146 - VALIDATION AND ADAPTATION OF EATING DISORDER INVENTORY FOR THE BRAZILIAN CONTEXT

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INTRODUCTION

Eating Disorders (ED) are defined as a persistent psychiatric disorder that causes significant damage to physical health or to psychosocial functioning (APA, 2013). They mainly affect adolescents and young female adults, with a combined prevalence of 13 to 15% of women during the second decade of life, and present stronger relations to suicide attempt as well as a higher mortality rate than any other psychiatric disorder (CORDÁS; SALZANO, 2011). According to Crow et al. (2009) the suicide rate for Anorexia Nervosa (AN) is 4.7%, for Bulimia Nervosa (BN) 6.5% and 3.9% for Eating Disorder Not Otherwise Specified (EDNOS).

Deviations from eating behavior can lead to extreme weight loss, obesity, and increased morbidity (CORDÁS; SALZANO, 2011). The stage in life with the highest probability of occurrence of these diseases is in adolescence, since there is a search for personal identity, in most cases, by the influences of social groups and by standards imposed by the media, the body dissatisfaction develops in a way that it becomes internalized (Dos Santos, Oliveira, 2016).

According to the Diagnostic and Statistical Manual of Mental Disorders 5th ed. (DSM-5) eating disorders are divided into Ruminant Disorder, Restrictive/Avoidant Eating Disorder, Pica, Anorexia Nervosa, Bulimia Nervosa, and Eating Disorder Not Otherwise Specified. The diagnostic criteria for these disorders are results of a scheme that classifies and also excludes. This procedure is justified by the fact that the disorders differ in terms of treatment need, clinical course and outcome (APA, 2013).

We will be restricted to AN, BN and EDNOS, which are detected by the Diagnostic and Statistical Manual of Mental Disorders 3rd. (EDI-III). The AN and BN are specified eating disorders according to the Diagnostic and Statistical Manual of Mental Disorders fourth edition (DSM-5). However, the most common diagnosis of eating disorder, both in clinical samples and in the general population, is the EDNOS dimension.

AN is characterized by intense and intentional weight loss, with the use of extremely strict diets, unrestrained search for thinness, gross distortion of body image and extreme repudiation for food (APA, 2013). BN is characterized by a large intake of foods with a sensation of loss of control, the so-called bulimic episodes. Excessive preoccupation with weight and body image leads to compensatory methods for weight control (APA, 2013). The category of EDNOS is used when the clinician chooses not to specify a specific eating disorder, since the diagnostic criteria are not sufficient to close a specific diagnosis (APA, 2013). According to Smink et al. (2014) this disorder characterizes a heterogeneous group of ED and is not well defined, they include the partial syndromes of AN and BN, purgative behaviors, as well as binge eating disorder.

Eating Disorder Inventory (EDI-3)

The Eating Disorder Inventory (EDI-3) is a widely used self-report questionnaire, both in research and clinical settings. Composed of 12 scales, they are: Drive for Thinness; Bulimia; Body Dissatisfaction; Personal Alienation; Interpersonal Insecurity; Interpersonal Alienation; Interoceptive Deficits; Emotional Dysregulation; Perfectionism; Asceticism; and Maturity Fears. It is one of the most commonly used self-report measures for the measurement of psychological traits or constructs that are clinically relevant in those with ED, taking into account more contemporary theories of the disorders and associated psychological domains (CLAUSEN; ROSENVINGE; FRIBORG, 2011).

EDI-3 is not intended to produce a diagnosis of eating disorder. Instead, it is intended for the measurement of psychological traits or clusters of symptoms relevant to the development and maintenance of eating disorders. The psychological profile provided by EDI-3 is a rich source of information to generate or confirm clinical impressions that go well beyond simple diagnosis. It is also a valuable tool for generating treatment plans and evaluating the effect of treatment in key psychological domains (GARNER, 2004).

In view of the above, the objective of the study is to adapt to the Brazilian context and obtain evidence of construct validity of EDI-3. It is justified to carry out this research considering that the ED can cause several damages to the life of the patient. Correct and accurate assessment becomes indispensable for proper treatment. Through the searches in the System of evaluation of psychological tests (SATEPSI) developed by the Federal Psychological Council (CFP), no approved test was found for the evaluation of the ED. Therefore, this study attempts to contribute to the enrichment of the information about the ED, and consequently provide an improvement in the patients' life conditions.

