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ORIGINAL STUDY

Cross-cultural adaptation and psychometric evaluation of the Brazilian Portuguese version of the Vulvovaginal Symptoms Questionnaire

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Abstract

Objective: The aims of this study were to perform a cross-cultural adaptation of the Vulvovaginal Symptoms Questionnaire (VSQ) into Brazilian Portuguese (VSQ-Br) and evaluate its measurement properties (structural validity, construct validity, internal consistency, and reliability).

Methods: Cross-cultural adaptation was conducted through the translation, synthesis, and back-translation of the VSQ-Br. Subsequently, 314 women completed the Pelvic Floor Impact Questionnaire, Pelvic Floor Disorders Inventory, Medical Outcomes Study 36-Item Short-Form Health Survey, and VSQ-Br. Seven to 10 days later, participants completed the VSQ-Br for the second time. Data were submitted for confirmatory factor analysis. Cronbach α was used to verify internal consistency, and construct validity was assessed using Pearson correlation coefficient (*r*). Reliability was calculated using the intraclass correlation coefficient.

Results: Confirmatory factor analysis showed that the questions were grouped into four domains (symptoms, emotions, life impact, and sexual impact). The model showed good fit (>0.95). The Cronbach α in this study was 0.85, reflecting adequate internal consistency. Adequate reliability was confirmed, with an intraclass correlation coefficient total score of 0.80. The VSQ-Br had a weak correlation with the pelvic domain of the Pelvic Floor Disorders Inventory, the pelvic organ prolapse domain of the Pelvic Floor Impact Questionnaire, and pain, vitality, and the social aspect domains of the Medical Outcomes Study 36-Item Short-Form Health Survey.

Conclusions: The VSQ-Br was validated and had acceptable measurement properties for assessing vulvovaginal symptoms in Brazilian women.

Keywords: Cross-cultural adaptation – Pelvic floor disorders – Psychometric evaluation – Women's health.

Vulvovaginal symptoms are common and challenging problems, and they can be caused by infections, hormonal changes (such as reduced estrogen), systemic dermatoses, and neuropathic pain syndromes. Another cause could be contact dermatitis, which often occurs because of personal practices, lack of ventilation under clothing, and region humidity and is prone to trauma from itching and burning.[1] The physical signs include dryness, burning, irritation, lack of lubrication, discomfort, and pain.[2] These symptoms can cause suffering and may affect one's physical and emotional well-being, contribute to a decrease in quality of life in women, and negatively influence sexual function,[3] sleep, mental health, and self-esteem.[1]

Assessment of vulvovaginal symptoms is sometimes neglected by health professionals, and many do not ask about vaginal symptoms and do not find them relevant enough to be part of a patient's assessment.[4] Therefore, a tool to identify vulvovaginal symptoms would help both health care professionals and women to identify and report their symptoms. It is important to emphasize that many women often know less about their vulva or vagina than about any other part of their body, and sometimes they believe that vulva or vaginal symptoms are related to aging or lack of hygiene.[3]

The Vulvovaginal Symptoms Questionnaire (VSQ) was developed to determine the impact of vulvovaginal symptoms on women's health (emotions, life, and sexual impact).[2] This instrument presented acceptable measurement properties (reliability and internal consistency) in a study conducted with postmenopausal women from the United States.[2] However, there are currently

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no questionnaires to assess vulvovaginal symptoms in Brazilian women. By filling out questionnaires to evaluate certain conditions, health professionals can objectively analyze personal information. Another important advantage may be related to the self-completion of the instrument by the patient or a health professional in research and/or clinical practice.

The lack of Brazilian tools to assess vaginal symptoms is a limitation and barrier for health professionals, who may not measure the presence, quality-of-life impact, and prevalence of these symptoms during gynecological appointments. Therefore, the present study aimed to perform a cross-cultural validation of the VSQ in Brazilian Portuguese (VSQ-Br) and evaluate the questionnaire's measurement properties.

