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Item Response Theory-based validation of a short form of the *Disordered Eating Attitude Scale* (DEAS-s) to a Brazilian sample

Validação de uma versão breve da *Disordered Eating Attitude Scale* (DEAS-s) em uma amostra brasileira com base na Teoria da Resposta ao Item

Validación de una versión breve de la *Disordered Eating Attitude Scale* (DEAS-s) en una muestra brasileña basada en la Teoría de la Respuesta al Ítem

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Abstract

This study aimed to validate a short version of the Disordered Eating Attitude Scale *(DEAS-s). To this end, 2,902 adult individuals answered the original DEAS and informed age, weight, and height. Data were analyzed using the full-information factor analysis and Item Response Theory (IRT) analysis. Exclusion criteria retained items with adequate values of commonality and factor loadings. Estimation of IRT parameters, the Item Characteristic Curve (ICC), and test information guided the selection of the best quality items. The final model adjustment was evaluated using Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMSR), Comparative Fit Index (CFI), and Tucker-Lewis Index (TLI). The eating attitudes on each level of DEAS-s were described. The analyses were performed on R software and Microsoft Excel version 2013. As results, six items were excluded because of the low communalities and factor loadings, and one more was excluded because of an overlapping on the ICC. The remaining 17 items explained 0.53 of the total variance and had an adequate goodness-of-fit (RMSEA = 0.05; SRMSR = 0.05; CFI = 0.98; TLI = 0.98). The information test is more accurate between the scores 0 and +3. Scores higher or equal to 1.5 identified individuals with disordered eating attitudes. Women, older individuals, and those with a higher body mass index presented more disordered eating; thus, the one-dimensional and short version of DEAS showed a suitable adjustment and may contribute to properly evaluate disordered eating in diverse populations.*

Psychometrics; Multivariate Analysis; Eating Disorders; Questionnaires; Reliability and Validity

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Introduction

Disordered eating could be defined as all spectrum of problems related to food, from simple diet to clinical eating disorders [1,2]; hence, some publications use the term to refer to patients with eating disorders or diagnostic, others to refer to dysfunctional eating behaviors (such as purgative practices, binge eating and restriction) to lose or control weight, which occur less frequently or in a less severe way than eating disorders diagnostic criteria [3,4,5,6].

Disordered eating behaviors are observed mostly in the young female people and described as "epidemic" in teenagers and college students [7,8,9,10] – and are related to debilitating and costly health conditions. Disordered eating has been associated to the development of classical eating disorders [11], with obesity [12,13] and perpetuation of overweight progress [14,15]. Disordered eating also leads to diverse psychological and behavioral consequences, e.g. severe stress, low self-esteem, mood disorders, personality problems, and alcohol and drug abuse [11,16,17,18,19].

Disordered eating is evaluated using multiple instruments and terms (e.g. risk for eating disorders, abnormal eating attitudes) in the literature. Among validated questionnaires worldwide [7,19,20], *Eating Attitude Test* (EAT) and *Bulimic Investigatory Test of Edinburgh* [7,19,20] had their psychometric properties evaluated for adolescents in Brazilian context [21,22]. All of them were developed in the context of clinical eating disorders screening, and EAT, specifically, has many limitations [23].

The *Disordered Eating Attitude Scale* (DEAS) was developed aiming to approach specifically disordered attitudes (not eating disorders symptoms), including dysfunctional beliefs, thoughts, feelings, and relationship with food [24]. It was developed and validated in Brazil with female college students and has an English [25], Spanish [26], and Japanese [27] adapted versions for young female population. DEAS psychometric properties were also evaluated when it was answered by men [28] and adolescents [29].

DEAS psychometric properties were previously studied using the classical test theory (e.g. exploratory factor analysis with estimation by principal components using varimax rotation). However, the classical approach has some limitations, such as the focus on the test overall. On the other hand, the Item Response Theory (IRT) analysis concerns the quality and requirement of each item on the test. Likewise, the items characteristics remain constant while the test is applied in other samples. IRT analysis also enables the selection of more accurate items set improving the development of short versions of the test. Furthermore, when using the IRT analysis, the scores are calculated based on a probabilistic model and not on the sum of the correct answers [30,31,32].

