124**	1.00		
	p	**.001**			
ORTO - 15	rho	-.030	.014	1.00	
	p	.348	.654		
EAT - 40	rho	-.016	.002	-.292**	1.00
	p	.616	.968	**.001**	

**Spearman correlation analysis, **: correlation at 0.01 level*

The relationship between the scales used in the study was demonstrated in Table 4. As it can be seen, there was a very weak positive correlation between BMI and age, and a negative and very weak correlation between ORTO -15 and EAT-40.

4. DISCUSSION

The prevalence of obesity has doubled over the past 20 years. With the increase in the number of obese individuals, obesity has become a public health problem. There is a growing interest in diet and nutrition, which is seen by the World Health Organization as one of the main determinants of health, due to the influence of the media and culture. In addition, increased awareness due to health education can push individuals working in this field to wrong eating behaviors. All these factors that cause improper eating habits have started to make ON an important problem in individuals in society (10,11). The diagnostic criteria and classification of some eating disorders have not been definitively established. There is a need for more studies to be done in the literature for ON, which is one of the eating disorders. In the literature, there are studies on healthcare professionals, performance artists, university students, or professional athletes.

The average age of the participants was 21.01 ± 1.81 (Min: 17, Max: 35, Median: 21). In studies conducted with university students in the literature, the mean age has been reported to be similar to the present study (12-14). Waist circumference measurements were also asked to the participants and it was seen that only 174 (17.48%) of the participants knew their waist circumference (Mean: 64.08 for waist circumference, Standard deviation: 7.21, Min: 49, Max: 86, Median: 62.00). The mean Body Mass Index (BMI) of the individuals participating in the study was determined as 22.19 ± 2.77 (Min: 16.14, Max: 38.57, Median: 21.90). In the study conducted by Akcilek at Medipol University, it was reported that 72.70% of the students were normal and 1.20% of them were obese according to the Body Mass Index (15).

When the findings were evaluated according to the cut-off score of the ORTO-15 questionnaire, it was determined that 92.1% of the participants (916 individuals) were normal and 7.9% of them (79 individuals) were orthorexic. Considering the studies in the literature, it was reported that the frequency of ON was between 3.3% and 88.7% (16-18). In terms of the cut-off score of EAT-40, it was observed that 88.2% of the participants (522 individuals) did not have an eating disorder, and 11.8% of them (70 individuals) had an eating disorder. Fidan et al. determined the cut-off point as 27 in their study of 878 medical students and used the ORTO-11 scale and found the prevalence of ON to be 43.6% (19). Asil and Süroğlu found the prevalence of ON to be 41.9% in their study on 117 dietitians using the ORTO-15 scale (20).

When the characteristics of the participants that made a difference on both the ORTO - 15 and EAT - 40 score distributions were examined, there is a statistically significant difference

between the Perception of the Student's Weight, Mother's educational level, employment status, presence of chronic diseases, frequency of eating, snacking habits, fast food habits on both scales ($p<0.05$). In studies conducted on university students, it has been seen that nutritional status and behaviors are affected by many factors such as chronic and psychological diseases, lifestyle, physical activity, increased consumption of fast food, skipping meals, and decreased consumption of vegetables and fruits (21). The results of our study are compatible with the literature.

When the characteristics of the participants that made a difference in the distribution of both the ORTO – 15 and EAT – 40 scores were examined, it was determined that the variables of age range and marital status did not make a difference ($p > 0.05$) on both scales. While Özkahya (22) found that there was no statistically significant difference between age and ON in his 1972 study, Donini et al. also found that the tendency to ON increases with age (17). Looking at the studies on marital status, Zarifoğlu stated in his study on university students that while all married individuals were orthorexic, 81.30% of the singles were orthorexic (23). In a study conducted on adults in Italy, orthorexia nervosa tendencies of singles were found to be higher than the others (24).

It was determined that the ORTO-15 mean rank was higher in males ($p = 0.043$), in those with associate degree education ($p = 0.001$), and in those whose fathers were middle school graduates ($p = 0.045$). Looking at the studies on gender, Baş conducted a study on 75 participants, 59 women and 16 men, in order to determine the obsession of healthy eating (Orthorexia Nervosa) and eating attitudes in dietitians, and it was determined that 36 women were orthorexic and 23 women were not (25). No significant correlation was found between the ORTO-15 total score and gender ($p=0.301$). Yıldırım, in his study with students, concluded that the mean total scores of orthorexia nervosa differed significantly according to the gender variable, and the total score of orthorexia nervosa of male students was found to be higher than the total score of orthorexia nervosa of female students (26). Ertürk found that the mean ORTO-15 score of female individuals was higher than that of male individuals, but this difference was not statistically significant ($p>0.05$) (27). In studies on the relationship between the educational level of students and their fathers and ON, in the study of Arusoğlu et al., it was observed that the susceptibility to orthorexia nervosa decreased as the level of education increased (7). In the study of Oktay on university students, 19.40% of those whose fathers were literate and primary school graduates, 16.30% of those who graduated from high school, and 12.50% of those who graduated from college showed an orthorexic tendency but the study reported no statistically significant difference (28). In the literature, there are studies showing that the educational level of the father did not make a difference in the findings of orthorexia nervosa (14,19). Although orthorexic thought is affected by family structure and parental education, it is not sufficient on its own and it can be affected by many factors.

5. CONCLUSION and RECOMMENDATIONS

In the current study, it was seen that the frequency of orthorexia in young university students was not to be underestimated. The tendencies towards the obsession of healthy nutrition and eating attitudes of students, who receive a lot of training in their education life in order to protect and develop health, to improve it in case of illness, and to increase the quality of life of individuals, can be affected by the education process they receive. Students should be provided with training on Orthorexia Nervosa, and their individual awareness should be increased. Since Orthorexia Nervosa is a subject that has started to be investigated in recent years, it is recommended to carry out more extensive studies, since each study will contribute to the definition of the diagnostic criteria of Orthorexia Nervosa and determine the treatment steps.

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Conflict of interest

The authors declare that they have no conflicts of interest

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