Avaliação Psicológica
ISSN 2175-3431 (versão on-line)

CC BY NC

Research report

Body Shape Questionnaire: Psychometric Properties and Invariance Structure in the Brazilian Context

Gislei Mocelin Polli[1], *Anahi de Almeida Viganó*, *João Paulo Araújo Lessa*
Universidade Tuiuti do Paraná, Curitiba-PR, Brasil

ABSTRACT

The Body Shape Questionnaire (BSQ) is an instrument designed to assess concerns about body shape and dissatisfaction with appearance. This study aimed to evaluate evidence of validity based on internal structure, examining measurement invariance across gender, body mass index (BMI), and weight control practices (WCP), as well as its ability to discriminate between groups. A total of 462 individuals, aged 18 to 59 years (M=32.38; SD=10.33), participated. Confirmatory factor analyses were conducted to address the study objectives. The results indicated complete invariance for gender and WCP, but not for BMI. Factorial ANOVA revealed significant mean differences in BSQ scores between gender and WCP groups. These findings suggest that the BSQ demonstrates good psychometric properties for use in research and screening contexts related to body shape concerns and body dissatisfaction, supporting its relevance as a measure for assessing potential eating disorders.

Keywords: Body Dissatisfaction; Body Mass Index; Weight Loss.

RESUMO – *Body Shape Questionnarie:* Propriedades Psicométricas e Estrutura de Invariância no Contexto Brasileiro

O *Body Shape Questionnaire* (BSQ) é um instrumento que avalia preocupações com a forma corporal e insatisfação com a aparência. Este estudo objetivou avaliar evidências de validade baseada na estrutura interna, para tanto examinou sua invariância de medida em relação ao gênero, massa corporal (IMC) e práticas de controle de peso (PCP), bem como sua capacidade discriminativa entre os grupos. Participaram 462 indivíduos, de 18 a 59 anos (M=32,38; DP=10,33). Para atingir o objetivo do estudo, foram realizadas análises fatoriais confirmatórias. Os resultados demonstraram haver invariância completa para gênero e PCP, mas não para IMC. A ANOVA fatorial mostrou diferenças de média significativas para gênero e das PCP em relação aos escores do BSQ. Estes resultados apontam que o BSQ é um instrumento com boas propriedades psicométricas para uso em contextos de pesquisa e rastreio sobre preocupações com a forma do corpo e insatisfação corporal, sendo uma medida importante para contextos de avaliação de possíveis transtornos alimentares.

Palavras-chave: Insatisfação corporal; Índice de massa corporal; Perda de peso.

RESUMEN – *Body Shape Questionnarie:* Propiedades Psicométricas y Estructura de Invarianza en el Contexto Brasileño

El *Body Shape Questionnaire* (BSQ) es un instrumento que evalúa las preocupaciones respecto a la forma corporal y la insatisfacción con la apariencia. Este estudio tuvo como objetivo evaluar evidencias de validez basadas en la estructura interna, examinando su invarianza de medición en relación con el género, el índice de masa corporal (IMC) y las prácticas de control de peso (PCP), así como su capacidad discriminativa entre grupos. Participaron 462 individuos de 18 a 59 años (M=32,38; DS=10,33). Se realizaron análisis factoriales confirmatorios para alcanzar los objetivos del estudio. Los resultados mostraron invariancia completa para género y PCP, pero no para IMC. El ANOVA factorial reveló diferencias de medias significativas para género y PCP en relación con las puntuaciones del BSQ. Estos hallazgos indican que el BSQ es un instrumento con buenas propiedades psicométricas para su uso en contextos de investigación y cribado de preocupaciones relacionadas con la forma y la insatisfacción corporales, siendo una medida relevante para evaluar posibles trastornos alimentarios.

Palabras clave: insatisfacción corporal; índice de masa corporal; pérdida de peso.

