# Psychometric Properties of the OBCS Body Shame Scale in a Sample of Female Residents in Puerto Rico

## Propiedades psicométricas de la escala de Vergüenza Corporal OBCS en una muestra de residentes féminas en Puerto Rico

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## Abstract

The purpose of this study is to analyze the psychometric properties of the Spanish version of the Body Shame scale within the Objectified Body Consciousness Scale (OBCS) in a sample of women living in Puerto Rico. The sample consisted of 117 heterosexual women. A confirmatory factor analysis was conducted to evaluate the structure of the scale and internal consistency was examined. Findings revealed that the 6-item Spanish version of the Body Shame scale shows better model-data fit than the original 8-item version. The results of the study support the use of the final 6-item version of the Body Shame scale in research and practice, given that it demonstrated appropriate structure and internal consistency. In conclusion, the findings support the use of the 6-item version of the Body Shame scale.

Keywords: *body shame, confirmatory factor analysis, OBCS, psychometric properties, structural equations modeling*

## Resumen

El propósito de este estudio es analizar las propiedades psicométricas de la versión española de la escala de Vergüenza Corporal en la Objectified Body Consciousness Scale (OBCS). La muestra estuvo compuesta de 117 mujeres heterosexuales que viven en Puerto Rico. Se realizó un análisis factorial confirmatorio para evaluar la estructura de la escala y se examinó la consistencia interna. Los resultados indican que la versión española de 6 ítems de la escala de Vergüenza Corporal mostró un mejor ajuste de los datos del modelo que la versión original de 8 ítems. Los resultados del estudio respaldan el uso de la versión final de 6 ítems de la escala de Vergüenza Corporal en la investigación y la práctica, dado que demostró una estructura apropiada y una consistencia interna adecuada. En conclusión, los resultados apoyan el uso de la escala de 6 ítems de vergüenza corporal.

Palabras clave: *vergüenza corporal, propiedades psicométricas, OBCS, análisis confirmatorio de factores, ecuaciones estructurales*

## Introduction

Objectification theory (Fredrickson & Roberts, 1997; for reviews see Calogero, 2012 and Roberts, Calogero, & Gervais, 2018), states that girls and women, at any given point in their life, are vulnerable to being treated as a body or a collection of body parts valued predominantly for its use to others. This experience refers to what is called sexual objectification and it occurs whenever a person's body, body parts, or sexual functions, particularly a woman's, are separated from the person, reduced to the status of instruments, and regarded as if they were capable of representing the person as a whole (Bartky, 1990; Fredrickson & Roberts, 1997).

Objectification theory also posits that women exist within a culture where their body is evaluated, observed, and potentially objectified by others. This results in girls and women internalizing the observer's perspectives of themselves and adopting this perspective as their own, resulting in *self-objectification*, or the act of viewing one's body as an object or a sight to be appreciated by others (DeVille, Ellmo, Horton, & Erchull, 2015). Self-objectification manifests as constant and habitual monitoring of the body's outward appearance and it is often operationalized as body monitoring through self-surveillance. In many cases, this can result in the neglect of internal body states, such as hunger, in favour of physical appearance (Fredrickson & Roberts, 1997; Steer & Tiggemann, 2008). Many of the negative consequences associated with habitual body monitoring are believed to be the result of internalized body shame (Bessenoff & Snow, 2006; Fredrickson & Roberts, 1997; Steer & Tiggemann, 2008). This internalized body shame then leads to a sense of inadequacy due to the inability to achieve the unattainable cultural standards of attractiveness commonly propagated through sociocultural processes, such as the media (Grower, Ward, & Trekels, 2019; Karsay, Knoll, & Matthes, 2017; Manago, Ward, Lemm, Reed, & Seabrook, 2014) and interpersonal relationships (Fredrickson & Roberts, 1997; Steer & Tiggemann, 2008).

In turn, internalized body shame could cause women to constantly worry about their appearance and performance during sexual activities, preventing them from concentrating on the activity itself and their own pleasure, resulting in poorer sexual satisfaction and sexual functioning (Claudat & Warren, 2014; Fredrickson & Roberts, 1997; Steer & Tiggemann, 2008). The literature also supports findings that the internalization of body shame can lead to other psychopathologies, such as eating disorders (Dakanalis et al., 2014; Noll & Fredrickson, 1998; Schaefer et al., 2018) and depression (Grabe, Hyde, & Lindberg, 2007; Tiggemann & Kuring, 2004). Additionally, Szymanski, Moffitt, and Carr (2010) not only do a comprehensive review of the literature related to objectification theory, but they also expand upon the established theory to provide further understanding on women's substance use and abuse.

