Management in health
XXV/4/2021; pp. 5-7

PREVALENCE OF EATING DISORDERS IN COMORBIDITY WITH ANXIETY: Non-experimental cross-sectional study

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The present study aimed to investigate eating disorders and anxiety symptoms in a sample of 46 participants from the active adult population without a psychiatric diagnosis.

Eating Disorder Inventory–3 (EDI-3, Garner, 2004) and Psychiatric Diagnostic Screening Questionnaire (PDSQ, Zimmerman, 2002) were self-administered in a single step. The obtained results showed statistically significant positive correlations between the composite scale - eating disorder risk and bulimia ($r = 0.326$, $p < 0.05$), panic disorder ($r = 0.300$, $p < 0.05$) and body mass index ($r = 0.511$, $p < 0.01$). Statistically significant results were obtained between the scale body dissatisfaction and body mass index ($r = 0.531$, $p < 0.01$). The obtained data may represent starting points for more thorough studies regarding the potential methods of increasing the quality of life within the patients with anxiety and eating disorders that could change their cognitive and behavioral strategies about food.

Keywords: eating disorders, anxiety, comorbidity, depression, body mass ***index***

INTRODUCTION

People's concern for food means more than their nutritional needs. Eating disorders (ED) are mainly related to the psychoemotional domain, not the eating domain, regardless of age. For people from different cultures, food progresses from being a source of nutrition, a sensory pleasure, to being a social marker, a source of meaning, and often a moral entity [1].

Currently, eating behavior is seen as a multidimensional concept that includes behavioral, cognitive, emotional, and biological components, as part of its environment (family, society, work), with all that they entail (cultural, religious customs, financial constraints) [2].

Eating disorders (ED) are characterized by a persistent disorder of eating or eating behavior resulting in impaired food consumption and absorption, with a significant impact on physical health and psychosocial functioning [3]. Eating disorders affect many aspects of functioning, including behavior (e.g., eating habits), attitudes and values (e.g., assessment of shape and weight), psychosocial functioning (e.g., levels of depression and anxiety; interpersonal functioning), and health physical (e.g., body weight) [4,5]. Their defining characteristics include body image disturbances, restrictive or uncontrolled eating, and the manifestation of extreme behaviors to control body shape and weight (starvation, compulsive exercise [6].

The imbalances felt by the body that come from an unhealthy diet can be correlated with the quantitative or qualitative disturbance of the food intake and a series of psychoemotional disorders. In addition, changes in eating behavior usually signal that the person is experiencing emotional or mood problems.

The most common comorbidities of ED are depression, bipolar disorder, panic and anxiety disorders, post-traumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD), obsessive-compulsive personality disorder, sleep disorders, substance abuse, or dependence.

Social anxiety can particularly manifest in those with a predisposition to EDs, as research finds that “stress from negative social evaluation may play a pivotal role as a cause of eating disorder symptoms” [7].

Several studies have found positive correlations between mental disorders, eating risk behaviors, and increased risk of early death [8,9].

It has been specified in many studies that the association of psychiatric disorders with the symptoms of eating disorders can cause resistance to treatment and chronic eating disorders [10,11].

Regarding treating eating disorders, it can be a holistic one that considers both drug and psychological treatment to increase the quality of life and reduce some comorbidities such as anxiety, depression, or obsessive-compulsive symptoms [12].

For this reason, cognitive-behavioral psychotherapy, support groups, personalized psychopharmacological treatment, the effectiveness of which has been proven by clinical trials, are necessary for the treatment of eating disorders and anxiety [13].

This study started from the hypotheses that assumed that people at risk of eating disorder also have comorbidities in the spectrum of anxiety disorders (panic disorder, generalized anxiety, social or specific phobia, obsessive-compulsive disorder, etc.) and also that those with a high or very low body mass index, there is a risk of eating disorder. Population screening aimed to identify psychological factors with a role in predisposition to food risk behaviors.

MATERIAL AND METHOD

Participants

The study included 46 people without a psychiatric diagnosis, selected voluntarily, aged between 22 and

64, of Romanian nationality, of which 7 were male and 39 female. In terms of weight, it was between a minimum of 45 kg and a maximum of 120 kg.

The body mass index (BMI) is used in medicine to determine a person's risk of developing diseases due to too little or too much weight. The formula used is the weight (kg)/ height (m) 2. BMI had values between 17.10, i.e., underweight at risk of disease, and 37.87, representing grade II obesity with increased risk of disease.

Assessment instruments and research procedure

All participants completed Eating Disorder Inventory–3 (EDI-3, Garner, 2004) [14] and Psychiatric Diagnostic Screening Questionnaire (PDSQ, Zimmerman, 2002) [15].

Eating Disorder Inventory–3 (EDI-3, Garner, 2004) is a tool for screening and assessing the severity of symptoms of eating disorders, with 91 items grouped into baseline scales and composite scales. The specific scale of eating disorders, Risk of eating disorder, includes 3 subscales that measure the Desire to be weak, Bulimia, and Body dissatisfaction.

