RESEARCH ARTICLE

The Relationship of Orthorexic Tendencies with Eating Disorder Tendencies and Gender in a Group of University Students

Sultan OKUMUŞOĞLU*

European University of Lefke, Faculty of Arts & Sciences, Department of Psychology, Lefke, TRNC, Mersin 10, Turkey

Abstract

Orthorexia Nervosa is described as a psychopathological preoccupation about healthy food (Bratman & Knight, 2001). Investigation of the relationship of orthorexic tendencies with other eating disorder tendencies and gender among a group of university students was aimed as purpose of the presented study. Participants are 100 university students (57 females, 43 male) who volunteered to answer the scales when study explained to them. Orthorexic tendencies were measured by ORTO-11 scale and eating attitudes were measured by YTT-40 and REZZY scales. Intercorrelations among variables revealed that orthorexic tendencies and eating attitudes are all tended to rise together. On the other hand no significant correlation was found between YTT-40 and ORTO-11 scores. It was thought that lack of any significant correlation between YTT-40 and ORTO-11 scores can be interpreted as another indication of the differences in terms of characteristic symptoms between Anorexia Nervosa and Orthorexia Nervosa. Results points out that REZZY scale seems more related than YTT-40 in terms of covering orthorexic symptoms. According to findings, females' orthorexic tendencies (which measured by ORTO-11) and eating disorder tendencies (which measured by REZZY and YTT-40) are higher than males'. Overweight group showed lower orthorexic tendencies than participants who has normal weight, which is parallel with the results that reveals when orthorexic tendencies decline body mass index scores of participants' rise as a result of not being pathologically preoccupied with 'healthy' eating. It is hoped that the findings of the present study by combining with other related studies will be helpful regarding building a model for this disorder and to debates about classification of orthorexia nervosa. Besides findings are also important in terms of treatment plans regarding this disorder. As mentioned in literature too, more future investigations are needed about orthorexia nervosa. More research with various participants and perhaps with various measurement tools can be suggested for clarification of existing unanswered questions in this relatively young area of investigation.

Keywords: Orthorexia Nervosa, Anorexia Nervosa, Eating Disorders.

Makale Bilgileri / Article Info:

Gönderim / Received: 02.04.2017
Kabul / Accepted: 27.11.2017

** Sorumlu Yazar / Corresponding Author:*

European University of Lefke, Faculty of Arts & Sciences, Lefke, TRNC, Mersin 10, Turkey
ssebitoglu@eul.edu.tr
sultan.okumusoglu@gmail.com

To cite this article:

Okumuşoğlu, S. (2017). The relationship of orthorexic tendencies with eating disorder tendencies and gender in a group of university students. *Curr Res Educ, 3*(3), 105-115.

Bir Grup Üniversite Öğrencisinde Ortorektik Eğilimlerin Yeme Bozukluğu Eğilimleri ve Cinsiyetle İlişkisi

Öz

Ortoreksiya Nervoza, yiyeceklerin sağlıklı olması hakkında psikopatolojik biçimde endişe duyulması olarak tanımlanmaktadır (Bratman ve Knight, 2001). Mevcut çalışmada bir grup üniversite öğrencisinin ortorektik eğilimlerinin diğer yeme bozukluğu eğilimleri ve cinsiyetle ilişkisinin araştırılması amaçlanmıştır. Katılımcılar, araştırma onlara açıklandığında ölçekleri yanıtlamaya gönüllü olmuş 100 üniversite öğrencisidir (57 kadın, 43 erkek). Ortorektik eğilimler ORTO-11 ölçeği ile ve yeme tutumları YTT-40 ve REZZY ölçek puanları ile ölçülmüştür. Değişkenler arası korelasyonlar ortorektik eğilimlerin ve yeme tutumlarının birlikte yükselme eğilimi gösterdiğini ortaya koymuştur. Diğer yandan YTT-40 ile ORTO-11 arasında istatistiksel olarak anlamlı korelasyon saptanamamıştır. YTT-40 ile ORTO-11 arasında istatistiksel olarak anlamlı korelasyon olmayışının Anoreksiya Nervoza ve Ortoreksiya Nervoza arasında karakteristik belirtilerin farklılığının diğer bir belirteci olarak yorumlanabileceği düşünülmektedir. Bulgular ortorektik belirtileri kapsama konusunda REZZY ölçeğinin YTT-40 ölçeğinden daha fazla ilişkili göründüğüne işaret etmektedir. Bulgulara göre kadınların (ORTO-11 ile ölçülen) ortorektik eğilimleri ve (REZZY ve YTT-40 ile ölçülen) yeme bozukluğu eğilimleri erkeklere göre daha yüksektir. Fazla kilolu katılımcılar normal kilodakilere göre daha az ortorektik eğilim göstermişlerdir ki bu bulgu ortorektik eğilimler düştükçe 'sağlıklı' yemekle patolojik meşgul olmayışın bir sonucu olarak vücut kitle indeksi puanlarının yükseldiğini ortaya koyan diğer sonuçla paraleldir. Bulguların ilişkili diğer araştırmaların bulgularıyla bir araya gelerek ortoreksiya nervozanın klasifikasyonu hakkındaki tartışmalara ve bu bozukluğa ilişkin bir model oluşturmaya katkıda bulunacağı umulmaktadır. Ayrıca bu bozukluğa yönelik tedavi planlamaları açısından da bulgular önemlidir. Literatürde de vurgulandığı gibi gelecekte ortoreksiya nervoza konusunda daha fazla araştırma yapılmasına ihtiyaç vardır. Var olan yanıtlanmamış soruların açıklığa kavuşturulması için çeşitli katılımcılarla ve belki de çeşitli ölçüm araçları ile araştırmalar yapılması önerilebilir.