METHOD

Participants

The sample consisted of adolescents (high school students) and non-clinical adults (university students). There were a total of 169 people, 77 adolescents (45.56%) and 92 adults (54.44%), ranging in age from 14 to 49 years (M = 18.96, SD = 4.41). The sample of adolescents consisted of 45 men (58.4%) and 32 women (41.6%). In the adult sample, women accounted for 57.1% of the sample.

Regarding marital status, 92.8% of the respondents are single. In relation to religion, 46.1% are Catholics. Moreover, regarding family income, almost half of the respondents said they had between 1 and 3 minimum wages (43.9%).

Instruments

The two instruments were used for this study: Eating Disorder Inventory (EDI-3) and Sociodemographic questionnaire.

Procedures

Initially, the translation and adaptation of the scale to the Brazilian context was carried out. For the initial translation of the scale, a native English-speaking translator residing in Brazil was contacted. Subsequently, the scale was revised by a Brazilian professor, graduated in English Language Teaching, to make adjustments in the translation and correct grammatical errors.

After the translation, the semantic analysis was carried out with the lowest extract of the population, as well as with the highest extract, in order to verify if the items were understandable for the entire sample. Thus, according to Pasquali (2010), the biases in the responses are avoided.

RESULTS

EDRC

Before starting the EFA, we tried to find out if the correlation matrix between the items was factorable. For this, we calculated the KMO index and Bartllett's Sphericity Test. The KMO value was equal to 0.80, considered a good index, according to Damásio's classification (2012), indicating that the correlation matrix is factorable and not equal to an identity matrix, since the Sphericity Test of Bartllett presented significant $[X^2(300) = 1276{,}108; p < 0{,}01]$ In view of this, FA can be continued.

Initially an AFE was made and the extraction method chosen was the Guttman-Kaiser method with Oblimin rotation method. The criterion for observing the amount of factors used was known as eigenvalues > 1, the retained factors present an eigenvalue referring to the sum of the variance explained by the factor (Damásio, 2012).

Taking into account the eigenvalues criterion (greater than 1 of Guttman-Kaisser), 7 eigenvalues above 1 were found, accounting for 61.65% of the total variance. Since this criterion overestimates the number of factors (LAROS, 2012), it was decided to perform the Horn criterion (parallel analysis). According to Hayton, Alen and Scarpello (2004), parallel analysis is a more reliable procedure for checking the numbers of factors to be fixed. Comparing the eigenvalues obtained initially with those generated by matrices of random and uncorrelated variables, there appeared 4 eigenvalues smaller than the random ones, satisfying the 4 factors, according to the criterion of Horn.

However, the theoretical criterion prevailed in decision making, as suggested by Gorsuch (2003), and it was preferred to set the number of factors in 3, since the EDRC component is composed of 3 scales. The 3 factors explain 41.91% of the total variance.

In this way, we verified the set of items with factorial loads considered satisfactory when greater or equal to 0.30. The items of the EDRC component presented satisfactory factorial loads in the non-clinical sample. It was possible to distinguish the factors and the items in them saturated. Factor 1 corresponds to the Body Dissatisfaction (BD) scale, the Bulimia 2 factor (B) and the Factor 3 scale of the Drive for Thinness (DT) scale.

It was noticed that most of the DT items obtained a higher factor load in the BD factor, this can be justified by the fact that the concepts are similar. The DT has as one of the evaluation criteria the "extreme desire to be thinner", this concept can also be taken into account when the individual has body dissatisfaction. However, although the DT items have saturated with higher loads in the BD factor, they also present minimally satisfactory factor loads in their origin factor, loads greater than |0.30|. Only items 7 and 11, which should have been saturated in DT, did not obtain these satisfactory minimum loads, presenting loads |0.14| e |0.28|. However, items 45, 59 and 9, belonging to the BD scale, were satisfactorily saturated in the DT scale. This suggests that, at least for the nonclinical sample, body dissatisfaction is somewhat different from attitudes directed toward thinness and vice versa (Garner, 2004).

