

Cross-cultural adaptation of the *Fat Talk Questionnaire* for Brazilian Portuguese language

Adaptação transcultural do Fat Talk Questionnaire para o Português do Brasil

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ABSTRACT: *Objective:* To perform the cross-cultural adaptation of the Fat Talk Questionnaire into Brazilian Portuguese with focus on adolescent girls. *Methods:* The steps taken in this research were: conceptual and item equivalence, semantics, operational. The conceptual and item equivalence was performed by researchers in the field of Nutrition and body image; semantics involved translators fluent in English and Portuguese (n=3) and experts (n=19) in body image and eating behavior. Step 3 included 32 female adolescents (15 and 18 years), who answered the translated and adapted version to assess comprehension by the target audience. *Results:* Of the 14 items, six were considered adequate by the experts and 3 items required minimal language adjustments. Five items needed broader changes for cultural and idiomatic adaptation. The back-translation was approved by the original authors. The average response time by the adolescents was 3.5 minutes, with no queries. *Conclusion:* The scale was translated and adapted to Brazilian Portuguese aimed at female adolescents, showing satisfactory results in the translation process, conceptual, semantic and operational equivalence. Analyses of external validity, measurement equivalence and reproducibility were also required.

Keywords: Surveys and questionnaires. Adolescent behavior. Body image. Cross-cultural comparison.

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RESUMO: *Objetivo:* Realizar a adaptação transcultural do *Fat Talk Questionnaire* para o português do Brasil com foco no grupo de meninas adolescentes. *Métodos:* O trabalho seguiu as etapas de equivalência conceitual e de itens, semântica e operacional. A avaliação conceitual e de itens foi realizada por pesquisadores da área de nutrição e imagem corporal; a semântica envolveu tradutores fluentes em inglês e português (n=3) e *experts* (n = 19) em imagem corporal e comportamento alimentar. A terceira etapa contou com 32 adolescentes do sexo feminino (de 15 a 18 anos) que responderam à versão traduzida e adaptada para avaliação da compreensão pelo público-alvo. *Resultados:* Dos 14 itens do instrumento, seis foram considerados adequados pelos *experts*, três necessitaram de adequações mínimas de linguagem e cinco careciam de alterações mais amplas para adequações cultural e idiomática. A retrotradução foi aprovada pelos autores originais. O tempo médio de resposta pelas adolescentes foi de 3,5 minutos, não sendo apontadas dúvidas. *Conclusão:* A escala encontra-se traduzida e adaptada para o português para aplicação em adolescentes do sexo feminino, demonstrando resultados satisfatórios no processo de tradução e equivalências conceitual, semântica e operacional. São necessárias ainda análises de validade externa, equivalência de mensuração e reprodutibilidade.

Palavras-chave: Inquéritos e questionários. Comportamento do adolescente. Imagem corporal. Comparação transcultural.

INTRODUCTION

The term “fat talk” is used to refer to negative conversations related to the body, which frequently occur in female groups^{1,2}. This behavior involves thinking, listening and speaking negatively about one’s own body³. The term was coined in a three-year longitudinal study that followed 240 girls from elementary school and high school, aged between 12 and 18, in the western United States². Participants were interviewed about their thoughts and feelings on their bodies, and complaints and criticisms about the appearance of their own bodies were seen in their speech².

After this pioneering study, researchers developed measures to assess fat talk²⁻⁵, such as the Fat Talk Questionnaire (FTQ)², the Fat Talk Scale⁶, the Male Body Talk Scale³ and the Family FTQ⁴.

Fat talk behavior, usually present in the familial and friendship context⁷⁻¹³, is considered common by adolescent girls and young women (but is also present among adult and elderly women)^{2,6,14,15}.

Since the creation of the term, in 2013, studies have evaluated the impact of the fat-talk behavior and its implications, most of them^{7,9-12,16,17} using the FTQ, as it has a broader content and can be applied and adapted to different contexts, cultures and ethnicities, with wide coverage and applicability. In addition, other scales such as the Male Body Talk Scale³ and the Family FTQ⁴ were built by adapting the FTQ.

The Fat Talk Scale Items depict scenarios with a fictional character named Naomi and, in order to respond to the scale, participants must imagine themselves in the same situation

as a person of average height and weight, like the character. However, Salk and Engeln-Maddox¹³ pointed out that participation in fat talk did not vary based on body mass index, highlighting the importance of examining this type of behavior in women of all sizes. Finally, the Fat Talk Scale asks women to imagine how they would act in certain situations; however, it is possible that women's actual and imagined behavior differ. Thus, the FTQ stands out as an instrument of choice to assess this behavior in studies conducted with the female audience, mostly aged between 15 and 25 years^{2,7}.