Anahtar Kelimeler: Ortoreksiya Nervoza, Anoreksiya Nervoza, Yeme Bozuklukları.

1. Introduction

Orthorexia Nervosa (ON) is first introduced by Bratman and Knight (2001). ON is defined as having a pathological obsession with healthy eating and a highly restrictive eating behavior which is related with preoccupation with healthy foods and eating right (Arusoğlu, Kabakçı, Köksal, & Merdol, 2008; Asil & Sürücüoğlu, 2015; Bratman & Knight, 2001; Dunn & Bratman, 2016; Missbach et al., 2015).

For now, ON does not have a place together with other eating disorders (ED) in diagnostic system (APA, 2013), but it is getting an increasing attention from investigators (Barnes & Caltabiano, 2017; Gramaglia, Brytek-Matera, Rogoza, & Zeppegno, 2017). On the other hand, this situation is not something unusual, since some other eating disorders like anorexia nervosa (AN) and bulimia nervosa (BN) which are finally included in diagnostic systems were known for a long time before they were situated in diagnostic systems.

While public health nutrition policies are promoting healthy diet and warning people about dangers of obesity (Story, Kaphingst, Robinson-O'Brien, & Glanz, 2008; World Health Organization, 2000), talking about preoccupation with healthy eating as an eating disorder may seems paradoxical at first glance. But it should be kept in mind that ON cannot be explained by just eating right; it is a pathological fixation, it is an obsession about eating right. There are lots of studies which associates higher orthorexic tendencies with higher obsessive compulsive tendencies (e.g. Asil & Sürücüoğlu, 2015; Koven & Senbonmatsu, 2013). In related literature symptoms of eating disorders like food restrictions and almost ritualistic eating disorder related behaviors are associated with intolerance to uncertainty which is associated with not only eating disorders but also with anxiety disorders and obsessive compulsive disorders too (Kesby, Maguireb, Brownlowb, & Grishama, 2017; Renjan, McEvoy, Handley, & Fursland, 2016).

In terms of some characteristic symptoms, or health related consequences, ON has overlaps with well-known eating disorders (Eriksson, Baigi, Marklund, & Lindrgen, 2008; Koven & Senbonmatsu, 2013). For example, as an individual's fixation about 'eating right' heightened, logically rules and restrictions regarding food will also increase and as a result individual would experience a kind of starvation regarding essential nutrients like individuals with AN. As a result, both for ON and AN, long term deficiency regarding essential nutrition needs of the physical body would occur and this will lead to physical health problems (Vo, Lau, & Rubinstein, 2016; Westmoreland, Krantz, & Mehler, 2015). Beside it will lead to social and psychological problems via deterioration of social bonds or through consequences of stigma related with highly restrictive dieting behaviors (Coelho et al., 2016; Murakami, Essayli, & Latner, 2016). People with orthorexic tendencies associates with higher eating disorder scale scores, but at the same time ON has some extremely different characteristics. Therefore, an ongoing debate around ON and about ON's classification is exist (APA, 2013; Arusoğlu et al., 2008). According to Andersen and Yager (2005) ON can be defined as an eating behavior related with both behavioral and psychiatric elements. On the other hand, AN and BN have characteristic symptoms as excessive preoccupation with calories, an obsessive desire for decreasing existing weight despite the fact of being underweighted, size overestimation, & fear of getting fat (Kesby, Maguireb, Brownlowb, & Grishama, 2017). These mentioned characteristics are not valid for ON (Barnes & Caltabiano, 2017; Brytec-Matera, 2012).