Currently, body image is considered an important part of one's sense of self and may be associated with various cognitive and behavioral functions, such as eating and sexual behaviors, as well as emotional stability. In this way, it has a direct influence on an individual's quality of life and self-esteem. When feeling dissatisfied with their body image, individuals may experience negative consequences. Among the negative impacts associated with body dissatisfaction are depression, anxiety, and low self-esteem (Yurtsever et al., 2022).

Given that body image plays such a crucial role in an individual's well-being, it is essential to understand the factors influencing body dissatisfaction. The way people perceive their own bodies is influenced by several factors, such as cultural issues, social standards, and individual characteristics. In this context, the factors that can influence dissatisfaction with body image have various causes. Variables such as gender, profession, access to social networks, and cultural issues are among them. Different population groups are influenced in different ways by socially disseminated body norms.

[1] Endereço para correspondência: Rua Padre Ladislau Kula, 395, Santo Inácio, 82010-210, Curitiba, PR. *E-mail:* gismocelin@gmail.com

This impact has intensified with constant exposure to social media (Silva et al., 2020). Women are especially impacted by social demands regarding their bodies (Viganó et al., 2024). People who have negative perceptions about their image may seek compensatory behaviors to achieve their desired body. These behaviors may include unhealthy weight control practices (Nicoletti, & Vasconcelos, 2022).

To assess these issues more effectively, the Body Shape Questionnaire (BSQ) was developed as a self-report instrument to measure concerns about body shape and dissatisfaction with physical appearance (Cooper et al., 1987). It has been validated across various populations. Cooper et al. (1987) demonstrated its effectiveness in measuring body shape concerns, particularly related to eating disorders, while Rosen et al. (1996) confirmed its reliability and validity in both clinical and nonclinical samples. The Korean version showed reliability and validity in young women (Kang, & Kim, 2022), and the Turkish version demonstrated high test-retest reliability and correlations with other body image measures (Akdemir et al., 2012). Dowson and Henderson (2001) confirmed the construct validity of a shorter version in patients with psychogenic low weight and anorexia nervosa. The original BSQ had 34 items, with later shortened versions containing 16 and 8 items (Evans, & Dolan, 1993).

In addition to these international validations, the BSQ has been validated and found to be reliable in Brazilian populations, particularly among female university students (Conti et al., 2009; Di Pietro, & Silveira, 2009; Silva et al., 2014; Silva et al., 2016). Di Pietro and Silveira (2009) confirmed its internal validity and dimensionality, while Conti et al. (2009) and Silva et al. (2014) found it to be valid and reliable. Silva et al. (2014) also identified the 8-item version as the best shortened version. Silva et al. (2016) developed a unified version for Brazil and Portugal, containing 32 and eight items, respectively, with demonstrated validity and reliability. Given these recognized psychometric properties in Brazilian samples, the BSQ stands out as a highly relevant instrument for assessing body shape concerns in diverse populations, including the current sample of adults with varying body mass index (BMI) levels and weight control practices. Despite these promising findings, an important gap remains regarding in-depth examinations of measurement invariance and criterion validity across specific groups – namely, distinct body mass index (BMI) levels, weight control practices, and gender.

Measurement invariance testing, particularly through Multigroup Confirmatory Factor Analysis (MGCFA), is crucial because an instrument may function differently across subgroups (Chen, 2007; Cheung, & Rensvold, 2002). Without demonstrating invariance, comparisons of BSQ scores between, for instance, men and women or among individuals with varying BMI could lead to erroneous conclusions about body shape concerns. Therefore, MGCFA ensures that a measure retains its factor structure and intercepts consistently across key demographic or clinical categories. Furthermore, reinforcing criterion validity confirms that the BSQ can accurately distinguish between groups theoretically expected to differ in body dissatisfaction – such as those who engage in unhealthy weight control behaviors. Although other instruments also measure body image dissatisfaction (e.g., EDE-Q, EDI), the BSQ specifically targets related to body shape, which is central to detecting potential eating disorders and related risk behaviors (Dowson, & Henderson, 2001; Rosen et al., 1996). So, verifying measurement invariance and criterion-related validity ensures fair and accurate assessments in varied subpopulations. This is especially relevant in today's social media environment, where aesthetic standards may disproportionately affect different demographic groups (Silva et al., 2020).