Bulimia items saturated all satisfactorily in the factor of origin, with factorial loads ranging from |0.51| and |0.79|. Only item 53 (scale item B) shows a significant factor load on the DT scale in the non-clinical sample. Corroborating with the initial studies, Garner that evidenced this happened and justified stating that in the nonclinical sample, there is a special meaning and a little different for people with bulimic behaviors. However, item 47, an item that was recently assigned to the BD scale, saturated acceptably in the B scale, factorial load |0.46|. Nevertheless, due to the related content and other psychometric evidence found in previous studies by Garner (2004), item 47 remains assigned to the BD scale.

Although some items have been saturated in a factor that was not their origin factor, we can conclude that this three-dimensional component is consistent with the theory. Regarding reliability, evaluated by Cronbach's alpha, factor 1 presented a value equal to 0.719. The second factor was 0.709 and the third factor was 0.771. The EDRC component obtained α = 0.862.

GPMC

Initially, it was verified whether the correlation matrix between the items was actually factorable. For this purpose, the KMO and the Bartllett's Sphericity Test were calculated. The KMO was 0.639, according to Pasquali (2010), which is an acceptable value for research in the humanities. Bartllett's Sphericity Test was significant $[X^2(2145) = 4083{,}741; p < 0{,}01]$ With these results we can continue with FA.

In order to verify the quantity of factors, the extraction method used was Guttman-Kaiser (eigenvalues> 1) and the Oblimin rotation method. In a first rotation, 21 eigenvalues with values above 1 were observed, with total variance explained in 72.09%. According to the criterion of Horn (parallel analysis) 9 eigenvalues appeared smaller than the random ones, satisfying to 9 factors, corroborating with the theoretical criterion that presents the GPMC component as being composed of 9 scales. The 9 factors explain 47.91% of the total variance.

In this way, it investigated the set of items with factorial loads classified as satisfactory, loads greater than or equal to 30. As in the Garner (2004) studies, the items were grouped into factors, in which they were not possible to distinguish. Scales of Low Self-Esteem, Personal Alienation, and Emotional Dysregulation had most items grouped into the first factor. It is suggested that denial and a constraint on bodily functioning are closely related to a negative self-concept about oneself (GARNER, 2004). The Asceticism scale also obtained most of the items saturated in factor one, but also obtained satisfactory factorial loads in factors two, three and four. In Garner's (2004) finds, he affirms that this may have happened because asceticism is not a unitary factor, it is related to other factors.

The Scale of Maturity Fears and Perfectionism managed to saturate into a unitary factor. According to Garner (2004) this shows that there is a high consistency in all replicated samples. The Scales of Interpersonal Insecurity and Interpersonal Alienation were grouped in factor 2. Garner (2004) also verified the same behavior in his findings.

Regarding reliability, evaluated by Cronbach's alpha, the GPMC presented alpha equal to 0.884. Showing that the component presents a good homogeneity of the items.

FINAL CONSIDERATIONS

With this study, it was possible to obtain satisfactory preliminary evidence about the validity of EDI-3. This is of great

importance given the possibility of using the inventory for screening of symptoms of Eating Disorders in the populations studied.

Studies with larger and more in-depth samples are being developed with the purpose of supporting investigations regarding the disorders evaluated. The results of this study are expected to guide future research in order to investigate the adjustment of the items to the factorial model in independent samples, through confirmatory factorial analysis; and correlated with other measures for convergent-discriminant validity research.

In the long term, it is expected that this measure may be suitable for use in research and in the context of clinical evaluation, in order to promote subsequent interventions. After all, a correct and accurate assessment becomes indispensable for proper treatment.

KEYWORDS: Eating Disorders; Validation; Adaptation.