METHODS

This is a study of the translation, adaptation, and cross-cultural validation of the VSQ to Brazilian Portuguese (VSQ-Br). This study was approved by the ethics committee of the Universidade Federal de São Carlos (CAAE: 50779815.8.0000.5504). All participants signed an informed consent form after receiving information about the research to be conducted.

This study was conducted according to COSMIN (Consensus-based Standards for the Selection of Health Measurement Instruments).[5] The authors of the original publication consented to the use of the instrument, its translation, and validation in Brazilian Portuguese. Furthermore, the measurement properties were assessed following the recommendations provided by previous guidelines commonly used in research practice.[6]

The participants included in this study were women older than 18 years who answered yes to one of the four following questions: (1) Do you lose urine when you don't want to (even in small amounts)?[7] (2) Do you feel pressure or heaviness in your vagina or do you feel that you have a lump or something sticking out of your vagina?[8] (3) Have you ever lost stool or unintentionally soiled your panties? (4) Do you have constipation or does it take a lot of effort to perform bowel movements?[9]

At the time of assessment, women with lower urinary tract infections, interstitial cystitis, urogenital cancer, or neurological diseases and those who had received treatment for pelvic floor muscle dysfunction in the last 3 months were not eligible to participate in the study.

Cross-cultural adaptation

The cross-cultural adaptation process consisted of five steps[6] and are described as follows: Step 1: translation of the VSQ questionnaire from English to Brazilian Portuguese, carried out by two translators fluent in both languages, with Brazilian Portuguese as their native tongue (one layman [T1] and a construct specialist [T2]); step 2: the two Brazilian versions were compared and synthesized, resulting in a document prepared

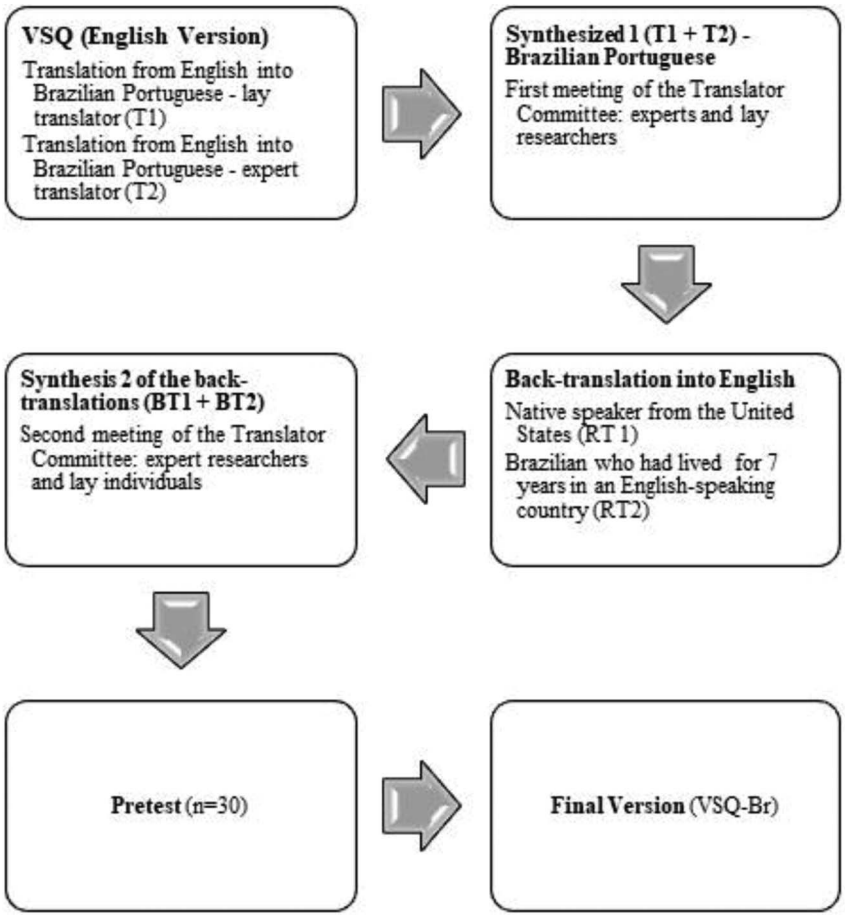

FIG. 1. Research phases of the cross-cultural adaptation of the Vulvovaginal Symptoms Questionnaire–Brazilian Portuguese.