Based on these considerations, the objective of this study was to evaluate evidence of validity based on the BSQ's internal structure in a Brazilian sample, focusing on its measurement invariance regarding gender, BMI, and weight control practices, as well as its discriminative capability (criterion validity) among these groups. We employed Multigroup Confirmatory Factor Analysis (MGCFA), following recommendations by Chen (2007) and Cheung and Rensvold (2002), and conducted factorial ANOVAs to further explore potential score differences. Through this approach, we aim to reinforce the BSQ's use in research and screening contexts, ensuring that the instrument effectively and equitably captures body shape concerns in distinct segments of the Brazilian population.

Methods

Participants

Four hundred and sixty-two people between the ages of 18 and 59 participated in this study (M=32.37, SD=10.32), Among them, 377 were female, 84 were male, and one participant preferred not to specify their gender. Participants were categorized into three BMI groups: 197 participants in the eutrophy group (42.6%; participants with a BMI below 18 kg/m2 were included in this group; Minimum=16.82, Maximum=24.98. M=22.31, Md=22.46, SD=1.82); 152 participants in the overweight group (32.9%; Minimum=25.10, Maximum=29.94, M=27.34, Md=27.31, SD=1.42); and 113 participants in the obesity group (24.5%; Minimum=30.02, Maximum=62.82, M=34.46, Md=32.99, SD=4.87). Specifically, in terms of gender distribution, the eutrophy group included 25 males and 170 females, the overweight group had 39 males and 113 females, and the obesity group comprised 20 males and 93 females.

Instruments

The questionnaire included inquiries about various participant characteristics, including measures such as weight and height for calculating Body Mass Index (BMI). Questions about the adoption of unhealthy weight control practices over the previous 12 months were used, inspired by research initially conducted by Yager and O'Dea (2009), and subsequently by Yager et al. (2017). The assessed practices included the use of weight loss medications, self-induced vomiting, and the use of laxatives (Tshililo et al., 2016).

Additionally, the assessment involved the short version of the Body Shape Questionnaire (BSQ), adapted from its original English version by Evans and Dolan (1993), which consisted of 8 items and was designed to evaluate concerns related to body shape. It demonstrated a high level of internal consistency, with a Cronbach's alpha coefficient of $\alpha=0.87$. For this study, Cronbach's alpha coefficient was 0.85, and McDonald's omega was $\omega=0.87$. The BSQ has demonstrated validity and reliability in the Brazilian population, particularly among female university students (Conti et al., 2009; Di Pietro, & Silveira, 2009; Silva et al., 2014; Silva et al., 2016) and serves as a relevant instrument for assessing concerns about body shape. Its application to the studied sample, consisting of adults with varying BMIs and weight control practices, underscores its significance in identifying groups at higher risk of body dissatisfaction and compensatory behaviors.

Procedures

This study was approved by the Human Research Ethics Committee of a university in southern Brazil (CAAE 3.698.187). A questionnaire hosted on the Google Forms platform was used and shared on different social networks. Participants were required to digitally sign the Informed Consent Form to answer the questions.

Data analysis

All analyses were conducted using the R environment (R Core Team, 2021), employing the lavaan package (Rosseel, 2012), and psych package (Revelle, 2024). To investigate the internal structure, confirmatory factor analysis (CFA) and multiple group confirmatory factor analysis (MGCFA) were employed to examine the psychometric properties of the measurement model and explore group differences. CFA assessed the fit of the proposed measurement model to the observed data, testing the hypothesized factor structure and evaluating how well observed variables were associated with their respective latent factors. Model fit was evaluated following criteria outlined in Marsh et al. (2020), including the overall model chi-square, root-mean-square error of approximation ($RMSEA \leq 0.05$), comparative fit index ($CFI \geq 0.95$), and Tucker-Lewis Index ($TLI \geq 0.90$).