ON's relationships with other eating disorders like AN and BN are not clear yet. Need for more research around these issues are mentioned in literature (Donini, Marsili, Graziani, Imbriale, & Cannella, 2004). According to Shafran & Robinson (2004) eating disorders are serious psychopathologies and investigation of them is related with theoretical and practical benefits. Therefore the aim of this study is investigation of the relationship of orthorexic tendencies with eating disorder tendencies and gender among a group of university students.

2. Method

2.1. Participants

Participants are 100 university students (57 female, 43 male) who volunteered to reply the inventories when study explained to them. Data was collected according to availability principle. Inclusion criteria is being a university student. Age range of the participants is between 18-28 (Mean: 22,35, SD: 2,194). Body Mass Index (BMI) of participants is between 16,41-29,35kg/m² (mean: 22,451, SD: 2,90). In terms of BMI, 8 of the participants are underweighted (BMI<18,5), 70 of them are having normal BMI ($18.5 \leq BMI \geq 24.9$) and 22 of them are overweight ($24,9 \leq BMI \geq 29.9$).

2.2. Tools

2.2.1. *Orto-11 scale.*

Original form of the scale is developed by Bratman (Bratman & Knight, 2001) at first and Donini et al. (2004) developed Bratman's 10 item questionaire into a 15 item ORTO-15 scale. Arusoğlu et al (2008) adapted the Donini et al.'s ORTO-15 scale into Turkish. As a result of their statistical standardization analysis, they (Arusoğlu et al., 2008) ended up with a 11 item scale and named it as ORTO-11. It is a 4 point likert type scale in which lower scores indicates orthorexic tendencies. The 6th item of the scale, which was the 8th item in the original 15 item scale requires reverse coding. Cronbach's Alpha of the scale was informed as 0.62.

2.2.2. *The eating attitude test-40 (YTT-40)*

Original form is a 40 item, 6th likert type self-report inventory which was developed by Garner & Garfinkel (1979). In the original study Cronbach's Alpha was informed as 0.94 for the whole sample and

alpha coefficient for clinical sample was informed as 0.79 (Garner & Garfinkel, 1979). Adaptation into Turkish have been performed by several investigators (Savaşır & Erol, 1989; Elal, Altuğ, Slade & Tekcan, 2000). Higher scores indicate eating disorder psychopathology. Cut point for psychopathology is accepted as 30; hence, scores ≥30 indicates psychopathology (Garner & Garfinkel, 1979; Savaşır & Erol, 1989). In Savaşır & Erol's (1989) study Cronbach's Alpha was informed as 0.70 and test re-test reliability was informed as 0.65.

2.2.3. *REZZY eating disorders scale (REZZY)*

Original scale (SCOFF Eating Disorders Scale) was developed by Morgan, Reid and Lacey (2000). After scale's adaptation into Turkish it was named as REZZY (Aydemir, Köksal, Yalın Sapmaz, & Yüceyar, 2015). It is a 5 item scale which measures eating disorder tendency. Individuals gets one point for every item which is suitable for them. Scores which are ≥2 are accepted as indicators of an eating disorder tendency. Cronbach's Alpha of the standardized version was informed as .74. Beside, Rezzy's correlation with eating attitude scale scores and item total correlations was informed as 0.52 and as 0.21-0.55 sequently. One-dimension structure for the scale was informed via factor analysis (Aydemir et al., 2015).

2.2.4. *Demographic questions scale.*

Data as participants' gender, age, weight and height handled by this questionnaire through self-report.

2.3. Statistical analysis

Evaluation of data was performed by SPSS 16. In order to see relations among ortorexic tendencies, eating attitudes and eating disorder tendencies correlation analysis were carried out. Predictors of ortorexic tendencies have been investigated by stepwise regression analysis. Differences between females and males in terms of scale scores have been investigated through one-way analysis of variance (ANOVA). Participants were divided into three groups according to their BMI level and differences among these BMI groups in terms of ORTO-11, YTT-40 and REZZY scores have been investigated through one-way ANOVA. Participants were also divided into two groups according to cut points for psychopathology which is ≥ 30 for YTT-40 and ≥ 2 for REZZY and differences between these groups regarding other scale scores have been investigated through one-way ANOVA. Statistical significance level was accepted as $p<0,05$.