Therefore, this study aimed to determine the feasibility of a unidimensional short version of DEAS (DEAS-s) using an item response theory-based methodology. This is reasonable because DEAS is almost ten years old now, the disordered eating research has increased in this period, and short (and high quality) scales are declared as ideal. Even with possibility of reduced variance (and impact on reliability and validity), short versions can improve assessment saving time and effort and increasing response rate [33]; in addition to be included together with other measures on eating in broader studies.

Material and methods

This psychometric study included 2,490 Brazilian college students from the five different regions of the country [34], 228 male college students from the study of validation for this population [28], 147 female patients with eating disorders (42 with anorexia nervosa, 52 bulimia nervosa, 53 binge eating disorder), and 37 obese female women without eating disorder symptoms [35] in treatment in the Clinics Hospital of Medical School at University of São Paulo (USP), Brazil. All of them answered the original DEAS [2] in paper and pencil in their universities or in the hospital area.

All individuals reported age, weight and height (self-informed in the case of students and measured in the case of patients). Body mass index (BMI; kg/m^2) was calculated as weight (in kilograms) divided by the square of height (in meters). The values of BMI were classified in thinness ($< 18.5 kg/m^2$), normal weight ($\geq 18.5 kg/m^2$ and $\leq 24.99 kg/m^2$), and overweight ($\geq 25 kg/m^2$) [36].

The DEAS scale

The original DEAS had 25 items divided into 5 factors, which explained 54.3% of the total variance, and had Cronbach's alpha equal to 0.88, 0.72, 0.65, 0.43, 0.51, respectively [24].

Before starting IRT analysis, we decided to exclude item 1, which stated *"mark how healthy and necessary you consider consumption of each kind of food"*, and a list of 12 food items divided in part a, b, and c. These food items were previously analyzed as different items in the factor analysis [24]. This exclusion was decided for conceptual reasons. Food classification was based on data from patients with eating disorder, following no scientific or theoretical rule or guideline. Hence, we considered it lacks epistemological basis to define the answers for this question as disordered or healthy regardless of the context and other variables. Consequently, IRT analysis started with the remained 24 DEAS items.

Data analysis

To develop a unidimensional short version of DEAS, a full-information factor analysis was performed using the package mirt on R software (http://www.r-project.org). Unidimensionality is endorsed by an explained variance of the first factor higher than 20% of the total variance [37]. Alvarenga et al. [24] had identified that the first factor explains approximately 28% of the total variance. While performing the full-information factor analysis, items with commonality lower than 0.4 and factor loadings lower than 0.3 were excluded from further analyses [38,39].

The graded response model was used to calculate the probability of a person to choose the category k from each item, with a given level of the latent trait (disordered attitudes). Equation 1 represents this model [40]:

$$P_{i,k}(\theta_j) = \frac{1}{1+\exp^{-a_i(\theta_j - b_{i,k})}} - \frac{1}{1+\exp^{-a_i(\theta_j - b_{i,k+1})}} \qquad (1)$$

where: θ_j is the IRT score of a person j; $P_{i,k}(\theta_j)$ is the probability of a person j, when answering the item i, choosing the category k; a_i is the discrimination parameter of item i; $b_{i,k}$ is the location parameter of the category k of the item i, with $b_{i,2} \leq b_{i,3} \leq b_{i,4} \leq ...$

The discrimination parameter (a_i) indicates the quality of the item to discriminate people with different level of disordered attitudes. Items had adequate discrimination of the latent trait when parameter ai was higher than or equal to 0.7 [41]. Parameter b_i should range mostly from -3 to +3 [42].