by a committee of translators composed of three specialist researchers and laypeople; step 3: back-translation of the Brazilian Portuguese document into English was performed by two translators with English as their native language (RT1) and a Brazilian who has lived in an English-speaking country for 7 years (RT2); step 4: a second committee meeting was held to create the prefinal version (synthesis of the two retroversions); step 5: a pretest was conducted by applying the prefinal version of the questionnaire to a representative sample of the target audience (30 women). In this step, the acceptability and comprehensibility of the instrument were evaluated using a semistructured questionnaire regarding the understanding, instructions, and layout of the VSQ-Br. (Fig. 1).

Procedure

The study participants completed the validated Brazilian Portuguese versions of the following questionnaires: Pelvic Floor Impact Questionnaire (PFIQ-7),[10] Pelvic Floor Disorders Inventory (PFDI-20),[10] Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36),[11] and VSQ-Br. In addition, the participants were invited to complete the VSQ-Br again, 7 to 10 days after the first assessment.

Instruments

PFDI-20 and PFIQ-7

The PFDI-20 and PFIQ-7 were validated in Brazilian Portuguese and were used to assess the severity and impact of symptoms caused by pelvic floor disorders, respectively. Both questionnaires combined symptoms related to pelvic organ prolapse, urinary incontinence, and fecal incontinence.[12] Each of the three scales of the PFDI-20 and PFIQ-7 are scored from 0 to 100, and the sum of the scores of these scales results in the final score of the instrument. Therefore, the higher the final value, the greater the impact perceived by the participant.[13]

The PFIQ-7 comprises seven questions in three domains (urinary, colorectal-anal, and pelvic organ prolapse). The PFDI-20 consists of 20 questions divided into three domains (bladder, bowel, and pelvis). Both instruments presented adequate internal consistency and test-retest reliability in the Brazilian Portuguese version. The PFDI-20 and PFIQ-7 responsiveness after surgical treatment[10] and physical therapy treatment[14] were considered as moderate.[14]

Medical Outcomes Study 36-Item Short-Form Health Survey

It is a multidimensional instrument consisting of 36 questions divided into eight domains (functional capacity, physical aspects, pain, general health status, vitality, social aspects, emotional aspects, and mental health). The final score ranges from 0 to 100, with 0 being the worst and 100 being the best general state of health. It has a validated Brazilian Portuguese version,[11] and it is used to assess quality of life in general.

Vulvovaginal Symptoms Questionnaire

The VSQ is a self-administered questionnaire with 21 items that includes four domains (symptoms, emotions, life impact, and sexual impact).[2]

The first seven VSQ questions comprise symptoms and include questions about itchiness, burning, pain, irritation, dryness, discharge, and odor in the last week. Women who answered yes to any of the first seven questions were considered to have vulvovaginal symptoms. Women who answered no to all of the first seven questions were deemed to have no vulvovaginal symptoms. Two VSQ domains refer to the emotional impact (questions 8-11) and lifestyle effects (questions 12-15) of vulvovaginal symptoms in the last week.[2]

Through questions 16 and 21, it was possible to assess the impact of vulvovaginal symptoms in the sexual domain. However, question 17, which concerns reporting one's current sexual activity with a partner, was not counted as part of the total score. In women who did not report current sexual activity (no to question 17), the final four questions related to the sexual impact of vulvar symptoms were omitted. Women who answer yes to question 17 were instructed to answer the following questions (questions 18 to 21).[2]

The final score for each domain ranging from 0 to 20 was obtained through the sum of items indicated as yes (except question 17). A higher score indicated more discomfort related to vulvovaginal symptoms.[2]

Statistical analysis and measurement properties

Initially, descriptive statistics were performed to characterize the study participants, and the data are presented as mean ± SD or percentages (%).