The FTQ was developed by researchers from a university in Canada following several steps². It had a preliminary version with more items⁵, which was used together with other instruments to assess body image¹⁸, dietary restriction¹⁹, anxiety²⁰ and desire for social acceptance²¹. Its final published version² has 14 questions and assesses the fat talk construct in a unidimensional way, that is, items related to body parts or social comparisons comprise a single self-completed dimension, with responses in a Linkert-type scale, covering issues related to possible bodily self-criticism, phrases about feeling or noticing oneself as fat and expressed in a pejorative way².

The assessment of fat-talk behavior is important, because studies carried out so far show that engaging and being exposed to fat talk is strongly associated with body dissatisfaction and increases the idealization and internalization of unreal bodily ideals^{8,9,22}. In pursuit of this ideal, inappropriate eating behaviors may arise (such as restrictions and compensations)^{23,24}, and even mental health can be impacted, with cases of depression and self-esteem¹⁵.

In the presence of an eating disorder, fat talk has the potential to maintain symptoms and concern with weight and shape²⁵. Therefore, the focus of assessment on adolescents is justified by the high prevalence of body image disorders in this audience, especially among girls, and by self-esteem issues, which are constructs that may be related²⁶⁻²⁹.

Although research in the international literature explores the consequences of fat talk on mental health, body image and its implications on eating behavior^{8,9,15,22,24}, there is no instrument validated for the Brazilian Portuguese language or national studies on this thematic. Thus, this study aimed follow the process of cross-cultural adaptation and content validation of the FTQ so that the instrument becomes suitable and available for research with adolescent girls on the national scenario.

METHODOLOGY

The cross-cultural adaptation of the FTQ to Brazilian Portuguese was based on the systematization described by Reichenheim and Moraes³⁰, a universalist approach, whose methodology for cross-cultural adaptation and content validation of constructs is the same in different cultures³¹⁻³³.

The preliminary adaptation followed the steps of conceptual and item equivalence, semantic equivalence and operational equivalence. Conceptual and item equivalence refers to the

analysis of relevance of the construct of interest and its dimensions, as well as its applicability to the scenario and target audience that one wishes to investigate. Semantic equivalence intends to transfer the meaning of the original instrument's dimensions to the translated version and corresponds to content validity. Operational equivalence, on the other hand, refers to the assessment of the instrument's comprehension through its application, in its adapted version, to the target audience³⁰.

The first stage of conceptual and item equivalence was carried out through a literature review on fat talk assessment instruments and especially publications on the FTQ, to assess the relevance and interest of the instrument for our sociocultural context and target population of female teenagers. The integrative review, which resulted in six international articles^{7-12,16,17,34}, found four instruments for the assessment of fat talk (mentioned in the Introduction)²⁻⁵. The FTQ² was selected because of its careful development, which followed several steps until the final 14-item version, with a Cronbach's Alpha of 0.96³⁵.

The author of the original questionnaire was contacted by email to authorize its cross-cultural adaptation to Brazilian Portuguese.

In the second stage (semantic equivalence), two translators fluent in English/Portuguese performed the translation of the original questionnaire from English into Brazilian Portuguese; they were unaware of the topic addressed and lay in the area studied. The translation was made independently, along with reports containing the words and terms with which the translators had difficulty and uncertainty. The two translated versions were then compared and discussed by the authors of this work to produce a synthesis version.

The synthesis version was then sent out, with an online invitation letter, using Microsoft Forms, to a committee of experts ($n = 19$) made out of professionals and researchers in the field of body image and eating behavior (nutritionists, psychologists and physical educators). After giving their consent, they received the questionnaire to assess understanding, queries and suggestions, judging the criteria of semantic (the meaning of words in relation to vocabulary and grammar), idiomatic (equivalence of the meaning of expressions), cultural (adequacy of the context in the culture of the target audience) and conceptual equivalence (same concept of the original instrument), using a score of -1 (inappropriate, requires reformulation), 0 (adequate) and 1 (extremely adequate), as per Beaton³³ guidelines.

The specialists were also asked to assess the clarity and degree of understanding of each question and the instrument as a whole by completing a scoring scale, attributing the value of -1 when there was no understanding of the question, requiring its reformulation, 0 (adequate) and 1 (extremely adequate), and suggesting changes with justifications, if applicable.

