BRIEF REPORT

Validation of the Portuguese version of the Questionnaire on Eating and Weight Patterns – Revised (QEWP-R) for the screening of binge eating disorder

Validação da versão em português do Questionário sobre Padrões de Alimentação e Peso – Revisado (QEWP-R) para o rastreamento do transtorno da compulsão alimentar periódica

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Abstract

Objective: The present paper describes the validation of the Questionnaire on Eating and Weight Patterns-Revised (QEWP-R) designed for the diagnosis of binge eating disorder (BED) and sub-clinical binge eating. Methods: 89 overweight women seeking treatment for binge eating and/or obesity were assessed with the Portuguese version of the Questionnaire of Eating and Weight Patterns and were, subsequently, interviewed with the eating disorders module of the Structured Clinical Interview for DSM-IV (SCID-I/P). Rates of binge eating disorder and sub-clinical cases of binge eating obtained with the Questionnaire on Eating and Weight Patterns-Revised were then compared to those obtained with the Structured Clinical Interview for DSM-IV. Results: In the identification of binge eating, irrespective of the presence of all criteria for binge eating disorder the QEWP-R Questionnaire on Eating and Weight Patterns-Revised yielded a sensitivity value of 0.88, a specificity value of 0.63 and a positive predictive value of 0.825. Rates for the identification of the full syndrome of binge eating disorder were: sensitivity value of 0.548, a specificity value of 0.8 and a positive predictive value of 0.793. Conclusions: The Questionnaire on Eating and Weight Patterns-Revised can be useful in a first-step screening procedure to identify probable cases of binge eating. It can be useful as a screening tool and as a first step of clinical assessment of patients seeking treatment for binge eating and/or obesity.

Keywords: Bulimia; Eating disorders; Feeding behavior; Obesity; Questionnaires; Validity

Resumo

Objetivo: O presente artigo descreve a validação do Questionário sobre Padrões de Alimentação e Peso-Revisado (QEWP-R), instrumento criado para o diagnóstico do transtorno da compulsão alimentar periódica (TCAP) e de quadros subclínicos de compulsão alimentar. Métodos: A amostra foi composta por 89 mulheres em busca de tratamento especializado para compulsão alimentar e/ou obesidade, que preencheram o Questionário sobre Padrões de Alimentação e Peso-Revisado e, posteriormente, foram entrevistadas com o módulo para transtornos alimentares da Entrevista Clínica Estruturada para o DSM-IV (SCID-I/P). As taxas de transtorno da compulsão alimentar periódica e de diagnósticos subclínicos obtidas pelo Questionário sobre Padrões de Alimentação e Peso-Revisado foram comparadas às obtidas pela Entrevista Clínica Estruturada para o DSM-IV. Resultados: Na identificação de compulsão alimentar (independente da presença de todos os elementos necessários para o diagnóstico de transtorno da compulsão alimentar periódica), a versão em português do Questionário sobre Padrões de Alimentação e Peso-Revisado apresentou sensibilidade de 0,88, especificidade de 0,63 e valor preditivo positivo de 0,825. Já para o diagnóstico de transtorno da compulsão alimentar periódica, o questionário apresentou sensibilidade = 0,548, especificidade = 0,8 e valor preditivo positivo de 0,793. Conclusões: O Questionário sobre Padrões de Alimentação e Peso-Revisado, em sua versão para o português, mostrou ser um instrumento útil na detecção de prováveis casos de compulsão alimentar. Pode ser utilizado como escala de rastreamento ou ainda como primeiro passo na avaliação clínica de pacientes que procuram tratamento para compulsão alimentar e/ou obesidade.