Another theory closely related to objectification theory (Fredrickson & Roberts, 1997) is the objectified body consciousness theory, presented by McKinley and Hyde (1996). This theory posits that the gender-role socialization and sexual objectification of women influence how women's bodies are socially constructed as objects to be viewed by others. These experiences socialize girls and women to internalize the beauty ideals established by their culture and to view their own bodies from the perspective of external observers, in other words, to self-objectify.

McKinley and Hyde (1996) presented three key manifestations of objectified body consciousness. The first being body surveillance, conceptualized as the habitual monitoring of one's body from an observer's perspective and comparing it

against the internalized beauty standards established by the culture. Second, would be feelings of body shame for not being able to attain the cultural beauty standard. Finally, McKinley and Hyde (1996) listed control beliefs or the point of view from which women are responsible for how they look and can achieve the cultural standards given enough effort. While objectification theory and objectified body consciousness theory both offer definitions of the body surveillance and body shame constructs, control beliefs as a construct is unique to the objectified body consciousness theory's framework.

Since its publication, the Objectified Body Consciousness Scale (OBCS; McKinley & Hyde, 1996) has been used in a variety of studies that have shown support for the relationship between body surveillance and body shame, and their consequences for women's well-being (Moradi, 2010; Moradi & Huang, 2008). For instance, self-objectification is believed to indirectly lead to negative outcomes through body shame. Studies have found that once the observer's perspective has been internalized and women self-objectify, this leads to higher levels of body shame (Calogero & Thompson, 2009; Steer & Tiggemann, 2008). Steer and Tiggemann (2008) found that self-objectification processes, which include body surveillance, body shame, and appearance anxiety, predicted higher self-consciousness during sexual activity, which predicted lower sexual functioning. Boursier, Gioia, and Griffiths' (2020) study on selfie-engagement on social media also found high correlations between the experience of body shame and body surveillance, due to the internalization of an observer's point of view, which appeared to be related to narcissistic personality traits in hypersensitive women. Veldhuis, Alleva, Bij de Vaate, Keijer, and Konijn (2020) also found that self-objectification preceded greater engagement in selfie behaviors such as

selecting, editing, and online posting of selfies. This means that when a selfie-maker viewed herself more strongly from an observer's perspective, specifically focused on her physical appearance, she was more inclined to preoccupy herself with the details of the selfie outcome, deliberately selecting and significantly editing the picture before posting it on social media. Additionally, Calogero and Thompson (2009) found that greater internalization of appearance ideals portrayed in media leads to more chronic body monitoring and more body shame which leads to decreased sexual satisfaction with a partner.

Tiggemann and Andrew's (2012) study assessed the link between clothes and self-objectification using four different scenarios varying in clothing worn and setting depicted. The results showed that revealing clothes led to greater self-objectification, which in turn led to greater body shame, body dissatisfaction, and negative mood than the scenarios with more modest clothing, particularly for heavier women, while the dressing room scenarios led to greater self-objectification but less negative mood than public scenarios. The literature also suggests that the act of self-objectification through constant body monitoring, resulting in higher levels of body shame and appearance anxiety, highly correlates to lower levels of sexual satisfaction and functioning in women (Claudat & Warren, 2014; Fredrickson & Roberts, 1997; Steer & Tiggemann, 2008).

*Psychometric Properties*
*of the Body Shame Scale*

The initial item pool for the Objectified Body Consciousness Scale (OBCS) was drawn based on McKinley and Hyde's (1996) theoretical framework and the experiences of North American college women, who are at high risk for body

image problems. In Study 1, with a sample of college women, they conducted an exploratory factor analysis (EFA) of their data, which provided initial support for three correlated factors corresponding to *body surveillance*, *body shame* and *control beliefs*, each subscale consisting of 8 items for a total of 24 items in the scale as a whole. The internal consistency of the body shame scale was α = .75. In Study 2, with a sample of undergraduate college women and middle-aged women, the internal consistency of the *body shame* scale was α = .84 and α = .70, for undergraduates and middle-aged women, respectively.