The semantic equivalence also involved sending the version, after expert review, to another translator fluent in English/Portuguese who did not participate in the previous steps and was not aware of the topic of the questionnaire for back-translation, being therefore a layman in the area.

Back-translation consists of checking validity to ensure that the synthesis version reflects the same content as the original⁵. The back-translated version was sent to the authors of the original scale so they could check that the instrument kept its original meaning.

In the third step (operational equivalence), an assessment of the instrument's comprehension, filling time and presentation was shown to the target population. Specifically, 32 female adolescents, aged between 15 and 18 years, enrolled in high school at a private educational institution in the city of São Paulo, responded to the online instrument. Adolescents who had the consent of their parents or guardians and agreed to participate in the study were considered eligible. They received an online form which contained detailed instructions on completing the final version of the adapted and translated questionnaire, followed by a question where they could state possible doubts and suggestions about the instrument, in order to assess its comprehension.

Although most studies that used this scale were conducted with young women, aged between 15 and 25 years, in the present investigation, we chose to apply this instrument to adolescents aged 15 to 18 years. The justification is based on the definition of adolescence by the World Health Organization (WHO), according to which it is comprised of individuals aged between 10 and 19 years old³⁶. We restricted the age range from 15 to 18 years old to obtain a more homogeneous group of high school students.

Descriptive analyses were performed to characterize the study population with socio-demographic data such as age, body mass index, family income and paternal education. Central and dispersion measures (mean, standard deviation, minimum and maximum values and frequency %) were obtained using the Statistica 6.0 software.

This study was submitted to and approved by the Research Ethics Committee, according to the norms of Resolution n° 466/2012 by the National Health Council of the Ministry of Health for research in human beings.

RESULTS

As for conceptual and item equivalence, in the integrative literature review, four instruments assessing fat talk were found: Fat Talk Scale⁵, FTQ², Male Body Talk Scale³ and Family FTQ⁴.

The authors claim that the FTQ has broad item content, addressing behaviors that can occur in different situations, contexts or settings and referring to various parts of the body. The items avoid allusions to specific situations or language and were developed and validated using ethnically diverse samples. This type of coverage gives the FTQ a "generalizing" character, being adaptable to a diversity of situations and to the cultural diversity of respondents. However, it is important to note that fat talk itself may be culture-specific and manifest differently or not according to cultural/ethnic groups. Therefore, the FTQ will require validation by additional groups that differ in terms of culture, ethnicity and age.

It is also noteworthy that the Male Body Talk Scale³ and the Family FTQ⁴ were developed based on FTQ, pointing out a reference for their construction. Fat Talk Scale Items describes scenarios in which a character named Naomi is talking to a friend, using expressions of body deprecation. To respond to the scale, the participant must imagine themselves in the same situation as Naomi. One of the limitations of this scale is that colloquial phrasing and wording may not be understood by individuals from non-Western cultures, whose native language is not English or who are not highly educated².

As most instruments assess adolescents and young women, it justifies the relevance and pertinence of the domains of the FTQ scale to be used with Brazilian adolescents.

With the conclusion of relevance of the instrument, the translation was carried out independently, accompanied by reports containing the words that raised any difficulties or uncertainty to translators. The two translated versions were compared and discussed by the authors to produce a synthesis version (V1), which presented better conceptual equivalence and suitability for the target audience (Supplementary Material 1).

The experts evaluated this synthesis version for semantic-idiomatic, cultural and conceptual equivalence, using a score of -1 (inadequate, requires reformulation), 0 (adequate) and 1 (very adequate), according to Beaton³³ guidelines. They also assessed the level of clarity and understanding of each question and of the instrument as a whole. The answers are listed in Table 1.

For items 5, 6, 9, 12, 13 and 14 (n = 6), there was no inadequate response in the experts' assessment (Table 1). However, for the general text of the items, which used the expression "when I'm with close friends", the suggestion was to omit the word "close", being discussed with the experts, which does not seem to add value to the semantic and conceptual equivalence or improve cultural and idiomatic equivalence. Thus, these six items were changed without the term "close". In item 13, the use of the words equivalent to "loathsome/gross" was considered more appropriate to reflect "disgusting", to broaden its understanding (Supplementary Material 1).

Although questions 1, 2 and 4 received "inadequate" rating by experts (Table 1), it essentially pointed to the issue of using the term "neighbors", and were also only reformulated regarding this exclusion. In item 2, the equivalent to "having" was used to replace the idea of "possessing" (Supplementary Material 1).