Descritores: Bulimia; Transtornos da alimentação; Conduta na alimentação; Obesidade; Questionários; Validade

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Introduction

In the eating disorder literature, binge eating is defined as uncontrolled eating of an abnormally large amount of food in a discrete period of time. It is a particularly challenging behavior to assess because the current DSM-IV definition includes an objective element (large amount of food eaten) without precise guidelines for its assessment.[1] It also includes a subjective aspect (sense of loss of control) exclusively based on the subject's own self-perception.[2] It has also been shown that the lay use of the term binge eating is often very different from that proposed by its technical definition.[3-4] A study of what young women mean when they describe their own eating as binge revealed that it is primarily the experience of loss of control over eating, and not the amount consumed, which is the important feature.[5]

Therefore, an instrument designed to assess binge eating and binge eating disorder (BED) must include questions about the amount of food eaten and the feeling of loss of control. It must also specify frequency, size, and duration of the episodes. Given these complexities, measures of binge eating, particularly self-report ones, must be extensively evaluated before being used for diagnostic purposes.

The Questionnaire on Eating and Weight Patterns – Revised (QEWP-R),[6] is a 27-item self-administered questionnaire that assesses binge eating and weight control behaviors, developed for determining a dichotomous measure for the diagnosis of BED. To this date, it is the sole self-report measure specifically based on the DSM-IV criteria for BED. The Binge Eating Scale,[7] a widely known scale for the assessment of binge eating, provides a continuous measure of binge eating severity. Although the scale was developed before the proposal of BED and does not follow DSM-IV criteria, a recent Brazilian study has shown that scores above the cut-off point of 17 can be considered indicative of clinically significant binge eating.[8]

Data on the QEWP-R's psychometric properties are still scarce. Comparisons between the questionnaire and a clinician-based version of the same questions were performed for the first multi-site field trials on BED[9] and found an agreement rate of 0.60 between the two methods of administration. This rate was considered modest by the authors of the questionnaire, comparable to the test-retest agreement commonly found for the major psychiatric disorders.[9] Nangle et al. compared a clinical sample of self-referred binge eaters with a non-clinical comparison group and found that the QEWP-R items assessing episodic overeating and lack of control over eating were able to discriminate between the two groups.[10] However, it seems that positive responses on the QEWP require confirmation by clinical interview in order to be considered of diagnostic significance.[11] A recent study comparing three self-administered assessments for binge eating and BED with interview methodology suggests that the QEWP-R performs satisfactorily as initial screen for the diagnosis of BED, but is less accurate in identifying non-BED individuals. The QEWP-R has also the advantage of being able to assess the frequency of binge eating.[12]

A Portuguese version of the QEWP-R was developed for initial studies on BED among the Brazilian population[13] and found that BED is also common among treatment-seeking overweight individuals in Brazil.[14] The objective of the present study is to validate the Portuguese version of the QEWP-R in a clinical population of overweight patients at specialized eating disorders and obesity services.

Methods

1. Subjects

Subjects were 89 overweight (BMI $>$ 25 kg/m^2) females seeking treatment for weight-loss and/or binge eating behavior. They were recruited from the Eating Disorders Program of the Department of Psychiatry and from the Obesity Program of the Department of Endocrinology of the Universidade Federal de São Paulo (UNIFESP/EPM), Brazil, and were undergoing initial screening for treatment of their eating and weight problems. Women were included in this study if they aged 15 to 59 years and were literate.

2. Instruments

1) Portuguese version of the Questionnaire on Eating and Weight Patterns – Revised (QEWP - R)

The QEWP-R includes questions on overeating and loss of control, distress related to eating behavior, importance of weight and shape and compensatory weight control behaviors. It provides decision rules for the differential diagnosis between BED and purging or non-purging bulimia nervosa based on YES-or-NO answers to questions assessing the presence or absence of binge eating and compensatory methods for weight control.[13] Following DSM-IV criteria, BED is considered positive when the subject endorses binge eating occurring at least twice a week associated with significant distress, without inappropriate compensatory methods for weight control. The instrument also assesses age, gender, ethnic background, education, height, weight and dieting behavior.

The QEWP-R was translated into Portuguese by eating disorders experts[13] and pilot-tested on eating disorders patients of the Eating Disorders Program of UNIFESP. The Portuguese version was then back-translated into English and submitted to one of the authors of the original questionnaire (S.Z.Y.), whose suggestions were included in the final version of the translation.