VALIDATION AND ADAPTATION OF EATING DISORDER INVENTORY FOR THE BRAZILIAN CONTEXT

ED is defined as a persistent psychiatric disorder that causes significant damage to physical health or psychosocial functioning. The objective of the research was to adapt to the Brazilian context and to obtain evidences of construct validity of the EDI-3. The EDI-3 is a self-report questionnaire consisting of 91 items organized in 12 scales. These scales produce two components: one for specific eating disorders (EDRC); and another related to constructs relevant to eating disorders (GPMC). This was an exploratory cross-sectional survey. Participants included 169 adolescents (45.56%) and 92 adults (54.44%), ranging in age from 14 to 49 years (M = 18.96, SD = 4.41). In addition to EDI-3, participants answered a sociodemographic questionnaire. Data collection took place in a public school in João Pessoa-PB and UFPB. Firstly, it was performed the translation and cultural adaptation of the items. Semantic validation was then performed with the lowest and highest stratum of the target population. For the data analysis, the IBM SPSS version 21 Software was used to perform Exploratory Factor Analysis and to obtain the internal consistency through Cronbach's Alpha Coefficient (α). The EDRC KMO was 0.80 and the Bartllett's Sphericity Test was significant $[X^2(300) = 1276{,}108; p < 0{,}01]$. The theoretical criterion prevailed, being fixed three factors, resulting in an α value of 0.862. The KMO of the GPMC was 0.63 and the Bartllett's Sphericity Test was significant $[X^2(2145) = 4083{,}741; p < 0{,}01]$. After the parallel analysis 9 eigenvalues appeared, satisfying the theoretical criterion presented by the GPMC composed of 9 scales. With this study it was possible to obtain initial analysis to obtain satisfactory evidence of the validation of EDI-3, which is of great importance for its use in the ED screening in the populations studied.

KEYWORDS: Eating Disorders; Validation; Adaptation.

VALIDATION ET ADAPTATION D'UN INVENTAIRE DE TROUBLES ALIMENTAIRES POUR LE CONTEXTE BRÉSILIEN

La TA est définie comme un trouble psychiatrique persistant qui cause des dommages importants à la santé physique ou au fonctionnement psychosocial. L'objectif de la recherche était de s'adapter au contexte brésilien et d'obtenir des preuves de validité conceptuelle de l'EDI-3. L'EDI-3 est un questionnaire d'auto-évaluation composé de 91 items organisés en 12 échelles. Ces échelles produisent deux composantes: une pour les troubles de l'alimentation spécifiques (EDRC); et un autre lié à des constructions pertinentes aux troubles de l'alimentation (GPMC). C'est une étude transversale exploratoire. Les participants comprenaient 169 adolescents (45,56%) et 92 adultes (54,44%), âgés de 14 à 49 ans (M = 18,96, ET = 4,41). En plus de l'EDI-3, les participants ont répondu à un questionnaire sociodémographique. La collecte des données a eu lieu dans une école publique à João Pessoa-PB et UFPB. La traduction et l'adaptation culturelle des articles ont été initialement effectuées. La validation sémantique a ensuite été effectuée avec la strate la plus basse et la plus élevée de la population cible. Pour l'analyse des données, le logiciel IBM SPSS version 21 a été utilisé pour effectuer une analyse factorielle exploratoire et obtenir une cohérence interne grâce au coefficient alpha de Cronbach (α). Le KMO de l'EDRC était de 0,80 et le test de sphéricité de Bartllett était significatif [X ^ 2 (300) = 1276,108; p <0,01]. Le critère théorique a prévalu, étant fixé 3 facteurs, résultant en une valeur α de 0,862. Le KMC de la GPMC était de 0,63 et le test de Sphericity de Bartllett était significatif [X ^ 2 (2145) = 4083,741, p <0,01]. Après l'analyse parallèle, 9 valeurs propres sont apparues, satisfaisant le critère théorique qui présente la GPMC composée de 9 échelles. Avec cette étude, il a été possible d'obtenir des analyses initiales pour obtenir des preuves satisfaisantes de la validation de l'EDI-3, ce qui est très important pour son utilisation dans le dépistage AT dans les populations étudiées.

MOTS-CLÉS: Troubles de l'alimentation; Validation; Adaptation.