TABLE 1. *Characterization of the participants (n = 314)*

Variables	
Age, mean ± SD, y	49.46 ± 16.5
Age category, n (%)	
≤35 y	75 (24)
36-60 y	147 (47)
≥60 y	92 (29)
Body mass index, mean ± SD, kg/m^2	26.98 ± 16.0
Marital status, n (%)	
Married	159 (51)
Unmarried	182 (49)
Educational level, n (%)	
None	3 (1)
Primary education	48 (15)
Secondary education	79 (25)
Tertiary education	184 (59)
Pelvic floor dysfunction, n (%)	
Urinary incontinence	221 (70)
Pelvic organ prolapse	58 (18)
Fecal incontinence	73 (23)
Intestinal constipation	111 (35)
Other diseases, n (%)	
Diabetes mellitus	31 (10)
Systemic arterial hypertension	80 (25)
Heart disease	21 (7)
Gynecological surgeries, n (%)	102 (32)
Hormone therapy, n (%)	25 (8)
Menopause, n (%)	
Premenopause	199 (63)
Postmenopause	115 (37)
Sexually active with a partner, n (%)	185(59)
Obstetric history, n (%)	
Nulliparous	89 (28)
One pregnancy	49 (16)
Two or more pregnancies	176 (56)
VSQ-Br domain scores, mean ± SD	
Diagnostic score	2.1 ± 2.1
Total score	4.3 ± 4.6
Symptoms	2.1 ± 2.1
Emotions	0.9 ± 1.3
Life impact	0.4 ± 0.9

VSQ-Br, Vulvovaginal Symptoms Questionnaire–Brazilian Portuguese.

Structural validity and confirmatory analysis

Data were subjected to confirmatory factor analysis using IBM SPSS Statistics for Windows, version 22 (IBM Corp., Armonk, NY). This is an analysis guided by hypotheses to evaluate the relationships between measures or indicators and latent variables or factors.[15]

The maximum likelihood was used to assess the fit of the model. In addition, the quality of the fit of the factor structure was evaluated using several descriptive criteria: the Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), root mean square error of approximation, Expected Cross-validation Index, and Consistent Akaike Information Criterion.[16]

Root mean square error of approximation describes the general fit of the model, quantifying the divergence between the data and the proposed model, with values less than 0.08 indicating an adequate fit.[16] The CFI, GFI, and TLI are some of the most used models for comparing measures and are relatively independent of the sample size, with values greater than 0.90 indicating an adequate fit.[16] The GFI is a goodness-of-fit measure that adjusts the model's χ^2 for model complexity and sample size,[16] with a low measurement indicating a better fit. The magnitudes of the factor loading in the analysis of the items' contributions to the model were considered for each variable, with those with a factor loading of 0.3 or greater[15] considered as representative of the construct measured in each domain.

Internal consistency and construct validity

Cronbach α was used to verify internal consistency by measuring the degree of interrelationship between the instrument items and reflecting their strength (homogeneity).[17] Appropriate values were between 0.70 and 0.95.[18]

Construct validity analysis was performed using Pearson correlation coefficient (r), which verified the correlation between the question and domains and the scores of the VSQ-Br with the other instruments used in this study. The correlation was considered either poor ($r < 0.29$), moderate ($0.3 < r > 0.69$), or strong ($r > 0.7$).[19]

As previously reported, there are currently no other Portuguese instruments with similar constructs to assess vulvovaginal symptoms. Thus, the VSQ-Br construct validity hypotheses tested in this study were based on dissimilarity (discriminant validity).[20] According to COSMIN,[5] acceptable correlations with instruments measuring unrelated constructs should be <0.30. Therefore, the hypotheses tested in these analyses considered a weak correlation between instruments, including the following:

(1) The presence of four domains (symptoms, emotions, life impact, and sexual impact), with a strong correlation among questions 1 to 7 (symptom domain), questions 8 to 11 (emotion domain), questions 12 to 15 (life impact domain), and questions 16 to 21 (sexual impact domain, except question 17)
(2) Weak positive correlations between the VSQ-Br total score and the scores in the pelvis domain of the PFDI-20 and pelvic organ prolapse domain of the PFIQ-7
(3) Weak negative correlations between the total VSQ-Br score and the score of the pain, vitality, and social aspect domains of the SF-36
(4) Weak positive correlations between the VSQ-Br symptom domain score and the pelvis domain of the PFDI-20 and pelvic organ prolapse domain of the PFIQ-7
(5) Weak negative correlations between the VSQ-Br symptom domain score and the pain, vitality, and social aspect domains scores of the SF-36
(6) Moderate negative correlations between the VSQ-Br emotion score and the SF-36 emotional domain score

Reliability (test-retest)

This study calculated reliability based on the final and domain scores obtained on the first (first day) and second assessments (7-10 days after). It was calculated using the intraclass correlation coefficient (ICC) (two-way random-effects model

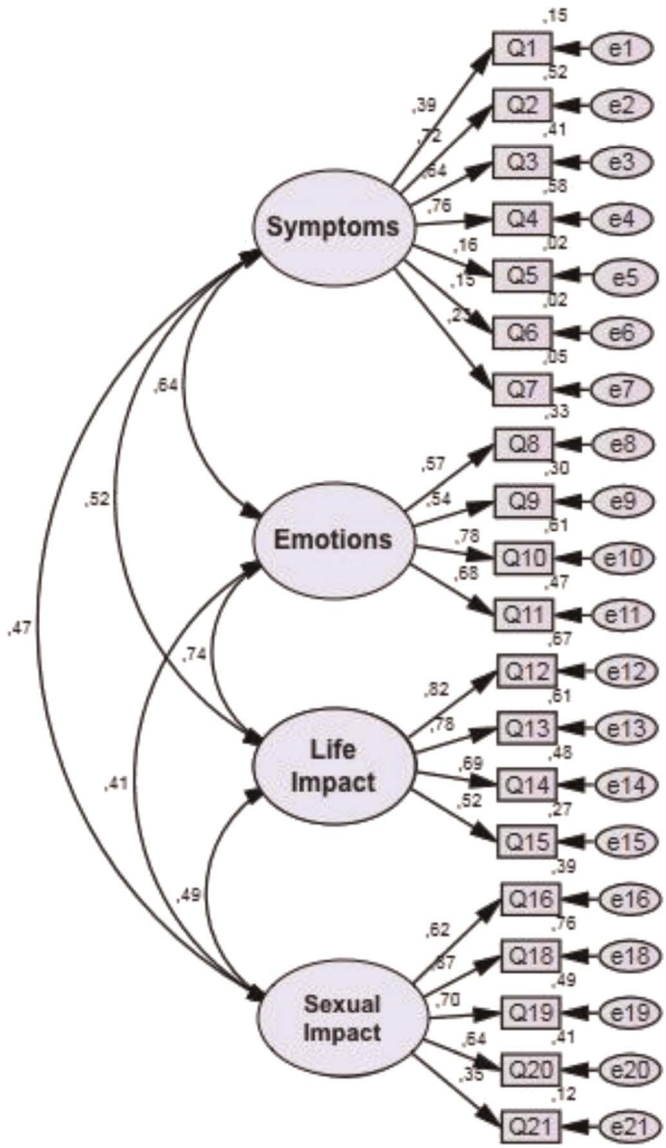

FIG. 2. Diagram of confirmatory factor analysis (AMOS software) of the Vulvovaginal Symptoms Questionnaire–Brazilian Portuguese. Q1… Q21 = questions; e = errors.