Items 3, 7, 8, 10 and 11 received more ratings of "inadequate" (Table 1) and suggestions for revision, namely: for item 3, the expression relating to "famous thin models" (thin models in magazines) was not considered a good option for comparison, being discussed with the experts (in a new exchange of forms) and the use of "thin women in the media" was agreed upon. For item 7, following the experts' suggestion, the expression relating to "fatty foods" was changed to the idea of "fattening foods" (from the original "eating fattening foods"), as to adapt it to the culture of the target language population (Brazilian adolescents). For item 8, the experts suggested to adjust the verb tense of the phrase "I'm getting fatter" for "I got fatter". For item 10, in order to ensure adequate semantic equivalence and

Table 1. Frequency of agreement in the expert committee assessment, according to conceptual, cultural, idiomatic and semantic equivalence.

ITEM	Conceptual equivalence n (%)			Cultural equivalence n (%)			Idiomatic equivalence n (%)			Semantic equivalence n (%)		
	Inadequate	Adequate	Very adequate	Inadequate	Adequate	Very adequate	Inadequate	Adequate	Very adequate	Inadequate	Adequate	Very adequate
Sentence	0	4 (21)	15 (79)	0	6 (31,6)	13 (68)	1 (5)	8 (42)	10 (52)	0	7 (36)	12 (63)
1	0	6 (32)	13 (68)	1 (5)	3 (16)	15 (79)	0	5 (31)	14 (73)	0	3 (16)	16 (84)
2	2 (10)	4 (21)	13 (68)	1 (5)	6 (32)	12 (63)	2 (10)	8 (42)	9 (47)	2 (10)	6 (32)	11 (58)
3	1 (5)	4 (21)	14 (74)	1 (5)	3 (16)	15 (79)	1 (5)	7 (37)	11 (58)	2 (10)	5 (31)	12 (63)
4	0	4 (21)	15 (79)	0	5 (31)	14 (74)	1 (5)	3 (16)	15 (79)	0	4 (21)	15 (79)
5	0	4 (21)	15 (79)	0	6 (32)	13 (68)	0	8 (42)	11 (58)	0	5 (31)	14 (74)
6	0	2 (10)	17 (89)	0	2 (10)	17 (89)	0	3 (16)	16 (84)	0	12 (63)	16 (84)
7	2 (10)	7 (37)	10 (52)	2 (10)	6 (32)	11 (58)	3 (16)	7 (37)	9 (47)	2 (10)	8 (42)	9 (47)
8	0	6 (32)	13 (68)	0	5 (31)	14 (74)	2 (10)	6 (32)	11 (58)	2 (10)	5 (31)	12 (63)
9	0	2 (10)	17 (89)	0	2 (10)	17 (89)	0	3 (16)	16 (84)	0	2 (10)	17 (89)
10	0	3 (16)	16 (84)	0	3 (16)	16 (84)	0	5 (31)	14 (74)	1 (5)	4 (21)	14 (73)
11	1 (5)	5 (31)	13 (68)	0	4 (21)	15 (79)	0	7 (37)	12 (63)	1 (5)	7 (37)	11 (58)
12	0	3 (16)	16 (84)	0	3 (16)	16 (84)	0	3 (16)	16 (84)	0	3 (16)	16 (84)
13	0	3 (16)	16 (84)	0	7 (37)	12 (63)	0	5 (31)	14 (74)	0	3 (16)	15 (79)
14	0	3 (16)	16 (84)	0	7 (37)	12 (63)	0	5 (31)	14 (74)	0	2 (10)	17 (89)

understanding of the content expressed in the original scale, the expression “eat so much” was changed to convey the idea of “eat a lot”. In item 11, the change suggested and accepted was regarding the expression “I compare my body with that of friends” to “body compared to that of my friends”. As to the whole sentence, in addition to excluding the word “close”, it was decided to add the verb reflecting “have” to the phrase addressing “weight similar to yours” (Supplementary Material 1).

The back-translated version after changes was sent to the authors and was approved, with few comments relating to agreement with the change made in item 3: “Item 3 refers to women ‘in the media’, when the original refers to thin models in specific magazines. Arguably, using ‘media women’ is more inclusive and a better choice anyway.” For item 5, the back-translation had the term “comment”, being suggesting the use of “complaint”, but we were already adopting the term “complaint” in the Portuguese version.