Both parameters (a_i and b_i) were estimated by the marginal maximum likelihood method considering a convergence criterion equal to 0.001. Parameter b_i and IRT scores were estimated in a scale with mean equal to 0 and standard deviation equal to 1 [42]. These estimates may be also analyzed in the Item Characteristic Curve (ICC). Figure 1 shows an example of ICC for the item *"I feel guilty when I eat something that I thought I should not eat for some reason"*. This item has the discrimination parameter equal to 2.24 and location parameters equal -0.49; 0.70; and 1.45, respectively for categories 2, 3, and 4.

The estimates were analyzed with the corresponding standard error. The items that did not adhere to the acceptable requirements were excluded from further analysis. The response categories of items with overlapping on the ICC were reorganized considering the conceptual reasons. The final model considered only those items with adequate values of parameters ai and bi and their standard errors.

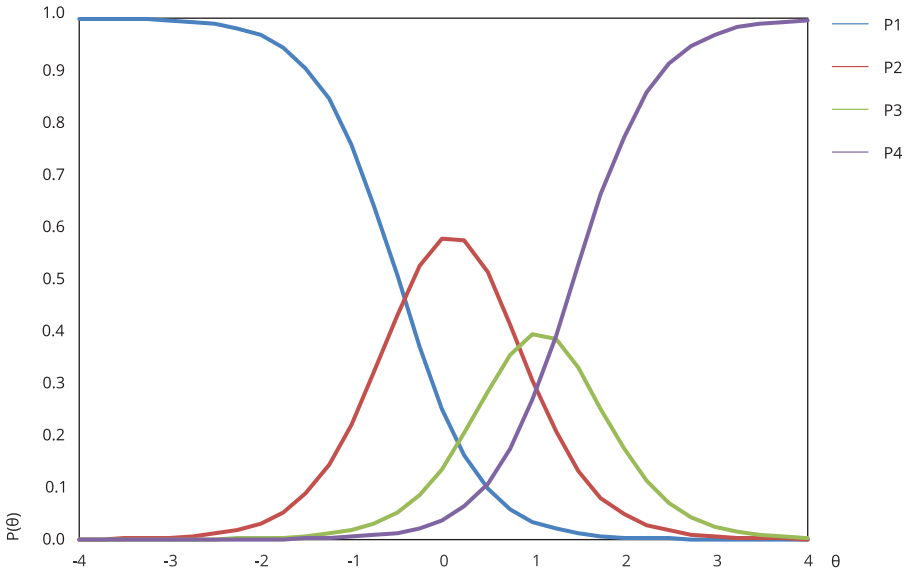
The internal consistency of the items in the final model was evaluated using the Cronbach's alpha in the package *psych* on R software. The questionnaire is internally consistent when alpha is higher than 0.7 [38]. The effect of the exclusion of each item on the alpha value was also evaluated.

The adjustment of the final model was evaluated underlying the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean Square Residual (SRMSR), the Comparative Fit Index (CFI), and the Tucker-Lewis Index (TLI) [43,44]. The goodness-of-fit was confirmed when the RMSEA and SRMSR were less or equal to 0.05 and the CIF and TLI were higher than 0.90 [45]. Accuracy was also analyzed by the Test Information Curve. IRT and adjustment analyses were performed using the package *mirt* on R software.

The probability to choose the category k was calculated across the scores, considering the location parameters for each item. To describe the eating attitudes of each level of DEAS-s, each item was located at the level in which the probability was higher or equal to 0.5. Two nutritionists (M.S.A. and

Figure 1

Item Characteristic Curve of the item "*I feel guilty when I eat something that I thought I should not eat for some reason*".



θ: Item Response Theory (IRT) score; P(θ): probability of a person to choose the category; P1: characteristic curve of the category 1 (never); P2: characteristic curve of the category 2 (sometimes); P3: characteristic curve of the category 3 (frequently); P4: characteristic curve of the category 4 (always).