In this study, subjects were classified as having BED when meeting full criteria as proposed in the Appendix B of the DSM-IV.[1] Responses to a subset of items were used to establish sub-clinical diagnosis, as follows: Binge Eating Syndrome with Distress (BES+D), Binge Eating Syndrome (BES, recurrent episodes of overeating plus loss of control plus three associated symptoms of loss of control), Binge Eating (BE, recurrent episodes of overeating with loss of control), NBE (no-binge eating or episodic overeating without loss of control), and NBED (no-Binge Eating Disorder). Subjects reporting binge eating syndrome with distress plus undue influence of weight and shape on self-evaluation plus frequent compensatory behavior for weight control were classified as bulimics (BN).

2) Structured Clinical Interview for DSM-IV (SCID-I/P)

Subjects were also evaluated with the eating disorders module of the Structured Clinical Interview for DSM-IV (SCID-I/P)[15] for the clinical diagnosis of BED. Sub-clinical diagnoses were also derived from the answers to the SCID-I/P, following the same criteria described above.

The SCID-I/P is a semi-structured interview designed to be used by trained mental health professionals. Studies comparing eating disorder groups based on SCID-I/P diagnoses indicate that the SCID-I/P provides valid assessment of binge eating and purging.[16] In order to further refine the assessment of binge eating, subjects reporting overeating and loss of control were asked to describe a recent episode in detail and list all the food items consumed during the episode. For the purposes of this study, the SCID-I/P was considered the gold-standard for the diagnosis of BED.

3. Procedure

Upon arrival at the outpatient clinic for a previously scheduled screening interview, subjects were asked to complete the QEWP-R. Immediately after completing the questionnaire, each woman was interviewed with the SCID-I/P by a trained research team member blind to the QEWP-R diagnosis. The study was approved by UNIFESP's Ethics Committee (process number 488/00) and subjects were asked to give their informed consent before participating.

4. Statistical analysis

Rates of QEWP-R diagnosis of BED and sub-clinical categories were compared to those obtained with the SCID-I/P. Sensitivity, specificity, and positive predictive values were computed using SPSS. Comparisons were considered significant when $p < 0.05$.

Results

1. Demographics

Women in this sample had a mean age of 35 years. The majority (80%) was white and 60% had, at least, completed high-school.

2. SCID-I/P diagnosis

Forty-two (47.2%) women met DSM IV criteria for BED and 17 (19.1%) reported binge eating but did not fulfill criteria for BED. Of these, 8 (9%) were classified as BE, 2 (2.25%) as BES, 2 (2.25%) as BES+D and 5 (5.6%) as BN. Thirty (33.7%) women did not report binge eating and were classified as NBED.

Table 1 shows that BED and NBED women were similar in terms of age, education, weight and BMI. There was a significantly higher proportion of white women in the BED group, compared to the NBED group (Table 1).

Table 1 – Main characteristics of study sample (n, mean, standard deviation, %)

	BED (42) mean ± SD	NBED (30) mean ± SD	Statistics
Age (Years)	35.19 ± 10.77	36.73 ± 11.82	n.s.
Race			p<0.05
White n(%)	24 (80.0)	15 (57.7)	OR = 2.67
Weight (Kg)*	98.64 ± 20.12	99.78 ± 17.80	n.s.
BMI (Kg/m^2)**	39.19 ± 11.79	37.89 ± 6.64	n.s.

*Note: BED = Binge Eating Disorder. NBED = No-Binge Eating Disorder. BMI = body mass index. n.s. = non significant. Due to missing data, samples sizes are: * BED (40), NBED (29); ** BED (41), NBED (29).*

3. Comparisons between SCID-I/P and QEWP-R

1) BED X NBED

First, the QEWP-R was compared to the SCID-I/P in terms of its ability to identify BED in this sample (Table 2). Seventy-two women diagnosed with BED and NBED with SCID-I/P were included in this analysis.