TABLE 2. *Confirmatory factor analysis indexes obtained for the VSQ-Br in each of the domains (n = 314)*

	Symptoms	Emotions	Life impact	Sexual impact
GFI	0.977	0.998	0.995	0.996
CFI	0.967	1.000	0.999	1.000
TLI	0.937	1.021	0.998	1.011
RMSEA	0.57	0.000	0.022	0.000
ECVI	0.245	0.078	0.085	0.121
CAIC	12.009	51.754	53.205	78.420

CAIC, Consistent Akaike Information Criterion; CFI, Comparative Fit Index; ECVI, Expected Cross-validation Index; GFI, Goodness of Fit Index; TLI, Tucker-Lewis Index; RMSEA, root mean square error of approximation; VSQ-Br, Vulvovaginal Symptoms Questionnaire–Brazilian Portuguese.

[ICC2.1]) and 95% confidence interval: weak (ICC < 0.4), moderate (0.40 < ICC > 0.7), and strong (ICC > 0.7).[17]

RESULTS

The questionnaire was administered to 30 participants during the pretest phase, and no interpretation problems were identified. After this first stage, 314 participants answered the questionnaire once, and of these, only 240 agreed to answer it a second time and were included in the test-retest analysis. Therefore, all other analyses were performed with the total number of participants (n = 314). Participants' characteristics are presented in Table 1.

The confirmatory factor analysis showed through factor loading values greater than 0.3 (except for questions 5-7) that the questions were grouped into four domains, with questions 1 to 7 associated with the symptom's domain, questions 8 to 11 associated with the emotion's domain, questions 12 to 15 connected with the impact domain, and questions 16 and 18 to 21 with the sexual impact domain. The results are shown in Figure 2.

Data were analyzed separately, considering each domain as an independent scale. The model showed a good fit, with high CFI, TLI, and incremental fit index values (>0.9) and low Consistent Akaike Information Criterion, Expected Cross-validation Index, and root mean square error of approximation values (Table 2).

The Cronbach α in this study was 0.85, reflecting adequate internal consistency. Pearson values indicated a strong correlation ($r > 0.70$) among questions 1 to 7 (symptom domain), 8 to 11 (emotions domain), 12 to 15 (impact domain), and 16 and 18 to 21 (sexual impact domain).

TABLE 3. *Values of the Pearson correlation between the scores of the domains of the VSQ-Br and PFDI-20, PFIQ-7, and SF-36*

VSQ-Br	POP PFDI-20	Pelvis PFIQ-7	SF-36 pain	SF-36 vitality	SF-36 social aspect	SF-36 emotional
Total score	0.27	0.26	−0.25	−0.24	−0.27	
Symptom	0.24	0.24	−0.29	−0.25	−0.27	
Emotion	0.22	0.26	−0.23	−0.24	−0.28	−0.30
Life impact	0.17	0.21	−0.19		−0.21	
Sexual impact	0.20	0.13				

PFDI-20, Pelvic Floor Distress Inventory; PFIQ-7, Pelvic Floor Impact Questionnaire; POP, pelvic organ prolapse; SF-36, Medical Outcomes Study 36-Item Short-Form Health Survey; VSQ, Vulvovaginal Symptoms Questionnaire.

In Table 3, we present the correlation values between the VSQ-Br and the domains of the PFDI-20, PFIQ-7, and SF-36 instruments. According to our hypotheses, weak correlations were observed in all cases ($P < 0.05$). Adequate reliability was confirmed with an ICC greater than 0.70 in the VSQ-Br total score and domains (Table 4). Figure 3 presents the final version of the VSQ-Br.

DISCUSSION

This study aimed to carry out the cross-cultural adaptation and evaluation of the measurement properties of the VSQ in Brazilian Portuguese according to the recommendations from previous guidelines already described in the literature.[21] Furthermore, to the best of our knowledge, this is the first study to report a patient-reported outcome measure questionnaire available in Brazilian Portuguese to estimate the occurrence and impact of vulvovaginal symptoms in Brazilian women.