Furthermore, multiple group analysis was employed to assess whether the measurement model holds across different groups, specifically comparing individuals in male and female gender groups, as well as those classified with normal BMI and above BMI levels. A third group was created based on a dichotomous variable, where participants who exhibited at least one type of unhealthy weight control practice were classified as having unhealthy weight control practices. This analysis involved testing the invariance of the factor structure, factor loadings, and intercepts between the groups, which provides evidence of internal structure validity and ensures fairness in testing. Configural invariance assessed whether the same factor structure was present in both groups, metric invariance examined whether the factor loadings were equal between the groups, and scalar invariance investigated whether the intercepts were equivalent. These analyses facilitated understanding the similarities and differences in the measurement model across the groups. Following recommendations by Cheung and Rensvold (2002) and Chen (2007), we evaluated the overall model chi-square, as well as changes in CFI, TLI, and RMSEA.

To assess another source of validity evidence, a two-way factorial analysis of variance (ANOVA 2x2) was utilized to investigate group differences in BSQ scores across categorical variables, providing insights into its discriminant validity across diverse subgroups. Lastly, to evaluate the internal consistency reliability of the BSQ, two commonly used indices, Cronbach's alpha (α) and omega (ω), were calculated and already reported in the instrument section.

Results

The primary aim of this study was to assess the psychometric properties and structural invariance of the Body Shape Questionnaire (BSQ) within the Brazilian cultural context. Using Confirmatory Factor Analysis (CFA) and multiple group analysis techniques, we examined the measurement properties of the constructs under scrutiny, providing insights into the degree of similarity or variation across different demographic groups. Furthermore, our investigation extended to exploring sources of external validity evidence by comparing the BSQ with alternative measures and criteria, thereby enabling a comprehensive understanding of its discriminative ability across diverse populations.

Confirmatory Factor Analysis (CFA) was used to test the fit of the one-factor model previously examined in the literature (reference). Initially, the CFA model did not show a good fit ($RMSEA=0.103$). Subsequently, modifications were made to the model by allowing covariances between items 1 and 3, and items 3 and 8, which improved the fit for the model with the overall sample ($\chi^2=117.436$ [462], $p<0.001$; $CFI=0.984$,

TLI=0.976, RMSEA=0.080 [$p<0.001$], SRMR=0.038). The items exhibited factor loadings ranging from 0.495 to 0.845.

To investigate the consistency of the model across different groups – gender (male and female), BMI (eutrophy, overweight, and obesity), and weight control practices (healthy and unhealthy) – multiple-group confirmatory factor analysis (MGCFA) was conducted for each group. This analysis aimed to assess the model's fit by testing nested models for configural invariance (evaluating factor structure), metric invariance (examining factor loadings), and scalar invariance (assessing intercepts) across these groups. The results, presented in Table 1, indicate that the BSQ demonstrates factor invariance in the factor structure for the gender group. This finding is supported by insignificant increases in CFI and TLI indices of no more than 0.01 (Cheung & Rensvold, 2002), as well as RMSEA values that did not increase by more than 0.005 (Chen, 2007). Similarly, factor invariance was observed for the weight control practices group, as indicated by minimal differences in CFI and TLI. However, for the BMI group, no invariance could be established due to larger increases in fit index differences.

Table 1
Multiple group confirmatory factor analysis for Gender, Weight control practices, and BMI classification

Gender	χ^2	*DF*	CFI (Δ)	TLI (Δ)	RMSEA (Δ)
Configural	87.356	36	.985	.976	.079
Metric	90.608	43	.986 (.001)	.981(-.005)	.069 (-0.01)
Scalar	150.701	74	.977 (-.009)	.983 (.002)	.067(-0.002)
Weight control practices					
Configural	92.381	36	.981	.971	.083
Metric	91.831	43	.984 (.003)	.979 (.008)	.070 (-.013)
Scalar	125.814	74	.982 (-.002)	.986 (.007)	.056 (-.014)
BMI classification					
Configural	102.839	54	.986	.978	.077
Metric	169.688	68	.971 (-.005)	.964 (-.014)	.099 (.022)
Scalar	335.176	130	.942 (-.029)	.962 (-.002)	.102 (.003)