Moradi and Varnes (2017) reevaluated the Objectified Body Consciousness Scale's structure 20 years after its development using a sample of 368 college women between the ages of 18 and 35. Their analyses of factor structure, reliability and validity provided psychometric support for the *body surveillance* and *body shame* subscales, but not for the *control beliefs* subscale. Their two-factor structure, without the *control beliefs* items, yielded acceptable fit indices. The *body shame* scale yielded an acceptable Cronbach's alpha of α = .80.

Since its publication, the Objectified Body Consciousness Scale (OBCS) has also been translated, validated, and used in other countries. Moya-Garófano, Megías, Rodríguez-Bailón, and Moya (2017) translated and validated the OBCS with a sample of Spanish female university students. Study 1 explored the internal structure of the scale and the relationship among its components with a sample of 218 female students at a public university in Spain between the ages of 17 and 31. Their exploratory factor analysis (EFA) with varimax rotation revealed a multidimensional solution with three factors. The internal consistency coefficient (Cronbach's alpha, α) of the *body shame* scale was α = .84. In Study 2, the sample was composed of 201 female students from a public university in Spain between the ages of 18 and 30. The OBCS showed good internal consistency for all subscales, specifically *body shame*, which showed a Cronbach's alpha of α = .82, greater than *body surveillance* (α = .68) and *control beliefs* (α = .75).

Yilmaz and Bozo (2019) made a Turkish adaptation of the Objectified Body Consciousness Scale using a sample of 174 female Turkish university students aged 18 to 30 years old. Their confirmatory factor analysis (CFA) of the original three-factor model indicated a good fit of the data where CFI = .83, RMSEA = .052, and SRMR = .076. However, given that two items did not load satisfactorily for the *body surveillance* subscale, they were excluded from further analyses and the Turkish version of the Objectified Body Consciousness Scale was composed of 22 items. After excluding these two items, a second CFA was conducted showing a better fit to the data (CFI= .87, RMSEA= .047, and SRMR= .07). However, the overall fit of the three-factor model was inadequate. Additionally, at Time 1, the reliability of the *body shame* scale was α = .75, higher than the *control belief* (α = .75) and *body surveillance* reliability estimates (α = .64). At Time 2, the test-retest reliability of the *body shame* scale was of α = .78, again, higher than the *control belief* (α = .75) and *body surveillance* reliability estimates (α = .64).

*Purpose of this Study*

As previously presented, evidence suggests the importance of body shame in the study of women's objectification experience given that its internalization can lead to feelings of inadequacy, which can result in an array of psychopathologies. Being able to identify body shame using adequate measures could be used to track

changes over the course of therapy as a result of prevention or intervention efforts. Besides, the psychometric properties of the Objectified Body Consciousness Scale consistently indicate that the Body Shame scale shows better psychometric properties than the other factors. The purpose of this study is to analyze the psychometric properties of the Spanish version of the Body Shame scale within the Objectified Body Consciousness Scale (McKinley & Hyde, 1996; Moya-Garófano et al., 2017) in a sample of women living in Puerto Rico.

**Method**
*Participants*

A total of 117 women answered the Spanish version of the Body Shame scale within the Objectified Body Consciousness Scale. Their mean age was 30.55 (SD = 9.49), and the age range was 21-58. As it can be seen in Table 1, the overwhelming majority of the women that participated were Puerto Rican (94.6 %). Among the participants, half of them (49.6 %) reported being legally single while a fourth of them reported being married (26.5 %). 70.9 % of the women reported having a romantic partner, while 29.1 % reported not having a romantic partner. Women that were part of a religion accounted for a little over half (52.1 %) of the sample, while the other half (47 %) reported not belonging to any religion. Half of the participants (49.6 %) had acquired a bachelor's degree, 27.4 % had acquired a master's degree and 8.5 % had acquired a doctorate degree. 53.8 % were employees and 37.6 % were students. The overwhelming majority of participants (94.9 %) indicated having been sexually active during the 4 months previous to answering the survey.

*Instruments*

***Body Shame scale within the Objectified Body Consciousness Scale (OBCS; McKinley & Hyde, 1996).*** The Body Shame scale within the Objectified Body Consciousness Scale, developed by McKinley and Hyde (1996), measures the degree to which individuals feel shame about their bodies when they perceive themselves as not meeting cultural body ideals. This scale consists of eight items rated on a 7-point scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). Higher scores indicate greater body shame. The Cronbach alpha value of the scale in McKinley and Hyde's study was $\alpha = .89$. The Spanish version (Moya-Garófano et al., 2017), which was translated following cross-cultural translation procedures and validated with a sample of women from a public university in Spain, showed internal consistency with a Cronbach's alpha of .84. However, no literature could be found regarding its adaptation to the Puerto Rican population; therefore, this translation will be used and validated for the intended population in this sample.