T.S.S.S.) analyzed this description and identified the score from which the individuals have disordered eating attitudes using Microsoft Excel version 2013 (https://products.office.com/). Moreover, to improve the interpretability of the DEAS evaluated by IRT [46], the scores estimated in a scale with mean equal to 0 and standard deviation equal to 1 were transformed to a scale with mean equal to 50 and standard deviation equal to 10.

Chi-square test was performed to evaluate differences in the sample characteristics regarding sex, age (less than or equal to 19 – since the World Health Organization defines adolescence from 10 to 19 years of age [47] –, 20 to 30 years old; and ≥ 31 years old), and BMI by disordered eating attitudes.

All the original studies using DEAS were approved by the Research Ethics Committee of the School of Public Health, USP [28,34,35].

Results

Most participants included in the current analyses were women (92.1%), younger than 30 (85.8%) and had a BMI lower than 24.99kg/m^2 (79.9%).

Six items were excluded in the full-information factor analysis because of the low values for communalities and factor loadings.

Namely, these are the items excluded before performing the IRT analysis: "*Do you feel pleasure when you eat?*"; "*Do you enjoy the feeling of an empty stomach?*"; "*Do you have good memories related to food?*"; "*Do you believe that it is normal to eat sometimes just because you are sad, upset or bored?*"; "*I worry all the time about what I am going to eat, how much to eat, how to prepare food and whether I should eat or not*"; and "*When I desire a specific kind of food, I know I will not stop eating until I have finished with it*".

IRT analysis was performed in the remaining 18 items. All items presented adequate discrimination parameter. Nevertheless, the item "*I would like to have my appetite and eating behavior under total*

control" presented an overlapping on the ICC after various attempts of re-categorization and was excluded. Finally, IRT analysis was also performed considering only the 17 items (for full description and codification system see Supplementary Material 1: http://cadernos.ensp.fiocruz.br/site/public_site/arquivo/suppl-1-e00169919_3298.pdf). These items explained 0.53 of the total variance in full-information factor analysis; the estimation of the IRT parameters was completed with 20 EM cycles. Table 1 shows the factor loadings, communalities and IRT parameters (a_i, b_i, and their standard errors) of the 17 remained items and Supplementary Material 2 (http://cadernos.ensp.fiocruz.br/site/public_site/arquivo/suppl-2-e00169919_8064.pdf) presents their item characteristic curves.

The items on the exclusion of some foods (items 4 and 14) have the lowest discrimination parameter (a_4 = 1.47 and a_{14} = 1.48). The best discrimination parameter is found for the item on the effect of the relationship with food in life as a whole (a_{25} = 2.65).

Guilt after eating was observed at the lowest levels of DEAS-s ($b_{13,2}$ = -0.49), suggesting thoughts regarding some foods that should be not eaten are sometimes presented by individuals with the lowest scores of DEAS-s. Besides the lowest discrimination (a_{14} = 1.48), item 14 also had the highest value for the location parameter ($b_{14,4}$ = 2.63), suggesting the exclusion of some food because of the calories is more frequent at the highest levels of disordered eating.

The final model presented an adequate internal consistency (Cronbach's alpha equal to 0.88) and goodness-of-fit (RMSEA = 0.05; SRMSR = 0.05; CIF = 0.98; and TLI = 0.98). The information test suggested a better accuracy between the scores 0 and +3 (Figure 2).

