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Body Image Screening Questionnaire for eating disorder early detection: a Romanian replication

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Abstract

Eating disorders adversely affect physical health, eating habits, social and family relationships, mood, work and school performance. We tested for cross-cultural validity of the Body Image Screening Questionnaire (BISQ), a screening measure validated in Spain, which assesses potential eating disorders related to anorexia, perception of obesity, orthorexia and vigorexia, in a Romanian sample from both clinical and general populations. The measure showed adequate internal consistency and allowed distinguishing clinical vs. general subsamples. Significant differences based on clinical characteristics were obtained. The measure can be utilized as screening tool of individuals who need further assessment and prioritize primary intervention strategies with at risk population.

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1. Introduction

Eating disorders are one of the most common mental health issues, along with depression and anxiety disorders (Johnston, Fornai, Cabrini, & Kendrick, 2007). Sedentary lifestyle and changes in eating patterns, together with other social and cultural factors, explain the increase of these disorders worldwide (Henrickson, Crowther, & Harrington, 2010). Personality and individual factors such as affect intolerance, interpersonal problems, low self-esteem and clinical perfectionism have been linked to this

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increase (Tasca, Ritchie, & Balfour, 2011). Eating disorders (ED) affect the quality of life of patients (mood, physical health, nutrition patterns, work and studies' performance), including social and family relationships (Quiles, Terol, & Quiles, 2003). These disorders are more prevalent in the female population (American Psychiatric Association, 2003; Zamora, Bonaechea, Sanchez, & Rial, 2005).

From a medical standpoint, there are three main diagnostic categories of eating disorders, namely, anorexia nervosa (AN), bulimia nervosa (BN), and eating disorders not otherwise specified (American Psychiatric Association, 2003). In this last category, there is some evidence of gender differences associated to binge eating disorder (Reas, White, & Grilo, 2006). Other eating related disorders such as vigorexia (muscle dysmorphia) and orthorexia (obsession with healthy eating) are emerging in different countries (Dudas & Tury, 2008; Ferenc & Andrea, 2006; Kinzl, Hauer, Traweger, & Kiefer, 2006) Zamora, Bonaechea, Sanchez & Rial, 2005). Still other authors reject the inclusion of orthorexia and vigorexia as EDs and call for the development of clear diagnostic criteria and standardized measures (Meyer-Gross & Zaudig, 2007; Murray, Rieger, Touyz, & De la Garza Garcia, 2010). The need for screening measures for early identification of eating disorders is stressed in different studies (Fairburn, Cooper, Doll, & Davies, 2005; Johnston, et al., 2007). So, as other researchers have proposed, a flexible approach to diagnosis, which includes personality dimensions along with a description of eating disorder symptoms, may result in a more inclusive and useful diagnostic scheme for treating individuals with eating disorders (Tasca, et al., 2011). Being such a complex phenomena, eating disorders are difficult to evaluate and this field currently faces several challenges (Sepulveda, 2007). First, the persistence of conceptual issues related to the actual diagnosis of these disorders and their medical criteria of severity (Berrocal, Rivas, Bersabé, & Castro, 2003; Guisinger, 2008). Second, studies have focused on classical ED, leaving other disorders unexplored. Very few studies have focused on vigorexia (Cantón, Revert, & Chávez, 2008) and also studies on orthorexia are scarce (Donini, Marsili, Graziani, Imbriale, & Cannella, 2004). Third, the most commonly used measures for the assessment of eating disorders leave out other possible disorders (Jenaro, Flores, Tomsa, & Bermejo, 2011). One of the few exceptions is the Body Image Screening Questionnaire for Eating Disorder Early Detection (BISQ), which has been developed in Spain (Jenaro, et al., 2011).

With these facts in mind, the present study aims to help increase the existing screening tools of a broad variety of eating disorders. More specifically, our first objective is to verify the psychometric properties of the BISQ with Romanian population. Secondly, we expect to find significant differences in scores based on risk factors for participants.

2. Methods

2.1. Participants

The study was carried out in Bucharest. A convenience sample of 156 participants was recruited for the current study. Of the total, 132 (84.6%) were female, and 24 (15.4%) were male. Most participants were single (58.3%), followed those who were married or living with a partner (37.8%), and a small percentage (3.8%) of participants who were divorced or separated. The majority of participants were full-time employees (46.2%), although a significant percentage both study and work (26.9%), followed by those who were full-time students (25%). Of the sample, 12.2% of the participants who reported past or present obesity, 35.3% reporting trying to stay on a diet, 5.8% having eating disorder, 9% having relatives with eating disorder, 12.2% having rapid weight changes, 10.3% having relatives with depression or anxiety, and 11.5% having past or present history of anxiety or depression. Of the total sample, 45.5% have at least one risk factor, with the remaining 54.5% not reporting any risk factor. No significant association between number of risk factors and gender was obtained.