*Procedure*

Once the study was approved by the Institutional Review Board (IRB) of the Carlos Albizu University, participants were recruited using a snowball sampling technique through different social networks, such as Facebook and Twitter. The participants were given the option to follow the link to the anonymous survey on SurveyMonkey, where they were able to read and agree to a statement of informed consent. The study was conducted using a secure online website allowing participants to answer the survey at a location of their preference throughout the study. No identifying information about the participants or their

**Table 1**
Sociodemographic data of participants.

| Variable | Category | | Frequency (n = 117) | Percentage % |
|---|---|---|---|---|
| *Age Range* | 21-29 | | 75 | 64.1 |
| | 30-39 | | 21 | 18.0 |
| | 40-49 | | 16 | 13.6 |
| | 50-58 | | 5 | 4.3 |
| *Ethnicity* | Puertorican | | 111 | 94.9 |
| | Dominican | | 1 | 0.9 |
| | Cuban | | 2 | 1.7 |
| | Other | | 3 | 2.6 |
| | American | | 1 | 0.9 |
| | Argentinian | | 2 | 1.7 |
| *Civil Status* | Legally single | | 58 | 49.6 |
| | Cohabitation with partner | | 24 | 20.5 |
| | Married | | 31 | 26.5 |
| | Divorced | | 3 | 2.6 |
| | Widowed | | 1 | 0.9 |
| *Relationship Status* | Single | | 83 | 70.9 |
| | In a romantic relationship | | 34 | 29.1 |
| *Religion* | Yes | | 61 | 52.6 |
| | | Catholic | 40 | 34.3 |
| | | Christian | 5 | 4.3 |
| | | Baptist | 1 | 0.9 |
| | | Evangelical | 7 | 6.1 |
| | | Presbyterian | 1 | 0.9 |
| | | Methodist | 2 | 1.7 |
| | | Protestant | 3 | 2.6 |
| | | Wiccan | 2 | 1.7 |
| | No | | 55 | 47.4 |
| *Education Level* | High school | | 4 | 3.4 |
| | Bachelor | | 58 | 49.6 |
| | Master | | 32 | 27.4 |
| | Doctorate | | 10 | 8.5 |
| | Associate | | 7 | 6.0 |
| | Postdoctorate | | 2 | 1.7 |
| | Other | | 3 | 2.6 |
| *Employment status* | Student | | 44 | 37.6 |
| | Employee | | 63 | 53.8 |
| | Unemployed | | 3 | 2.6 |
| | Housewife | | 7 | 6 |
| *Sexually active in the past 4 months* | Yes | | 111 | 94.9 |
| | No | | 6 | 5.1 |

electronic device was collected at any time, ensuring the responses to remain anonymous.

To partake in this study, each participant indicated voluntary agreement in the consent form, which included detailed information about the purpose of the study, the procedure, their rights to confidentiality as a participant, anonymity, the estimated time in minutes it would take them to answer the survey, and the potential risks and benefits of the study. Their participation in the study was entirely voluntary and they were able to withdraw from the study at any moment without penalty. Information on how the participant could contact the prime investigator of the study, the study director, and the director of the ethical committee of the research department within the university was provided. The consent form also included contact information of various clinics and hospitals around the island in case the study was to evoke any negative feelings, and the participant would wish to seek psychological assistance. Once the survey was completed, the participants were directed to a debriefing page. The participants of this study did not receive any monetary incentive or reward for their participation.