Table 1

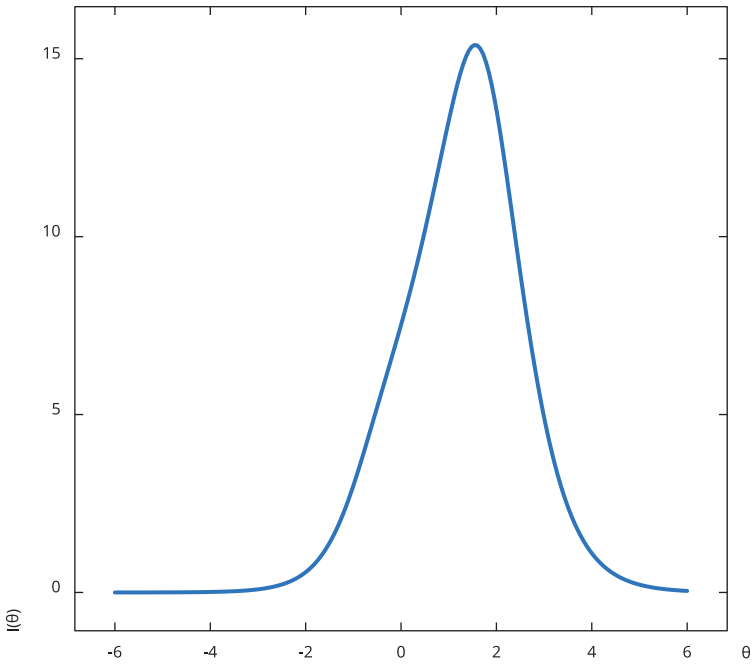
Factor loadings, communalities, and discrimination and location parameters (and respective standard errors) of 17 items from the short version of the *Disordered Eating Attitude Scale* (DEAS-s) evaluated by Item Response Theory.

Item	Factor loading	h^2	a	SE_a	b_2	SE_{b2}	b_3	SE_{b3}	b_4	SE_{b4}
3 *Does eating ever feel unnatural to you?*	0.76	0.58	2.01	0.16	2.43	0.11				
4 *Have you ever spent one or more days without eating or having only liquids because you believed you could lose weight?*	0.65	0.43	1.47	0.08	1.71	0.07				
5 *Do you count the calories of everything you eat?*	0.66	0.44	1.51	0.09	1.94	0.08				
7 *Do you "skip" meals to avoid putting on weight?*	0.71	0.50	1.71	0.08	0.99	0.04				
8 *Does eating make you feel "dirty"?*	0.83	0.69	2.52	0.17	1.92	0.06				
10 *Do you wish you did not need to eat?*	0.67	0.45	1.54	0.08	1.25	0.05				
12 *When you eat more than usual, what is your behavior afterwards?*	0.70	0.50	1.69	0.07	0.50	0.03	1.81	0.06		
13 *I feel guilty when I eat something that I thought I should not eat for some reason.*	0.80	0.63	2.24	0.08	-0.49	0.03	0.70	0.03	1.45	0.04
14 *I quit eating a kind of food if I find out it has more calories than I thought.*	0.66	0.43	1.48	0.06	0.32	0.04	1.642	0.06	2.63	0.10
16 *I worry about how much a certain kind of food or meal will make me gain weight.*	0.76	0.58	1.99	0.07	-0.47	0.03	0.56	0.03	1.49	0.05
17 *I am angry when I feel hungry.*	0.69	0.47	1.62	0.08			1.28	0.05		
18 *It is hard to choose what to eat, because I always think I should eat less or choose the option with fewer calories.*	0.81	0.66	2.39	0.09	0.08	0.03	0.91	0.03	1.66	0.05
21 *I try to eat less in front of others in order to overeat when I am alone.*	0.68	0.47	1.59	0.11			2.20	0.10		
22 *I am afraid of starting to eat and not being able to stop.*	0.75	0.56	1.94	0.08	0.67	0.03	1.39	0.05	2.06	0.07
23 *I dream of a pill that would replace food.*	0.79	0.62	2.19	0.12			1.35	0.05		
24 *I get nervous and/or lose my self-control at parties and buffets, due to a great amount of foods available.*	0.73	0.53	1.82	0.11			1.90	0.07		
25 *My relationship with food messes up my life as a whole.*	0.84	0.71	2.65	0.16			1.52	0.05		

a: discrimination parameter; b_2: location parameter of category 2; b_3: location parameter of category 3; b_4: location parameter of category 4; h^2: communality; SE_a: standard error of discrimination parameter; SE_{b2}: standard error of b_2; SE_{b3}: standard error of b_3; SE_{b4}: standard error of b_4.