Psychiatric Diagnostic Screening Questionnaire (PDSQ, Zimmerman, 2002) is a self-report instrument that allows screens for the DSM-IV Axis I disorders and the realization of the differential diagnosis [7].

The scale includes 125 questions and the time required to complete the questionnaire was about 20 minutes. The questions are grouped into 13 scales (major depressive disorder, posttraumatic stress disorder, bulimia/binge-eating disorder, obsessive-compulsive disorder, panic disorder, psychosis, agoraphobia, social phobia, alcohol abuse/dependence, drug abuse/dependence, generalized anxiety disorder, somatization disorder, hypochondriasis, PDSQ total). Although the total score can be used as an overall measure of psychopathology, this questionnaire allows improving the clinical efficiency by taking into account the diagnostic comorbidity.

Each participant performed the self-application procedure of the tests in paper/pencil format, the lack of a psychiatric diagnosis gives the inclusion criterion. The principles of ethics were met by informing the participants about the strict research purpose of this study and signing the informed consent before answering the questions of the questionnaires.

RESULTS

For testing the hypothesis from which this study started, the test results were analyzed by correlation analysis by calculating the Pearson correlation coefficient. It was used for this SPSS ver. 23.

Following the correlation analysis, statistically significant results were found between various scales of the two self-applied questionnaires and BMI, as follows:

- Bulimia (EDI-3) with BMI ($r = 0.493$, $p < 0.01$) and with panic disorder (PDSQ) ($r = 0.417$, $p < 0.01$) indicating a medium association between the two constructs;
- Body dissatisfaction (EDI3) and BMI ($r = 0.531$, $p < 0.01$) indicating a strong association between the two constructs;
- Panic disorder (PDSQ) with low self-esteem (EDI-3) ($r = 0.474$, $p < 0.01$), with personal alienation (EDI-3) ($r = 0.340$, $p < 0.01$), with Interpersonal Insecurity ($r = 0.387$, $p < 0.01$), with interoceptive deficits ($r = 0.307$, $p < 0.05$), with emotional dysregulation ($r = 0.301$, $p < 0.05$), indicating a medium association between the two constructs;
- Eating disorder risk (EDI-3) with panic disorder (ODSQ) ($r = 0.300$, $p < 0.05$), respectivelly eating disorder risk (EDI-3) with BMI ($r = 0.511$, $p < 0.01$) indicating a medium/strong association between the two constructs.

Table 1. Correlation between PDSQ and EDI-3 scales.

Scale PDSQ/ EDI-3	Depression	Bulimia	Panic Disorder	Agoraphobia	Social Phobia	Generalized Anxiety Disorder	PDSQ Total	Body mass index
Bulimia	,192	,314*	,417**	,112	,102	,088	,208	,493**
Body Dissatisfaction	,043	,266	,208	-,153	-,099	-,186	-,013	,531**
Low Self-Esteem	,139	,109	,474**	,230	,191	,166	,283	,060
Personal Alienation	,112	-,207	,340*	,206	,266	,219	,248	-,062
Interpersonal Insecurity	,172	-,201	,387**	,193	,224	,163	,180	,057
Interpersonal Alienation	,150	-,129	,237	,180	,341*	,162	,213	-,124
Interoceptive Deficits	,289	,040	,307*	,331*	,386**	,334*	,404**	-,082
Emotional Dysregulation	,264	-,124	,301*	-,010	,276	,350*	,306*	,022
Asceticism	,311*	-,009	,076	-,182	,183	,080	,114	,130
Maturity Fears	-,049	,036	,226	,404**	,043	,094	,101	,068
Eating Disorder Risk	,104	,326*	,300*	-,095	-,020	-,040	,083	,511**

***. Correlation is significant at the 0.01 level (2-tailed).*
**Correlation is significant at the 0.05 level (2-tailed).*

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DISCUSSION

The results obtained from the correlation analysis partially support the initial hypothesis showing that people at risk of eating disorder also have comorbidities in the spectrum of anxiety disorders (panic disorder, generalized anxiety, social phobia) and also those with a high body mass index, has an increased risk of eating disorder.

The results obtained in this study are consistent with those obtained in other research [13,16,17], highlighting the positive association between eating disorders and anxiety symptoms.

Much more consistent results could result from an experimental study or from a much larger number of participants, these being some of the limitations of the present research.

CONCLUSIONS

Research on the relationship between and symptoms of anxiety disorders in comorbidity with eating disorders represents a topic of interest in research studies, in recent years beginning to be taken together, but the limited number of studies on this topic is insufficient. In future studies, research should include variables of anxiety and depressive disorders that have a significant impact on eating disorders. Thus, the comorbidity of eating disorders and anxiety disorders will be better understood, leading to more consistent evidence-based results.

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