Of the 42 BED subjects, 23 were classified as such by the QEWP-R (sensitivity = 0.55), and of the 30 NBED individuals, 24 were correctly identified by the questionnaire (specificity = 0.80). The positive predictive value was 0.79 and the negative predictive value was 0.56.

2) BE X NBE

Secondly, the QEWP-R was compared to the SCID-I/P on its ability to discriminate binge eating in general (BEg, including BED, BES+D, BES, BE and BN) from NBE (Table 3). 89 subjects were included in this analysis. 59 women were diagnosed with BEg and 30 were diagnosed as NBE by the SCID-I/P. The questionnaire (QEWP-R) showed a sensitivity rate of 0.88 and a specificity rate of 0.63. Its positive predictive value for the diagnosis of BEg was 0.82 and the negative predictive value was 0.73.

Table 2 – Agreement between interview and self-report on the diagnosis of Binge Eating Disorder (BED) (n = 72)

	BED (42) (SCID-I/P)	NBED (30) (SCID-I/P)	Total
	n	n	
BED (QEWP-R)	23	6	29
NBED (QEWP-R)	19	24	43
Total	42	30	72

Note: BED = Binge Eating Disorder. NBED = No-Binge Eating Disorder. SCID-I/P = Structured Clinical Interview for DSM-IV. QEWP-R = Questionnaire on Eating and Weight Patterns-Revised.
Sensitivity 0.55; Specificity 0.80; Positive predictive value 0.79; Negative predictive value 0.56.

Discussion

This study investigated the psychometric properties of the Portuguese version of the Questionnaire on Eating and Weight Patterns - Revised (QEWP-R) in a Brazilian population of overweight women seeking treatment for binge eating and/or obesity problems.

The study showed that the QEWP-R is able to correctly identify 88% of the women with binge eating problems in a clinical setting. The questionnaire also has a good positive predictive value (0.82) indicating that positive answers about binge eating behaviors on the QEWP-R are strongly suggestive of true binge eating.

Sensitivity for the diagnosis of BED (0.55) is lower than that for the behavior of binge eating. De Zwaan et al.[17] also found modest level of agreement between the QEWP-R and the SCID-I (0.57), which they considered to be fair. Modest sensitivity values for the diagnosis of BED can be related to intentional resistance to give correct information (denial for several reasons, such as shame) but most of all, the ambiguities of the definition of binge eating are possibly interfering with the correct interpretation of QEWP-R questions.

As a self-report instrument, the QEWP-R is limited to the individual's own perception of binge eating episodes, which can lead to both false-positive and false negative diagnoses. Still, self-report instruments tend to be economical, brief, easily administered and objectively scored.[18]

Despite its modest sensitivity, the specificity and positive predictive value for the diagnosis of BED in a clinical sample

Table 3 – Agreement between interview and self-report on the diagnosis of BEg and NBE (n = 89)

	BEg (SCID-I/P)	NBE (SCID-I/P)	Total
	n	n	
BEg (QEWP-R)	52	11	63
NBE (QEWP-R)	7	19	26
Total	59	30	89

Note: BEg = Binge Eating in general. NBE = No-Binge Eating. SCID-I/P = Structured Clinical Interview for DSM-IV. QEWP-R = Questionnaire on Eating and Weight Patterns-Revised.
Sensitivity 0.88; Specificity 0.63; Positive predictive value 0.82; Negative predictive value 0.73.

are good (0.80 and 0.79 respectively), suggesting that positive QEWP-R diagnoses of BED have a 79.3% chance of being confirmed by clinical interview.

An important limitation of this study was the clinical nature of the sample. Further studies with community samples and large samples, including individuals with different severity levels of binge eating are required to investigate the usefulness of the questionnaire in epidemiological studies. Men (and equal distribution of all races) should also be included in future samples in order to increase generalization of findings.

We conclude that, despite these limitations, the Portuguese version of the QEWP-R can be considered as a good screening tool for the identification of binge eating problems in clinical populations seeking treatment for binge eating and obesity, and can be used for research purposes as well as for initial clinical assessment.

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