2.2. Analysis of the psychometric properties of the Body Image Screening Questionnaire

First stage of the study required the translation of the measure. Back-translation and raters' judgments to guarantee the conceptual equivalence of the items was utilized (Grilo, Lozano, & Elder, 2005). After the BISQ data were collected, reliability for each of the subscales and the total measure were tested. Cronbach's α values for all subscales (for Bulimia =.81; Anorexia=.75; Orthorexia=.59; Perception of Obesity=.71; Vigorexia=.44;) and the overall scale (α =.85) were similar to those obtained in the original version. As in the Spanish version (Jenaro, et al., 2011), it would be advisable to further analyze the Vigorexia subscale. Second, for construct validity purposes, we tested the correlations between the different subscales. The majority of correlations were low or non-significant. The only exception was Perception of obesity that correlated moderated-high with Bulimia (r =.67; p =.001) and with Anorexia (r =.69; p =.001). These results support the multidimensionality of the BISQ and the relative independence of ED subtypes. They also support the construct validity of these disorders. The 24 item version of the scale was used for further analyses.

2.3. Procedure

Data were collected over a period of three months during the summer of 2011 (July-September). An online version of the survey was developed in Romanian to facilitate the gathering of the data. The authors of the study were responsible for entering the data in the online application, if necessary. Participation was requested from people attending gyms, health centers, model agencies, and workers in fashion boutiques. Students were also invited to participate. In the written instructions we stated that the measure was a screening tool not designed for diagnostic purposes. Anonymity was guaranteed during the entire process, and no names or other identifying data were gathered at any time.

2.4. Analyses

SPSS v.15.01 (2006) was used for the analyses. Descriptive analyses were performed and parametric tests were used for hypothesis testing after verifying the parametric assumptions of normal distribution and homogeneity of variances. Non-parametric (Chi-squared) tests were utilized with categorical variables. An alpha level = 0.05 was established for the analyses.

3. Results

After computing the scores for each factor and the total scale, we analyzed potential differences between groups based on risk factors. Concerning gender, the analysis did not reveal significant differences (Chi square = 8.422, df = 5, p = 0.134). Second, the possible impact of the respondent's profession showed significant differences (Chi square = 23.576, df = 3, p = 0.000). Results showed that men were more frequently involved in professions in which good physical condition is required. Third, the analysis of the possible association between gender and labor situation (student, worker, unemployed, etc.) showed an absence of significant differences. The same results were obtained when analyzing the potential association between gender and marital status. In sum, it is possible to say that both genders were distributed quite homogeneously throughout the different variables. Next, we analyzed the possible differences on BISQ scores based on reported risk factors. First, being obese or not; participants who answered yes scored significantly higher on bulimia, anorexia, orthorexia, and perceived obesity. As regards to the variable "having made repeated attempts to diet", participants who responded positively scored significantly higher on bulimia, anorexia, orthorexia, and perceived obesity. With regards to the

variable “having experienced large changes in weight in a short period of time”; those claiming to have experienced this scored significantly higher on bulimia, anorexia, orthorexia, and perceived obesity.

Concerning having a previous clinical history of anxiety or depression disorders, those who responded affirmatively scored significantly higher on Orthorexia. Those having relatives with previous clinical history of anxiety or depression did not have any significant difference. On the other hand, having a relative with eating disorders showed significant differences. Those who responded affirmatively scored higher on bulimia, anorexia, orthorexia, and perceived obesity. Likewise, differences based on reporting eating disorder revealed differences in bulimia, anorexia, and perceived obesity in the same direction as previous analysis. Regarding validity, we conducted multiple discriminant analysis in which average scores on the subscales Anorexia, Bulimia, Perception of obesity and Orthorexia were selected as predictor variables. The grouping variable was the distinction between “no risk group” (i.e. no risk factors) and “at risk group”, consisting of those who had indicated at least one of the factors associated with EDs (obesity, diet, weight changes, etc.). The 156 participants were distributed as follows: 89 participants belonged to the "No risk" group, and 67 to the "risk" group. The discriminant function correctly classified 76.9% of cases and has been particularly effective for classifying "No risk" participants (88%), rather than "at risk" participants (63%).

To conclude, the BISQ has demonstrated comparable reliability and validity properties as the Spanish version. The measure revealed elevate specificity (instrument's ability to properly classify non-risk population) and moderate sensitivity (ability to properly identify people at risk). Given that for diagnostic purposes, values equal or higher than 80% are considered optimal, the Romanian version of the measure clearly meets this standard. Yet, screening tests should be highly sensitive as this is critical for identifying (early diagnosis) clinical cases. Given that our results are not based on the identification of clinical cases diagnosed, but on reported risk factors, additional studies with this measure are strongly suggested to further support its utility for diagnostic purposes. Finally, we would like to mention some shortcomings of the current study. First, the items of the Vigorexia subscale require further attention in order to increase the reliability of this subscale. Secondly, we need to test the measure with a larger sample of diagnosed clinical population in order to corroborate the sensitivity and specificity of the measure.

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