3. Results

3.1. Correlation analysis

At first in order to see correlations among BMI, ORTO-11, YTT-40 and REZZY scores of participants, correlation analysis were used. According to results of performed correlation analysis orthorexic tendency scores that measured by ORTO-11 scale were negatively correlated with eating disorder tendencies which measured by REZZY scores (r=-0,328, p=0,01). Since lower ORTO-11 scores points out orthorexic tendencies while rising REZZY scores as 2 and above points out eating disorder tendencies, this correlation indicates that orthorexic tendencies and eating disorder tendencies have a positive relationship. Which means mentioned tendencies are significantly related with each other and they tended to rise together. Similar relationship is also valid for BMI and ORTO-11 scores; as scores rise which means lessening of orthorexic tendencies BMI scores of participants also rise, (r=0,264, p=0,01). According to results, YTT-40 scores are significantly correlated with REZZY scores (r=0,328, p=0,01), but they are not significantly correlated with ORTO-11 scale scores.

Table 1.

Correlation coefficients among variables (n=100)

Variable	ORTO-11	YTT-40	REZZY	BMI
ORTO-11	1,000			
YTT-40	0,044	1,000		
REZZY	- 0,328**	0,328**	1,000	
BMI	0,264**	0,087	0,054	1,000

**p<0,01

3.2. Regression analysis

In order to see predictor variables related with orthorexic tendencies linear multiple regression analysis have been performed. REZZY scores, YTT-40 scores, sex and BMI variables were entered by using stepwise method. Regression analysis revealed that eating disorder tendencies which measured by REZZY explains %9 of the variance of ortorexic tendencies and REZZY scores and BMI together explain %16,9 of the variance of orthorexic tendencies.

Table 2.

Stepwise regression analysis for predictors of orthorexic tendencies

Predictors	**R**	**R²**	**B**	**Beta**	**Std.Error**	**F**
REZZY	0,328	0,108	-1,794	-0,328	0,521	11,847*
BMI	0,433	0,188	0,631	0,283	0,204	11,210**

**p < 0.005. ** p<0,001 Predictors: REZZY:(SCOFF) Eating Disorder Tendency Scale; BMI: Body Mass Index*

3.3. Analysis for group differences

3.3.1. *Investigation of differences between males and females by one-way ANOVA.*

According to the results of performed One-way ANOVA, females (M=15,824, SD=5,285) and males (M=19,488, SD= 7,326) are significantly differed in terms of ORTO-11 scores, F (1, 98) =8,443, p=0.005, η^2=0,079.

Males (M=0,558, SD= 0,628) and females (M=1,964, SD=1,148) also differed significantly in terms of REZZY scores, F (1, 98) =52,505, p=0.000, η^2=0,349.

In terms of YTT -40 scores, males (M=11,581, SD= 1,703) and females (M=18,386, SD= 15,451) differed significantly, F (1, 98) =9,103, p=0.003, η^2=0,085.

Tablo 3.

Scale scores' means and standard deviations for women and men

Variable	**Gender**	**Mean**	**Standard Deviation**
ORTO-11	Female	15,824	5,285
	Male	19,488	7,326
REZZY	Female	1,964	1,148
	Male	0,558	0,628
YTT-40	Female	18,386	15,451
	Male	11,581	1,703

3.3.2. *Investigation of differences among BMI groups in terms of total scale scores.*

Since there is no one with obesity (BMI ≥ 30) among participants, they were divided into three BMI groups as underweight, normal weight and overweight groups (first group: BMI <18.49; second group:18.50 ≤ BMI ≥ 24.99; thirth group: BMI ≥25) according to their BMI scores. Participants' BMI scores were calculated from handled data through following formula; BMI=weight kg /height m².

According to One-way ANOVA results BMI groups are differed significantly in terms of ORTO-11 scores, F (2, 97) =7,907, p=0,001, η^2=0,140). According to post hoc tests significant differences were found between normal weight (M=15,900, SD=4,195) and overweight (M= 21,727, SD=10,161) groups.

According to One–way ANOVA results BMI groups are not differed significantly in terms of YTT-40 (EAT-40) scores and REZZY (SCOFF) scores.

Tablo 4.