Note. *df*=degrees of freedom; (Δ)=difference; BMI=body mass index

To explore external criteria validity, a two-way ANOVA was performed to examine the influence of gender and weight control practices on BSQ scores. This analysis revealed significant main effects for both gender, ($F(1, 424.85)=6.03$, $p<.05$), and weight control practices, ($F(1, 2707.61)=38.44$, $p<.001$), indicating that women and individuals engaged in unhealthy weight control behaviors reported higher BSQ scores. No significant interaction was observed, suggesting these effects operate independently (see Table 2).

Table 2
Descriptive analysis for group comparison

Gender	Weight control practices	Mean	*SD*	*N*
Male	Healthy	24,463	8,434	67
	Unhealthy	33,706	7,252	17
	Total	26,333	8,981	84
Female	Healthy	29,102	8,690	255
	Unhealthy	35,107	7,861	122
	Total	31,046	8,877	377
Total	Healthy	28,137	8,828	322
	Unhealthy	34,935	7,778	139
	Total	30,187	9,071	461

Note. SD=standard-deviation; *N*=number of subjects for each subgroup

Discussion

This study aimed to examine the measurement invariance of the Body Shape Questionnaire (BSQ) across three distinct groups: gender, BMI levels, and weight control practices. Our findings indicate that the BSQ demonstrated configural and metric invariance across gender and weight control practice groups but not across BMI categories. This suggests that the structure of the BSQ and the importance of its items are consistent for both men and women, as well as for individuals with different weight control practices, allowing for valid comparisons within these groups. However, the lack of invariance across BMI categories suggests that the interpretation of BSQ items or their relevance varies among individuals with different BMI levels. This finding aligns with Polli et al. (2021), which suggests that societal beauty standards emphasizing thinness can lead to aesthetic pressures experienced by individuals across various weight ranges.

A lack of measurement invariance across BMI groups highlights a critical challenge in assessing body shape concerns across individuals with different body compositions. This variation may stem from cultural and social differences in how weight is perceived and experienced. In societies where thinness is idealized, individuals with higher BMIs may internalize body image concerns differently, often facing stigma and discrimination that shape their responses to body dissatisfaction measures (Araújo et al., 2018; Pinto et al., 2020; Viganó et al., 2024). Conversely, those with lower BMIs might interpret BSQ items through concerns related to extreme thinness or difficulty in gaining weight (Nicoletti, & Vasconcelos, 2022). These distinct perspectives suggest that body dissatisfaction is not a uniform construct across BMI groups but rather a multifaceted experience influenced by societal norms, personal experiences, and exposure to aesthetic ideals (Silva et al., 2020). Future research should explore whether modifications to the BSQ could enhance its applicability to diverse BMI categories, ensuring a more precise assessment of body shape concerns across different body profiles.

The factorial ANOVA conducted to explore the external criteria validity of the BSQ revealed significant main effects for both gender and weight control practices on its scores. Regarding the gender difference, this finding aligns with existing literature, which often reports that women experience greater societal pressure to conform to ideal body standards, leading to higher levels of body dissatisfaction (Araújo et al., 2018; Pinto et al., 2020; Polli et al., 2021). In some studies, carried out in Brazil, where the gender variable was evaluated in relation to BSQ results, it was observed that the majority of women were dissatisfied with their body image (Bezerra et al., 2023; Nicoletti, & Vasconcelos, 2022; Perin, & Limberger, 2024).

Participants engaging in unhealthy weight control practices showed significantly higher BSQ scores compared to those with healthy weight control practices, underscoring the influence of unhealthy behaviors on body shape concerns. Practices like using weight loss medications or self-induced vomiting are frequently linked to increased body dissatisfaction, emphasizing the significance of promoting healthy eating behaviors (Nicoletti, & Vasconcelos, 2022). The sample exhibits a gender imbalance, which may limit the generalizability of the results.