Figure 2

Test Information Curve of the short version of *Disordered Eating Attitude Scale* (DEAS-s) evaluated by Item Response Theory.



θ: score; Iθ: Information per score.

Box 1 shows a description of the eating attitudes characteristics of each level of DEAS-s. We conceptually defined that the score higher or equal to 1.5 identifies the individuals with important eating disordered attitudes. That is, from the score 1.5, individuals wish they did not need to eat and always worry about their diet and weight. Women, older individuals, and those with a higher BMI presented more disordered eating according to this defined score (Table 2).

Discussion

To develop a unidimensional short version of DEAS, this study analyzed the answers to the original questionnaire considering IRT in addition to the factor analysis. The current analysis suggested some items from the original DEAS are unable to evaluate disordered eating. Besides decreasing the number of items, the short version provides a more accurate measure and adds the description of the eating disordered attitudes across each level of the continuum.

As recommended, the sample included individuals with heterogeneous eating attitudes [30]. This was important to adequately estimate the discrimination and location parameters [30]. The individuals included in the current analyses have shown a broad range of scores in the original DEAS in previous studies [27,28,35], so mixed levels for disordered eating were expected.

The original DEAS has five factors derived from a classical analysis and conceptual reasons [22]. The first factor explained more than 20% of the total variance [24], endorsing a unidimensional measure of disordered eating [36]. Moreover, it is important to consider that disordered eating is not necessarily a construct with dimensions. It has a range of characteristics, but could be unidimensional defined as disordered feelings, thoughts, behaviors and relationship with food.

Box 1

Description of eating attitudes from each level of the short version of *Disordered Eating Attitude Scale* (DEAS-s) evaluated by Item Response Theory.

Level (0,1)	Level (50,10)	In this level...
-0.5	44.6	Sometimes feel guilty when eat something that thought should not eat for some reason. Sometimes worry about how much a certain kind of food or meal will make gain weight.
0.0	49.9	Sometimes feel hard to choose what to eat, because always think should eat less or choose the option with fewer calories.
0.5	55.3	Assume you have lost control and keep eating even more or decide to go on a diet to compensate if eat more than usual. Sometimes quit eating a kind of food if find out it has more calories than thought. Frequently worry about how much a certain kind of food or meal will make gain weight.
1.0	60.7	Skip meals to avoid putting on weight. Frequently feel guilty when eat something that thought should not eat for some reason. Frequently fells hard to choose what to eat, because always think should eat less or choose the option with fewer calories. Sometimes is afraid to start eating and not be able to stop.
1.5	66.1	Would like to not need to eat. Always feel guilty when eat something that thought should not eat for some reason. Always worry about how much a certain kind of food or meal will make gain weight. Frequently fells angry when feels hungry. Frequently is afraid to start eating and not be able to stop. Frequently dreams of a *pill* that would replace food. Frequently think that relationship with food messes up life as a whole.
2.0	71.4	Spent one or more days without eating or having only liquids because you believe could lose weight. Count the calories of everything it eats. Feels "dirty" when eating. Use some kind of compensation (e.g. physical activity, vomiting, laxatives and diuretics) if eat more than usual. Frequently quit eating a kind of food if find out it has more calories than thought. Always fells hard to choose what to eat, because always think should eat less or choose the option with fewer calories. Frequently get nervous and/or lose self-control at parties and buffets, due to a great amount of foods available.
2.5	76.8	Think eating feels unnatural. Frequently try eating less in front of others in order to overeat when alone. Always is afraid to start eating and not be able to stop. Always quit eating a kind of food if find out it has more calories than thought.

Table 2

Disordered eating according to the shorter version of the *Disordered Eating Attitude Scale* (DEAS-s) by sex, age and body mass index (BMI).