VALIDACIÓN Y ADAPTACIÓN DEL INVENTARIO DE DESORDEN ALIMENTAR PARA EL CONTEXTO BRASILEÑO

Los TA se definen como un desorden psiquiátrico persistente que causan daños significativos a la salud física o al funcionamiento psicosocial. El objetivo de la investigación fue adaptar para el contexto brasileño y obtener evidencias de validez de constructo del EDI-3. El EDI-3 es un cuestionario de auto-relato constituido por 91 ítems organizados en 12 escalas. Estas escalas producen dos componentes: uno referente a los disturbios alimentarios específicos (EDRC); y otro referente a constructos relevantes a los trastornos alimentarios (GPMC). Se trató de una investigación exploratoria del tipo transversal. En la mayoría de los casos, se observó un aumento de la mortalidad por rotavirus en la población general. Además del EDI-3, los participantes respondieron a un cuestionario sociodemográfico. La recolección de datos ocurrió en una escuela pública en João Pessoa-PB y en la UFPB. Inicialmente se realizó la traducción y adaptación cultural de los ítems. A continuación se ejecutó la validación semántica con el estrato más bajo y el más alto de la población objetivo. Para el análisis de datos se utilizó el Software IBM SPSS versión 21 para realizar Análisis Factorial Exploratorio y obtener la consistencia interna a través del Coeficiente Alfa de Cronbach (α). El KMO del EDRC fue de 0,80 y la prueba de esfericidad de Bartllett se mostró significativa [X ^ 2 (300) = 1276,108; p <0,01]. El criterio teórico prevaleció, siendo fijado 3 factores, resultando en un valor de α de 0,862. El KMO del GPMC fue de 0,63 y la prueba de esfericidad de Bartllett fue significativa [X ^ 2 (2145) = 4083,741, p <0,01]. Realizado el análisis paralelo surgieron 9 eigenvalues, satisfaciendo el criterio teórico que presenta el GPMC compuesto por 9 escalas. Con este estudio se pudo obtener análisis iniciales para obtener evidencias satisfactorias de la validación del EDI-3 que es de suma importancia para la utilización de éste en el rastreo de TA en las poblaciones estudiadas.

PALABRAS CLAVE: Trastornos de la alimentación; Validación; Adaptación.

VALIDAÇÃO E ADAPTAÇÃO DO INVENTÁRIO DE DESORDEM ALIMENTAR PARA O CONTEXTO BRASILEIRO

Os TA são definidos como uma desordem psiquiátrica persistente que causam danos significativos à saúde física ou ao funcionamento psicossocial. O objetivo da pesquisa foi adaptar para o contexto brasileiro e obter evidências de validade de construto do EDI-3. O EDI-3 é um questionário de auto-relato constituído por 91 itens organizados em 12 escalas. Essas escalas produzem dois componentes: um referente aos distúrbios alimentares específicos (EDRC); e outro referente a construtos relevantes aos transtornos alimentares (GPMC). Tratou-se de uma pesquisa exploratória do tipo transversal. Participaram 169

pessoas, sendo 77 adolescentes (45,56%) e 92 adultos (54,44%), com idades variando entre 14 e 49 anos (M = 18,96; DP = 4,41). Além do EDI-3, os participantes responderam a um questionário sociodemográfico. A coleta de dados ocorreu em uma escola pública em João Pessoa-PB e na UFPB. Inicialmente foi realizada a tradução e adaptação cultural dos itens. Em seguida foi executada a validação semântica com o estrato mais baixo e o mais alto da população-alvo. Para a análise de dados foi utilizado o Software IBM SPSS versão 21 para realizar Análise Fatorial Exploratória e obter a consistência interna através do Coeficiente Alfa de Cronbach (α). O KMO do EDRC foi de 0,80 e o Teste de Esfericidade de Bartllett apresentou-se significativo $[X^2(300) = 1276{,}108; p < 0{,}01]$. O critério teórico prevaleceu, sendo fixado 3 fatores, resultando em um valor de α de 0,862. Já o KMO do GPMC foi de 0,63 e o Teste de Esfericidade de Bartllett foi significativo $[X^2(2145) = 4083{,}741; p < 0{,}01]$. Realizado a análise paralela surgiram 9 eigenvalues, satisfazendo o critério teórico que apresenta o GPMC composto por 9 escalas. Com esse estudo pôde-se obter análises iniciais para obtenção de evidências satisfatórias da validação do EDI-3 que é de suma importância para a utilização deste no rastreio de TA nas populações estudadas.

PALAVRAS-CHAVES: Transtornos Alimentares; Validação; Adaptação.