In summary, this study found that the Body Shape Questionnaire (BSQ) maintains measurement invariance across gender and weight control practice groups, but not across BMI categories. This indicates that while the BSQ is a reliable tool for assessing body shape concerns among men and women and individuals with different weight control practices, its interpretation varies across different BMI levels. The significant effects of gender and weight control practices on BSQ scores highlight the pervasive impact of societal beauty standards and unhealthy weight control behaviors on body dissatisfaction.

In practical terms, the results suggest that interventions should focus on promoting healthy weight control practices, particularly among individuals engaging in harmful behaviors. Programs aimed at fostering positive body image and educating about the risks of unhealthy weight control methods can be beneficial in mitigating body dissatisfaction. Additionally, addressing societal pressures related to body image through public health campaigns could contribute to improving overall well-being. While our findings support the psychometric properties of the BSQ within this Brazilian sample, further research is needed to explore additional variables that may influence body dissatisfaction. For instance, factors such as social media usage, cultural background, and psychological well-being could be examined to provide deeper insights into how body image concerns emerge and differ across populations. Furthermore, investigating new or alternative versions of the BSQ, particularly those designed for distinct demographic groups (e.g., adolescents, older adults, or clinical populations), may enhance the instrument's precision. Assessing the measurement invariance of these adapted versions would also be invaluable, ensuring that they function equivalently across diverse subgroups.

A notable limitation of this study concerns the dichotomous categorization of weight control practices (healthy vs. unhealthy). While grouping these behaviors facilitated our analyses, it may overlook important nuances in the severity, frequency, or specific nature of each practice. Future studies could adopt more detailed or multidimensional measures, potentially distinguishing among mild caloric restrictions, structured exercise programs, and extreme behaviors (e.g., purging or misuse of

medication). Such granularity would allow researchers to capture a broader spectrum of weight control behaviors and better understand their differential impact on body shape concerns.

Acknowledgments

There are no mentions.

Funding

This research received no source of financing being funded with resources of the authors themselves

Authors' contributions

We declare that all the authors participated in the elaboration of the manuscript. Specifically, author Gislei Mocelin Polli contributed to the study conception, data collection and analysis, initial drafting, and final revision of the text. Author Anahí de Almeida Viganó contributed to the initial drafting of the text. Author João Paulo Araújo Lessa contributed to data analysis, initial drafting, and final revision of the text. All authors declare that they agree with the contente of the manuscript submitted to the jornal Avaliação Psicológica.

Availability of data and materials

All data and syntax generated and analyzed during this research will be treated with complete confidentiality due to the Ethics Committee for Research in Human Beings requirements. However, the dataset and syntax that support the conclusions of this article are available upon reasonable request to the principal author of the study.

Competing interests

The authors declare that there are no conflicts of interest.

References

Akdemir, A., Inandi, T., Akbas, D., Karaoglan Kahilogullari, A., Eren, M., & Canpolat, B. I. (2012). Validity and reliability of a Turkish version of the body shape questionnaire among female high school students: Preliminary examination. *European Eating Disorders Review, 20*(1), e114-115. https://doi.org/10.1002/erv.1106

Araújo, L. S., Coutinho, M. d. P. L., Araújo-Morais, L. C., Simeão, S. d. S. S., & Maciel, S. C. (2018). Preconceito frente à obesidade: representações sociais veiculadas pela mídia impressa. *Arquivos Brasileiros de Psicologia, 70*(1), 69-85. http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1809-52672018000100006&nrm=iso

Bezerra, M. A. A., Bottcher, L. B., Gomes, C. B., & Pereira, C. C. B. (2023). Percepção da imagem corporal de praticantes de musculação. *Revista Brasileira de Nutrição Esportiva, 17*(107), 686, 692. https://www.rbne.com.br/index.php/rbne/article/view/1651/1384

Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 14*(3), 464-504. https://doi.org/10.1080/10705510701301834