	N	%	Disordered eating				p-value *
			No (n = 2,712)	% (93.5)	Yes (n = 189)	% (6.5)	
Sex (n = 2,901)							< 0.001
Male	228	7.9	225	8.3	3	1.6	
Female	2,673	92.1	2,487	91.7	186	98.4	
Age (years) (n = 2,835)							0.007
≤ 19	745	26.3	709	26.8	36	19.2	
≥ 20 and ≤ 30	1,686	59.5	1,574	59.4	112	59.9	
BMI (n = 2,749)							< 0.001
Thinness	272	9.9	245	9.5	27	16.2	
Normal weight	1,924	70.0	1,847	71.5	77	46.1	
Overweight	553	20.1	490	19.0	63	37.7	

* Likelihood ratio.

A unidimensional and short version may improve the assessment of disordered eating because its use is more practical. In addition, the current analysis selected high-quality items to evaluate the construct [31]. DEAS-s has adequate goodness-of-fit and better psychometric properties than the original DEAS, which has factors with low reliabilities and few items [38].

The disordered eating attitudes characteristics allocated at each level of the DEAS-s make sense in levels of "dysfunctionality". One must consider that it is more serious if someone wish they did not need to eat, and always or frequently feels guilty, afraid and worried (and even angry) related to eating. Nonetheless, disordered eating is not a diagnostic and has no "criteria" [1,2]; so the DEAS development did not propose a cut-point for its score. Nevertheless, in some way, we could classify the disordered eating by levels, considering its interpretation, which could improve studies of groups' evaluations and associated variables. When using the DEAS-s, we suggest the score 1.5 as the point from which the individuals have important disordering.

In this sense, women, older individuals (20-years-old up to 30-year-old), and those with a higher BMI presented very dysfunctional attitudes, as the classical profile of eating disorder patients [2]. Other studies focusing on disordered eating (even using other instruments) also found that female sex [7,12,48] and overweight and obesity [7,12] were linked to the disordered pattern. Women are usually more concerned with eating and weight, so disordered eating behaviors should address mostly female people. When using specific questions from the original DEAS and some from EAT, Alvarenga et al. [3] found that, among Brazilian female college students, disordered eating was 50% more prevalent in those who were overweight or obese.

The evaluation of Brazilian college students using the original DEAS had previously found higher scores for those with overweight status; but unlike this study, younger people had worse eating attitude [34]. In the current analysis, although eating disorders are more prevalent in older people, it is important to emphasize that the "older" here were those over 25 (and mostly under 30). This discussion on the weight status is fundamental to demystify the idea that overweight or obese people must be more concerned or even guilt about eating and its consequences. They usually are, but they have no weight loss or even better health because of it. In line with the current analysis, dysfunctional attitudes and behaviors with food and weight tend to be more common in overweight individuals. Disordered eating and body weight excess may perpetuate each other, since their common factors are related with both – including media influence, weight stereotypes, body dissatisfaction, dieting, emotional eating, etc. [13]. However, we must stress that weight and height were self-reported in the samples included in this study (with the exception of patients with eating disorders, whose weight and height were measured), which could be a limitation of the study. Nevertheless, a meta-analysis [49] concluded that self-reported height and weight are good estimates of actual measures, and some studies in Brazil show high consistency between self-reported and measured data and consider self-reported data reliable when actual measures are unavailable for epidemiological studies [50,51].

In conclusion, considering that disordered eating must be widely evaluated because of its prevalence and consequences – and must not be confused with classical eating disorder symptoms –, we need a proper instrument. DEAS had shown its possibilities in previous studies [3,34,35,52,53,54,55,56,57], but DEAS-s provided by this study could amplify its use and bring more knowledge on dysfunctional feelings, thoughts, behaviors and relationship with food.