Confirmatory factor analysis confirmed the presence of four domains in the VSQ-Br, which shows the degree of which the instrument's scores reflect the construct they assess.[22] These results indicated that all items (except three questions in the symptoms domain: Q5, Q6, and Q7) had factor loading values ≥0.3, which demonstrates a correlation between the issues and the domains they belong to.[15] The questions that presented a factor loading of less than 0.3 would not have a relationship with the domain in which they were inserted, which would indicate that the questionnaire should be presented without them. One possible explanation for this result is that most of the women included in the present study had a lower prevalence of vaginal dryness. Vulvovaginal symptoms differ according to age, with irritation, dryness, and tenderness being the most likely symptom to appear after menopause.[23] In addition, it is more common for women to report vaginal dryness during intercourse and sexual activities[23]; however, in this study, a significant proportion of participants were not sexually active (41%).

Another possible factor related to these results may be the shame experienced by women reporting vulvovaginal symptoms. Social and cultural perceptions related to a disease can impact how it is perceived, especially in the case of stigmatized diseases related to female sexuality, promiscuity, and sexually transmitted infections.[24] Therefore, bad vaginal smells and abnormal discharge are perceived negatively and are often associated with poor hygiene or even sexual promiscuity.[25]

In addition, as described previously, women who received treatment for pelvic floor muscle dysfunction in the past 3 months, women with lower urinary tract infections (treatment

TABLE 4. *Reliability of the VSQ-Br According to the ICC analysis*

VSQ-Br	ICC	95% CI
Total score	0.83	0.78-0.87
Symptom	0.81	0.76-0.85
Emotion	0.81	0.75-0.85
Life impact	0.71	0.62-0.77
Sexual impact	0.74	0.67-0.80

CI, confidence interval 95%; ICC, intraclass correlation coefficient; VSQ-Br, Vulvovaginal Symptoms Questionnaire–Brazilian Portuguese.

Questionário dos Sintomas Vulvovaginais

As questões a seguir foram desenvolvidas para avaliar a **região da camada externa da genitália feminina que é chamada de vulva**. Assim como outras partes do corpo, a vulva pode ficar irritada.
Algumas mulheres sentem desconforto na região da vulva. Estes sintomas podem ser leves, mas algumas vezes podem ser desconfortáveis. As questões a seguir são sobre o que causou incômodo na vulva, durante a última semana.

1	Sua vulva coçou? _____	☐ Não	☐ Sim
2	Você sentiu ardor ou queimação na vulva? _____	☐ Não	☐ Sim
3	Sua vulva doeu? _____	☐ Não	☐ Sim
4	Sua vulva ficou irritada? _____	☐ Não	☐ Sim
5	Sua vulva ficou ressecada? _____	☐ Não	☐ Sim
6	Você teve corrimento ou secreção da vulva ou vagina? _____	☐ Não	☐ Sim
7	Você sentiu cheiro desagradável na vulva ou vagina? _____	☐ Não	☐ Sim
8	Você se preocupou com os sintomas da vulva (por exemplo : vai se espalhar, se vai piorar, manchar, etc? _____	☐ Não	☐ Sim
9	Você se sentiu incomodada com a aparência da vulva? _____	☐ Não	☐ Sim
10	Você se sentiu frustrada com os sintomas da vulva? _____	☐ Não	☐ Sim
11	Você se sentiu envergonhada com os sintomas da vulva? _____	☐ Não	☐ Sim
12	Os sintomas da vulva interferiram na sua relação com outras pessoas? ____	☐ Não	☐ Sim
13	Os sintomas da vulva interferiram na sua vontade de estar com outras pessoas? _____	☐ Não	☐ Sim
14	Os sintomas da vulva atrapalharam sua demonstração de afeto? _____	☐ Não	☐ Sim
15	Os sintomas da vulva atrapalharam a realização de atividades diárias? ____	☐ Não	☐ Sim
16	Os sintomas da vulva atrapalharam seu desejo de ter intimidade? _____	☐ Não	☐ Sim
17	Atualmente você está sexualmente ativa com um parceiro?		
	☐ Não → obrigada você terminou este questionário		
	☐ Sim → Por favor, continue a responder as próximas quatro		
18	Seu sintomas na vulva afetaram seu relacionamento sexual? _____	☐ Não	☐ Sim
19	Seu sintomas na vulva causaram dor durante a relação sexual? _____	☐ Não	☐ Sim
20	Seu sintomas na vulva causaram secura durante a relação sexual? _____	☐ Não	☐ Sim
21	Seu sintomas na vulva causaram sangramento durante a relação sexual? ___	☐ Não	☐ Sim