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 9*(2), 233-255. https://doi.org/10.1207/S15328007SEM0902_5

Conti, M., Cordás, T., & Latorre, M. (2009). A study of the validity and reliability of the Brazilian version of the Body Shape Questionnaire (BSQ) among adolescents. *Revista Brasileira de Saúde Materno Infantil, 9*(3), 331-338. https://doi.org/10.1590/S1519-38292009000300012

Cooper, P. J., Taylor, M. J., Cooper, Z., & Fairburn, C. G. (1987). The development and validation of the Body Shape Questionnaire. *International Journal of Eating Disorders, 6*(4), 485-494. https://doi.org/10.1002/1098-108X(198707)6:4<485::AID-EAT2260060405>3.0.CO;2-O

Di Pietro, M., & Silveira, D. X. (2009). Internal validity, dimensionality and performance of the Body Shape Questionnaire in a group of Brazilian college students. *Brazilian Journal of Psychiatry, 31*(1), 21-24. https://doi.org/10.1590/s1516-44462008005000017

Dowson, J., & Henderson, L. (2001). The validity of a short version of the Body Shape Questionnaire. *Psychiatry Research, 102*(3), 263-271. https://doi.org/10.1016/s0165-1781(01)00254-2

Evans, C., & Dolan, B. (1993). Body Shape Questionnaire: Derivation of shortened "alternate forms". *International Journal of Eating Disorders, 13*(3), 315-321. https://doi.org/10.1002/1098-108x(199304)13:3<315::aid-eat2260130310>3.0.co;2-3

Kang, S. R., & Kim, S. J. (2022). Validation of the Korean version of the Body Shape Questionnaire (K-BSQ): Focus on young women. *Women Health, 62*(3), 254-264. https://doi.org/10.1080/03630242.2022.2055697

Marsh, H. W., Guo, J., Dicke, T., Parker, P. D., & Craven, R. G. (2020). Confirmatory Factor Analysis (CFA), Exploratory Structural Equation Modeling (ESEM), and Set-ESEM: Optimal balance between goodness of fit and parsimony. *Multivariate Behavioral Research, 55*(1), 102-119. https://doi.org/10.1080/00273171.2019.1602503

Nicoletti, Y. A., & Vasconcelos, S. S. N. (2022). Relação entre insatisfação corporal e a realização de procedimentos estéticos e consumo de medicamentos entre modelos de Maringá e região metropolitana. *Brazilian Journal of Health Review, 5*(5), 21534-21548. https://doi.org/10.34119/bjhrv5n5-295

Perin, I. L., & Limberger, J. (2024). Body Dissatisfaction in Women: Correlation with the ICTs use and physical exercise. *Studies and Research in Psychology, 24*, 1-17. https://doi.org/10.12957/epp.2024.68904

Pinto, L. S., Polli, G. M., Basso, B. C., Rezende, C. F. C., Silva, G. P. N., Almeida, L. L., & Antunes, M. C. (2020). Representações sociais de beleza e de saúde entre mulheres com obesidade. *Psicologia Argumento, 38*(100), 290-315. https://doi.org/10.7213/psicolargum.38.100.AO05

Polli, G. M., Joaquim, B. O., & Tagliamento, G. (2021). Representações sociais e práticas corporais: Influências do padrão de beleza. *Arquivos Brasileiros de Psicologia, 73*(3), 54-69. https://doi.org/10.36482/1809-5267.ARBP2021v73i3p.54-69

R Core Team (2021). *R: A language and environment for statistical computing* (Version 4.1.0) [Computer software]. R Foundation for Statistical Computing, Vienna, Austria. https://www.R-project.org/

Revelle, W. (2024). *psych: Procedures for psychological, psychometric, and personality research* (Version 2.5.6) [R package]. https://CRAN.R-project.org/package=psych