Means and standard deviations for BMI groups

Variable	BMIGroups	N	Mean	Standard Deviation
ORTO-11	Underweight	8	18,625	5,125
	Normal	70	15,900	4,195
	Overweight	22	21,727	10,161
REZZY	Underweight	8	1,000	1,069
	Normal	70	1,400	1,278
	Overweight	22	1,363	0,902
YTT-40	Underweight	8	11,625	6,631
	Normal	70	15,228	12,145
	Overweight	22	17,590	11,223

Underweight (BMI <18.49), Normal Weight (18.50 ≤ BMI ≥ 24.99), Overweight (BMI ≥25)

3.3.3. *Investigation of group differences according to YTT-40 cut point for psychopathology.*

Participants were divided into two groups as ≤29 (n=89) and ≥30 (n=11) according to YTT-40 score cut point for psychopathology (≥30). One-way ANOVA was performed and revealed no statistically significant differences between these two groups in terms of REZZY and ORTO-11 scores.

Tablo 5.

Means and standard deviations for YTT-40 cut point groups and total

Variable	YTTGroups	N	Mean	Standard Deviation
ORTO-11	≤29	89	17,033	5,181
	≥30	11	20,363	12,948
	Total	100	17,400	6,472
REZZY	≤29	89	1,292	1,150
	≥30	11	1,909	1,375
	Total	100	1,360	1,185

3.3.4. *Investigation of group differences according to REZZY cut point.*

Since cut point of REZZY for eating disorder tendency was equal to two, participants were divided into two groups as ≤1,99 (n=59) and ≥ 2 (n=41). One-way ANOVA was performed and revealed no statistically significant differences between these two groups in terms of YTT-40 scores. But in terms of ORTO-11 scores the group below cutpoint differed significantly (F (1,98) =12,729, p=0,001, η^2=0,115) with lower orthorexic tendencies (M=19,220, SD=7,696) than the other group (M=14,780, SD=2,423) .

Tablo 6.

Means and standard deviations for REZZY cut point groups and total

Variable	REZZYGroups	N	Mean	Standard Deviation
ORTO-11	≤1,99	59	19,220	7,696
	≥ 2	41	14,780	2,423
	Total	100	17,400	6,472
YTT-40	≤1,99	59	13,694	10,211
	≥ 2	41	18,000	13,091
	Total	100	15,460	11,613

4. Discussion and Conclusion

Correlation analysis pointed out a positive relationship between BMI and ORTO-11 scores. Since higher scores on the mentioned scale, means having less orthorexic tendencies, it can be said that when scale scores rise BMI scores of participants also rise as a result of not being a 'healthy food junky' (Bratman & Knight, 2001). This finding is parallel with the other result of the presented study which reveals participants with overweight has lower orthorexic tendencies than the group with normal weight. This finding is also seems parallel with the investigation (Varga et al., 2014) which implies a similar but minor-negligible relationship between mentioned variables. On the other hand the result regarding relationship of higher BMI and lower orthorexic tendencies seems contradictory with results of some other studies (Bundros, Clifford, Silliman, & Neyman, 2016; Fidan et al., 2010) which informs a relation between higher orthorexic tendencies with higher body mass index. This could be explained through differences regarding sample differences between Fidan et al.'s (2010) study and the current study. In the mentioned study (Fidan et al., 2010) higher orthorexic tendencies were found for male students. It can be said that orthorexic tendencies were found related with higher BMI for that sample since body structures (for example muscle ratios) of males are different from females which probably leads to the result that implies a relation between higher BMI and higher orthorexic tendencies. This idea could be seen as consistent with another study which informed higher BMI is related with higher orthorexic tendencies only for male participants (Oberle, Samaghabadi, & Hughes, 2017). All these are also consistent with the literature which claims that males with ED differs in terms of symptomatology from females and males mostly tend to have shape concerns (regarding gender identity norms of shape) more than weight concerns (Murray, 2017; Murray et al., 2017). Another study which associates higher loneliness/isolation tendencies just for male students studying abroad with gender identity norms can be accepted as another support for different relations between different variables as a result of complex interactions of gender based norms and situations (Okumuşoğlu, 2017).

On the other hand, seemingly contradictory finding of Bundros et al.'s (2016) with result of current study, could be explained via differences in terms of ethnicity of sample groups of studies and also through interpretation of the results by authors of the Bundros et al.'s (2016) study. For example, a detailed observation of the results of Bundros et al.'s (2016) study reveals that there were five participants who met

with the diagnostic cut-off point and informed BMI weight range for these participants were from underweight to normal weight (not with obesity) which implies a negative correlation between orthorexic symptomatology and BMI as the current study was reported.

