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Title: Orthorexia Nervosa and Its Relationship to Obsessive Compulsive Behaviors Among University Students in Southern California

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Background: Eating disorders, impact quality of life and can result in distress. Orthorexia Nervosa (ON), is a disordered eating pattern, that focuses on an obsession with healthy eating according to dietary theory. Orthorexia Nervosa is not currently considered a diagnostic category in the 5th edition of the Diagnostic and Statistical Manual of Mental Illness (DSM-5) which outlines diagnostic criteria required for eating disorder diagnosis. However, current research suggests the orthorexia pathology is multifaceted and associated with obsessive compulsive behaviors. These behaviors may interfere with a desire to engage in healthy behaviors for individuals with this disordered eating pattern. The relationship between Orthorexia Nervosa characteristics and obsessive compulsive behaviors are not clearly defined.

Purpose: This study explores the prevalence of orthorexia nervosa and the relationship between obsessive-compulsive behaviors and orthorexia nervosa (ON) behaviors among female and male university students, a nonclinical population.

Methods: A cross-sectional, questionnaire survey study design using a convenience sampling method was used to examine self-report eating behaviors in a sample of 281 students from a large university in the United States, average age from 18 to 43 years. Participants completed a demographic survey, the Orthorexia Nervosa Inventory (ORTO-15), and an Obsessive Compulsive Inventory (OCI-R). The ORTO-15 questionnaire is self-report instrument previously validated in European populations for measuring ON tendencies, comprised of 15-item items with a 4-point Likert scale. The ORTO-15 risk scales scores (EDRS) were used to identify assesses beliefs about attitudes covering food selection, the extent to which food concerns influence daily life, the perceived effects of eating healthy food and habits of food consumption. Lower overall scores on this instrument refer to more ON components (increased ON tendency). Researchers who developed the tool found sensitivity, specificity, and predictive validity values for the ORTO-15 using an original cut-off < 40 in an Italian adult sample. The Obsessive Compulsive Inventory –Revised (OCI-R), composed of 18 items in 6 subscales on a five-point scale was used to measure obsessive compulsive patterns among six domains including checking, hoarding, neutralizing, obsessing, ordering, and washing. **Analysis:** descriptive and correlational analysis using independent t-test and ANOVA. Multiple linear regressions using stepwise entry was used to examine the prevalence of obsessive compulsive behavior patterns among those with orthorexia nervosa characteristics.

Results: The data analysis showed one third of the participants scored below the cut off score of 40 which identifies the presence of orthorexia nervosa behaviors on the ORTO-15. There was a statistically significant difference between male and female on ORTO-15 total score, but not on

OCI-R scale. A significant correlation was found between the ORTO-15 total score and OCI-R total score. Orthorexia nervosa predicts only 10% of obsessive-compulsive disorder behaviors in the sample. Significant negative correlations were found between ORTO-15 total score and five out of six OCI-R subscales, the Pearson's correlations for checking, hoarding, neutralizing, obsessive behaviors, and ordering were -.271, -.291, -.276, -.300, and -.287 respectively. There was no significant correlation with the washing OCI-R subscale in this population. Stepwise regression results show that the Orthorexia Nervosa composites significantly predicted five of the obsessive compulsive patterns.

Conclusion: Participants with less orthorexia nervosa related symptoms have fewer tendencies to show obsessive behavior disorder behaviors related to checking, hoarding, neutralizing, obsessive behaviors, and ordering. More women were found to have orthorexia behaviors and there was no gender difference with those who also reported obsessive compulsive behaviors. Further tool psychometric studies on ORTO-15 scale are needed to evaluate its validity, reliability, and scoring criteria in different populations.

Implications: Participants with less orthorexia nervosa related symptoms have fewer tendencies to show obsessive behavior disorder behaviors. The high level of Orthorexia Nervosa score in this study might be attributed to that the original cut off points were developed based on Italian society. Further tool psychometric studies on ORTO-15 scale are needed to evaluate its validity, reliability, and scoring criteria in different populations. There is a need to build appropriate cut off points of orthorexia scale for individuals in the United States to differentiate between healthy eating and pathologically healthy eating. Health care providers should aware the occurrence of orthorexia nervosa among individuals presenting with disordered eating patterns and the influence of obsessive compulsive behaviors on orthorexia disordered eating behaviors.

References:

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