For the operational equivalence stage, the 32 adolescents had a mean age of 16.48 (SD = 0.89) years, with a mean body mass index of 21.6 kg/m² (SD = 3.02) and 42% of them had a family income of more than R\$ 10,450.00 (ten minimum wages); 50% of their fathers had complete higher education. Through an online form, in addition to sociodemographic data, the adolescents filled in the final version of the adapted and translated questionnaire.

A resource of the forms was used to control the filling time of each participant, whose average for the full questionnaire was 3.5 minutes. No queries and suggestions regarding the content were raised by the participants, who used the final version in this evaluation (Supplementary Material 1).

DISCUSSION

To perform the translation and cultural adaptation, one must rigorously follow protocols that ensure consistency with the original instrument^{2,5,32}. This study followed the processes recommended by Reichenheim and Moraes³⁰ and Beaton et al.³³ for cross-cultural adaptation and presents as a result an instrument with conceptual, semantic and operational equivalences adapted for use with the female adolescent population in Brazilian Portuguese.

The FTQ is simple, straightforward and easy to administer and reply to. A previous study showed its reliability and validity²; so far, it had only been used in the English language^{16,34}. Even with relatively broad content, that is, behaviors can occur in different situations and/or contexts, it is noteworthy that the fat talk phenomenon can be specific to cultures and manifest differently in other cultural/ethnic settings. Thus, the need for adaptation and content validation in additional groups that are different in terms of culture, ethnicity and age from the original is highlighted³¹.

The present work partially fulfills this need, making the FTQ available for application with female adolescents in Brazil. The audience who participated in the operation equivalence

stage did not report any queries or difficulties and, in addition to the absence of questionings, the average time for completing the questionnaire by the adolescents shows the ease and practicality of the instrument. The same instrument in English, in its original version, was used with adolescents and young adults. As recommended in the validation of psychometric instruments, any use by other audience must include validity and reliability indices, which is indicated in eventual use in adults.

The final version has items with language that is appropriate for the reality of Brazilian adolescents, since the adaptation followed the recommendations of Beaton et al.³³, who recommend that the items should not only be linguistically well translated, but also culturally adapted to maintain the conceptual validity of the content in different cultures. We believe that this is especially the case of replacing “close friends” with only “friends”, adapting to the communication standards of the target audience, and the use of “thin women in the media” for comparison purposes, and not just “models”, which is more appropriate to the current reality of social media (much more than magazines and TV, with models), since the impact of images in these media on body image is well known³⁷. Thus, specific expressions were used to adapt them to the culture of the target language population³³.

The target audience, made up of adolescents, is in a transition phase, a moment in which social, cultural, psychic and psychological changes occur, as well as physical transformation. During this period, there is more pressure and internalization of body “ideals” and thin bodies by girls—influenced by the media, social networks, friends and parents—, which makes them susceptible to social comparison, fat talk, weight-related provocations and bullying, body dissatisfaction and unhealthy behaviors to control and lose weight^{22,38-41}. Thus, assessing fat talk behavior can help to identify and perhaps prevent these and other problems related to body image, which are prevalent in adolescents and have worrying physical and psychosocial consequences^{40,41}.

A possible limitation of the present study is the convenience sample, which was used due to the easy accessibility of the online format in the context of the Covid-19 pandemic. However, for the operational equivalence stage, there is no requirement for such a broad and heterogeneous audience, as intended in the sample for the assessment of psychometric properties⁴². The use of a questionnaire may be subject to biases of filling out online or in person, due to the desire for social acceptance—the volunteer’s propensity to answer what they consider most accepted by researchers—which are minimized by the use of psychometric instruments. The use of forms, with detailed instructions on completing the instrument and availability of the researcher over telephone, minimized possible queries/doubts.

In view of the possible deleterious impacts of engaging in fat talk on mental and physical health, combined with the existing national gap in this topic, this work has the merit of carrying out the cross-cultural adaptation of the FTQ into Brazilian Portuguese, allowing for future research on psychometric conditions. The need for analyses of external validity, measurement equivalence and later reproducibility is highlighted.

FTQ into Brazilian Portuguese had its cross-cultural adaptation—translation and content validation—carried out adequately and with satisfactory results, enabling future evaluation of psychometric properties, which include a possible confirmatory/exploratory factor analysis and internal consistency, in addition to convergent validity with other instruments that assess interconnected constructs, such as dissatisfaction with body image and self-esteem.

External validity refers to the possibility of extending the results of a particular sample; thus, applying the instrument to a larger sample will allow an analysis of psychometric properties and a broader understanding of the scale, as it is suitable for adolescent girls.

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