*Statistical analyses*

Analyses were conducted using SPSS v.22 (IBM Corporation, 2013) and AMOS v.22 (Arbuckle, 2014). Prior to analysis, all the variables were examined for accuracy and missing data. The analysis showed that missing data was less than 5 % for each item (range from 0 % to 1.7 %). Incomplete data was addressed by estimating missing values through the Expectation-Maximization algorithm. Once data was cleaned up, descriptive analysis, internal consistencies (Cronbach's alpha) and correlational analysis were conducted. A confirmatory factor analysis (CFA) was implemented to examine the Body Shame scale factor structure. The following absolute and relative goodness-of-fit indices were considered to evaluate model fit. Considering the non-normality of the data (Doornik-Hansen test = $\chi^2_{(16)} = 309.551$, $p < .001$; Mardia Skewness = 14.46, $\chi^2_{(120)} = 291.00$, $p < .001$), we calculated the Satorra-Bentler (Satorra & Bentler, 1994) scaled chi-square ($\chi^2_{S\text{-}B}$), comparative fit index (CFI $_{S\text{-}B}$), the Tucker-Lewis index (TLI $_{S\text{-}B}$), the root mean square error of approximation (RMSEA $_{S\text{-}B}$) with its corresponding confidence intervals at 90 %, and the standardized root mean square residual (SRMR). We considered indicators of good fit to be values under .08 for RMSEA and .05 for SRMR, and above .90 for CFI and TLI. The original 8-item scale was tested as a one-factor model. The model was then re-specified based on modification indices, factor loadings and goodness-of-fit indices resulting in a second one-factor model composed of 6 items.

**Results**

Table 2 shows the descriptive statistics (mean and standard deviations), reliability analysis, compound reliability, average variance extracted, and correlations. Regarding the distribution properties of the 8 items of body shame, we calculated the means and standard deviations for each item. The averages of the items fluctuated between 1.82 and 5.16, and the standard deviations fluctuated between 1.685 and 2.437. Table 1 also shows the Kolmogorov-Smirnov and Shapiro-Wilk tests, which indicate that the score distributions for each item are not normally distributed.

**Table 2**
Descriptive and distribution statistics for items in the Body Shame scale of the OBCS.

| Item | Mean | Std. Deviation | Skewness | Kurtosis | Kolmogorov-Smirnov | Shapiro-Wilk |
|------|------|----------------|----------|----------|--------------------|--------------| 
| BSh_1 | 4.66 | 2.060 | -0.660 | -0.671 | .198 | .881 |
| BSh_2 | 3.46 | 2.191 | 0.233 | -1.332 | .168 | .890 |
| BSh_3 | 5.16 | 1.766 | -1.063 | 0.421 | .241 | .841 |
| BSh_4 | 2.91 | 2.420 | 0.651 | -1.337 | .341 | .739 |
| BSh_5 | 2.07 | 1.775 | 1.617 | 1.587 | .359 | .678 |
| BSh_6 | 4.01 | 2.152 | -0.228 | -1.155 | .148 | .924 |
| BSh_7 | 1.82 | 1.685 | 1.576 | 1.584 | .396 | .708 |
| BSh_8 | 3.37 | 2.437 | 0.307 | -1.515 | .217 | .853 |

**Note**: Standard error for skewness = .224; Standard error for kurtosis = .444. Degrees of freedom for Kolmogorov-Smirnov and Shapiro-Wilk = 117, all values $p < .001$.

*Dimensionality analysis of the scale*

We analyzed the factor structure of the Body Shame scale through a confirmatory analysis of the factors, applying structural equation modeling —maximum likelihood estimation method—, using AMOS (v. 22; Arbuckle, 2014). First, the original 8-item, one-factor model of the Body Shame scale was tested (Model 1). Results demonstrated poor goodness-of-fit indices (see Table 3). Given its poor factor loading, item 5 was eliminated. A 7-item, one-factor model of the scale was tested (Model 2). Results did not present favourable goodness-of-fit indices, and item 6 also showed poor factor loadings, resulting in its elimination (see Table 3). As a result, a 6-item, one-factor model of the scale (Model 3) was tested, which showed more favourable goodness-of-fit indices (see Table 3). Finally, the covariance between the uniqueness's of Body Shame item 5, *I feel ashamed of myself when I haven't made the effort to look my best*, and item 6, *I feel like I must be a bad person when I don't look as good as I could,*

were freed (Model 4; see Figure 1). The results show appropriate goodness-of-fit indices for the final 6-item, one-factor model of the Body Shame scale (see Table 3).

As the summary results in Table 3 suggest, the standardized factorial loads of the items in the full-length Body Shame scale were all statistically significant ($p \leq .001$) with a range between .39 and .79. On the other hand, the standardized factorial loads of the items in the final 6-item version of the Body Shame scale (Model 4) were all statistically significant ($p \leq .001$) with a range between .49 and .81.