Contributors

All authors contributed to the study conception and design. Material preparation and data collection was performed by M. S. Alvarenga, and analysis were performed by T. S. S. Santos and D. Andrade. The first draft of the manuscript was written by M. S. Alvarenga and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Conflict of interest

The authors declare no conflict of interest regarding the publication of this paper. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Additional informations

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Resumo

O objetivo do estudo foi validar uma versão breve da Disordered Eating Attitude Scale *(DEAS-s). Um total de 2.902 adultos responderam à DEAS original e informaram a idade, peso e altura. Os dados foram analisados com a análise fatorial por informação completa e Teoria da Resposta ao Item (TRI). Os critérios de exclusão retiveram itens com valores adequados de comunalidades e cargas fatoriais. A estimação dos parâmetros TRI, a Curva Característica do Item (CCI) e teste de informação orientaram a seleção de itens com melhor qualidade. O ajuste do modelo final foi avaliado com a Raiz da Média dos Quadrados dos Erros de Aproximação (RMSEA), Raiz Padronizada da Média Quadrática Residual (SRMSR), Índice de Ajuste Comparativo (CFI) e Índice de Tucker-Lewis (TLI). Foram descritas as atitudes alimentares em cada nível da DEAS-s. As análises foram realizadas no software R e no Microsoft Excel, versão 2013. Nos resultados, seis itens foram excluídos devido às comunalidades e cargas fatoriais baixas, e mais um item foi excluído devido a uma sobreposição na CCI. Os 17 itens restantes explicaram 0,53 da variância total e mostraram ajuste adequado (RMSEA = 0,05; SRMSR = 0,05; CFI = 0,98; TLI = 0,98). O teste de informação é mais acurado entre os escores entre 0 e +3. Valores maiores ou iguais a 1,5 identificaram os indivíduos com comer transtornado. As mulheres, os indivíduos mais velhos e aqueles com índice de massa corporal mais elevado apresentaram mais comer transtornado. Portanto, a versão unidimensional e breve da DEAS mostrou ajuste adequado e pode contribuir para a avaliação correta dos transtornos alimentares em populações distintas.*

Psicometria; Análise Multivariada; Transtornos da Ingestão de Alimentos; Questionários; Confiabilidade e Validade

Resumen

El objetivo del estudio fue validar una versión breve de la Disordered Eating Attitude Scale *(DEAS-s). Un total de 2.902 adultos respondieron a la DEAS original e informaron la edad, peso y altura. Los datos fueron analizados mediante análisis factorial por información completa y Teoría de la Respuesta al Ítem (TRI). Los criterios de exclusión retuvieron ítems con valores adecuados de comunalidades y cargas factoriales. La estimación de los parámetros TRI, la Curva de Característica del Ítem (CCI) y test de información orientaron la selección de los ítems de mejor calidad. El ajuste del modelo final se evalúo con la Raíz de la Media de los Cuadrados de los Errores de Aproximación (RMSEA), Raíz Estandarizada de la Media Cuadrática Residual (SRMSR), Índice de Ajuste Comparativo (CFI) e Índice de Tucker-Lewis (TLI). Se describieron las actitudes alimentarias en cada nivel de la DEAS-s. Los análisis se realizaron con el software R y con Microsoft Excel, versión 2013. En los resultados, seis ítems se excluyeron, debido a comunalidades y cargas factoriales bajas, y un ítem más se excluyó, debido a una sobreposición en la CCI. Los 17 ítems restantes explicaron 0,53 de la variancia total y mostraron un ajuste adecuado (RMSEA = 0,05; SRMSR = 0,05; CFI = 0,98; TLI = 0,98). El test de información es más preciso entre los escores 0 y +3. Valores mayores o iguales de 1,5 identificaron a individuos con comer desordenado. Las mujeres, los mayores y los individuos con índice de masa corporal más elevado presentaron más comer desordenado. Por tanto, la versión unidimensional y breve de la DEAS mostró ajuste adecuado y puede contribuir a la evaluación correcta de los trastornos alimentarios en poblaciones distintas.*

Psicometría; Análisis Multivariante; Trastornos de la Ingesta de Alimentos; Cuestionarios; Confiabilidad y Validez

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