Rosen, J. C., Jones, A., Ramirez, E., & Waxman, S. (1996). Body Shape Questionnaire: Studies of validity and reliability. *International Journal of Eating Disorders, 20*(3), 315-319. https://doi.org/10.1002/(SICI)1098-108X(199611)20:3<315::AID-EAT11>3.0.CO;2-Z

Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software, 48*(2). https://doi.org/10.18637/jss.v048.i02

Silva, W. R., Dias, J. C., Maroco, J., & Campos, J. A. (2014). Confirmatory factor analysis of different versions of the Body Shape Questionnaire applied to Brazilian university students. *Body Image, 11*(4), 384-390. https://doi.org/10.1016/j.bodyim.2014.06.001

Silva, W. R., Costa, D., Pimenta, F., Maroco, J., & Campos, J. A. (2016). Psychometric evaluation of a unified Portuguese-language version of the Body Shape Questionnaire in female university students. *Cadernos de Saúde Pública, 32*(7), 1-12. https://doi.org/10.1590/0102-311x00133715

Silva, A. F. S., Japur, C. C., & Penaforte, F. R. O. (2020). Repercussões das redes sociais na imagem corporal de seus usuários: Revisão integrativa. *Psicologia: Teoria e Pesquisa, 36*, 1-13. https://doi.org/10.1590/0102.3772e36510

Tshililo, R. A., Netshikweta, L., Tshitangano, T., & Nemathaga, H. (2016). Factors influencing weight control practices amongst the adolescent girls in Vhembe District of Limpopo Province, South Africa. *African Journal of Primary Health Care & Family Medicine, 8*(2), 1-4. https://doi.org/10.4102/phcfm.v8i2.952

Viganó, A. d. A., Polli, G. M., & Carioca, A. A. F. (2024). A gordofobia como violência e suas consequências para a saúde: Uma revisão narrativa. *Psicologia Argumento, 42*(119), 3031-3050. https://doi.org/10.7213/psicolargum.42.119.AO13

Yager, Z., & O'Dea, J. (2009). Body image, dieting and disordered eating and activity practices among teacher trainees: Implications for school-based health education and obesity prevention programs. *Health Education Research, 24*(3), 472-482. https://doi.org/10.1093/her/cyn044

Yager, Z., Gray, T., Curry, C., & McLean, S. (2017). Body dissatisfaction, excessive exercise, and weight change strategies used by first-year undergraduate students: Comparing health and physical education and other education students. *Journal of Eating Disorders, 5*(10), 1-11. https://doi.org/10.1186/s40337-016-0133-z

Yurtsever, I., Matusiak, Ł., Szepietowska, M., Evans, C., & Szepietowski, J. C. (2022). Body Shape Questionnaire-34 (BSQ) and Functionality Appreciation Scale (FAS) - pertinent body image screening tools: Creation and validation of Polish language versions. *Science Progress, 105*(3), 00368504221117068. https://doi.org/10.1177/00368504221117068

recebido em outubro de 2024
aprovado em março de 2025

Sobre os autores

Gislei Mocelin Polli is a psychologist (UFPR) and holds a PhD in Psychology from the Federal University of Santa Catarina (UFSC). She is currently a Professor in the Graduate Program (*Stricto Sensu*) in Forensic Psychology at Universidade Tuiuti do Paraná (UTP).

Anahi de Almeida Viganó is a psychologist (Centro Universitário de Pato Branco – UNIDEP) and holds a master's degree in Forensic Psychology at Universidade Tuiuti do Paraná (UTP).

João Paulo Araújo Lessa is a psychologist (CESMAC) and holds a PhD in Psychology from Universidade São Francisco (USF). He is currently a Professor in the Graduate Program (*Stricto Sensu*) in Forensic Psychology at Universidade Tuiuti do Paraná (UTP).

Como citar este artigo

Polli, G. M., Viganó, A. A., Lessa, J. P. A. (2026). Body Shape Questionnaire: Psychometric Properties and Invariance Structure in the Brazilian Context. *Avaliação Psicológica, 25*, e25648, 1-7. http://doi.org/10.15689/ap.2026.25.e25648