A pontuação final do VSQ-Br varia de 0 a 20, e deve ser calculado pela soma dos itens indicados como "Sim" (exceto questão 17). O escore indica que quanto maior a pontuação, mais desconforto relacionado aos sintomas vulvovaginais. Para o cálculo dos domínios, a soma das respostas "Sim" é realizada entre as questões correspondentes: domínio **Sintoma** (questão 1-7), **Emoção** (questão 8-11), **Impacto na vida** (12-15) e **Impacto sexual** (questão 16-21, excluindo a questão 17).

FIG. 3. Final version of Vulvovaginal Symptoms Questionnaire–Brazilian Portuguese.

of incontinence may also be an essential component of the treatment of vaginal symptoms),[25] and women with interstitial cystitis, urogenital cancer, or neurological diseases were excluded. This may have limited the number of women reporting symptoms such as discharge or unpleasant smells, which are characteristic of active infections,[26] who require immediate treatment of their vulvovaginal symptoms.

In contrast to the original instrument, the results of the present study demonstrated a fair correlation between the VSQ-Br, PFDI-20, and PFIQ-7. This result was expected, as the current study's hypothesis required a weak correlation between the questionnaires. Vulvovaginal symptoms are known to be associated with urine loss[27] and can also be considered predictors of severe urinary incontinence.[28] However, vulvovaginal symptoms and pelvic floor dysfunction are unnecessary concomitant disorders in women. For example, although it is possible that women with urinary incontinence report burning, itching, or rash, these symptoms are not necessarily present only in incontinent women. Moreover, the aging process can be associated with vulvovaginal symptoms, as lower estrogen levels can reflect vaginal atrophy and other symptoms.[25]

Regarding the correlations with the SF-36, the hypotheses related to negative correlations were also confirmed, with a weak negative correlation between the total score and diagnosis of the VSQ-Br and the scores of the pain, vitality, and social aspect domains of the SF-36. In addition, the VSQ-Br emotional score confirmed the hypothesis of a moderate negative correlation with the SF-36 emotional domain. Such results corroborate other studies that reported that vulvovaginal symptoms impact many aspects of women's lives, including their sexual, lifestyle, and emotional aspects.[29]

Discriminant validity assessment requires consideration of context, as a weak correlation between measures does not always imply that the instrument tested is not valid.[30] Instead, this means that the constructs of both instruments are unrelated. Although the questionnaires used in this study assessed symptoms in the pelvic region, they could assess different constructs. In the present study, we found that the VSQ-Br had strong reliability, greater than that found in the original study, which reported moderate reliability.[2] This result highlights that the VSQ-Br is an adequate and simple tool for assessing vulvovaginal symptoms at different time points during follow-up.

Future research should analyze the most common vulvovaginal symptoms among Brazilian women. The responsiveness of the VSQ-Br should also be investigated in different populations (eg, pregnant women or postpartum women).

CONCLUSION

The present study describes the cross-cultural adaptation and psychometric evaluation of the Brazilian Portuguese version of the VSQ-Br, which showed acceptable measurement properties (structural validity, internal consistency, reliability, and discriminant

validity). Considering these results, the VSQ-Br is a valid tool for assessing vulvovaginal symptoms and can be used in the daily practice of health care professionals in Brazil and in scientific research.

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