Regression analysis revealed that %16,9 of the variance of orthorexic tendencies were explained by REZZY scores and BMI together. At first REZZY scores appeared as the best predictor of orthorexic tendencies and then BMI entered into the equation. According to correlational analysis REZZY scores are related with both orthorexic tendencies and eating attitudes scores which means all scores tended to rise together.

On the other hand, it is possible to interpret the lack of any statistically significant relationship between YTT-40 and ORTO-11 scores as another indication of the assumed symptomatic differences between anorexia nervosa and orthorexia nervosa (Barnes & Caltabiano, 2017; Brytek-Matera, 2012; Gramaglia, et al., 2017). Inter-group analysis supported the suggestions mentioned above, results revealed that the participants who have REZZY scores below pathological tendency cut point also have lower orthorexic tendencies than the participants whose scores are equal to or above the cut point. REZZY as a short screening device with only five items, seems to cover not only anorexic tendencies but also orthorexic ones. Especially thirth and fifth items of REZZY can easily be related with orthorexic symptoms. It can be thought that, people with orthorexic tendencies while obsessing to eat ‘healthy’ may ‘lose weight’ (3th item) despite the fact it is not their primary concern and also they may have thoughts about ‘domination of food over their life’ (5th item).

The mentioned conclusion at the previous paragraph could be accepted as parallel with the suggestion (Morgan, Reid, & Lacey, 2000) that implies this questionnaire which claims to measure eating disorder tendencies with five items, has better performance than the other questionnaires with more items.

Females’ orthorexic tendencies (which measured by orto-11) and eating disorder tendencies (which measured by REZZY and YTT-40) were found higher than males as it was found in literature (Arusoğlu et al., 2008; Batıgün & Utku, 2006). All these findings are also parallel with the emerging literature about eating disorders which focuses on to investigate female participants (Kronenfeld, Reba-Harrelson, Von Holle, Reyes, & Bulik, 2010; Taylor, Caldwell, Baser, Faison, & Jackson, 2007).

The result which reveals higher orthorexic tendencies among females is conflicting with the result which obtained with original ORTO-15 scale (Donini et al., 2004). This discrepancy might be related with usage of different versions of the scale and also with cultural differences between participants (Arusoğlu et al., 2008; Kempa & Thomas, 2000). The importance of culture regarding orthorexic tendencies was also emphasized by other investigators in literature (Malmborg, Bremander, Olsson, & Bergman, 2017). It is possible to see the relevance of culture via omission of different items of orthorexia scale in different standardization studies which conducted at different countries (e.g. Fidan et al., 2010; Missbach et al., 2015; Varga et al., 2014).

Possible effects of culture in terms of symptomatology of eating disorders and ON needs to be clarified with further studies.

As possible limitations of this study following can be pointed out; BMI calculated through self-reported information about height and weight of the participant and attitudes have been measured through self-report inventories and data were not obtained from general society.

As a conclusion, the aim of this study was investigation of orthorexic tendencies and its relationship with eating disorder tendencies among a group of university students. According to results, when orthorexic tendencies decline, BMI scores of participants rise as a result of not being pathologically preoccupied with 'healthy' eating and also females showed higher orthorexic tendencies and eating disorder tendencies than

males. Results also revealed that orthorexic tendencies and eating attitudes are tended to rise together. These findings seem consistent with the related literature and conceptualization of ON. At least for this sample, lack of any significant relationship between eating attitudes which measured by YTT-40 scores and orthorexic tendencies can be interpreted as an indication of the differences in terms of characteristic symptoms between already classified eating disorders and Orthorexia Nervosa. Results also points out that REZZY scale seems more related than YTT-40 in terms of embracing orthorexic symptoms too.

It was mentioned that since any significant relationship between YTT-40 and ORTO-11 scores could not be detected it might be accepted as a support for the existence of symptomatic differences between anorexia nervosa and orthorexia nervosa. But since research about ON is just beginning it is too early to be sure either ON is a psychopathology which is another form of already known eating disorders or something entirely different. ON has overlaps with many other psychopathologies beside eating disorders and this is another reason for having more questions than answers. There are questions that could not be answered yet about ON's relation with obsessive compulsive disorders, or possibility of being a version of anorexic tendencies which uses preoccupation with healthy eating, dysfunctional schedules and all other beliefs and behaviors related with ON for rationalizing their pathological desire for eating less, for being thinner. Certainly more research with various participant groups and perhaps with various tools is needed for clarification of existing questions in this relatively young area of investigation.

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