*Reliability of the Body Shame scale*

The reliability of the Body Shame scale was calculated using Cronbach's alpha internal consistency coefficient. The final, abbreviated version of the Body Shame scale, consisting of 6 items, showed an internal consistency of $\alpha = .78$.
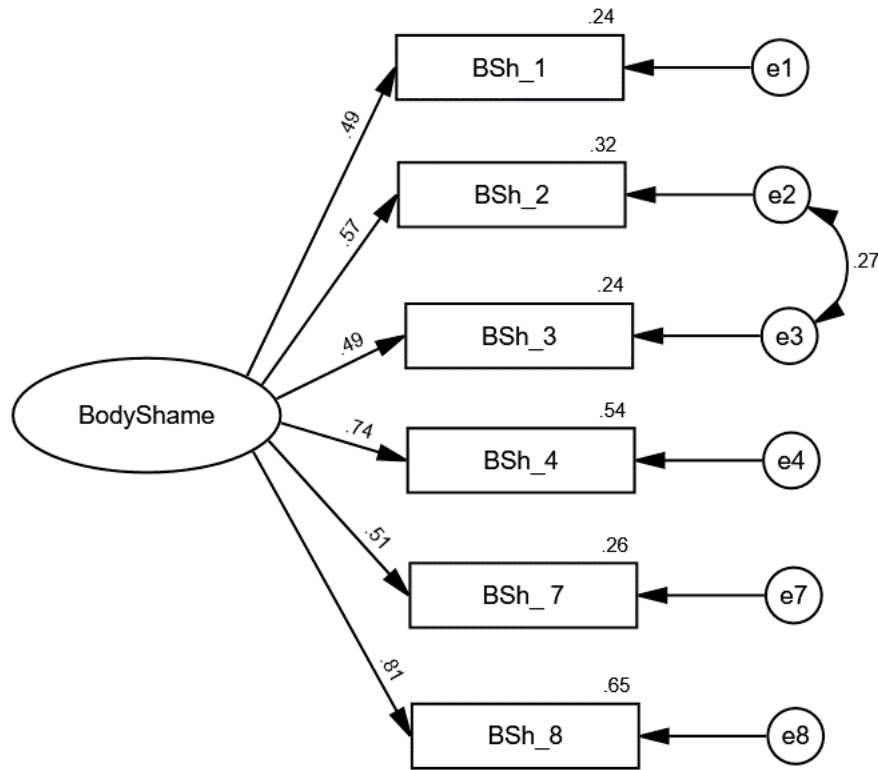
**Figure 1**
Abbreviated (Model 4) Body Shame scale.

**Table 3**
Confirmatory factor analysis of Body Shame scale models.

| Model | $\chi^2_{S\text{-}B}$ | df | $TLI_{S\text{-}B}$ | $CFI_{S\text{-}B}$ | SRMR | $RMSEA_{S\text{-}B}$ (90 % CI) | $\Delta\chi^2$ ($\Delta df$) |
|---|---|---|---|---|---|---|---|
| Model 1 | 46.72 | 20 | .831 | .879 | .069 | .107 [.06, .15] | |
| Model 2 (#5 removed) | 31.28 | 14 | .868 | .912 | .061 | .103 [.06, .15] | $\Delta\chi^2_{(6)} = 15.44$, $p < .05$ |
| Model 3 (#5 & #6 removed) | 21.12 | 9 | .888 | .933 | .057 | .107 [.05, .17] | $\Delta\chi^2_{(5)} = 10.16$, n.s. |
| Model 4 (error correlated between #2 & #3) | 14.01 | 8 | .937 | .967 | .048 | .080 [.00, .15] | $\Delta\chi^2_{(1)} = 7.11$, $p < .01$ |

## Discussion

The objective of this study was to analyze the psychometric properties of the Body Shame scale within the Objectified Body Consciousness Scale (Moya-Garófano et al., 2017) in a sample of women living in Puerto Rico. From the results obtained we can conclude that the final, 6-item version of the Body Shame scale is an instrument that has the appropriate psychometric properties to be used both in research and in professional practice. As in Moradi and Varnes (2017) study, two items of the Body Shame scale were eliminated due to poor factor loadings and their ab-

breviated version of the scale provided better model-data fit than the original 8-item scale. The abbreviated version of the Body Shame scale showed good model-data fit without sacrificing reliability. Factor loadings for the Body Shame scale were generally strong, suggesting that these items were good indicators of their underlying factors (see Table 4). The Body Shame scale in its full-length version, as the abbreviated versions, yielded acceptable Cronbach's alphas. Thus, this study offers further support for the structure and internal consistency reliability of the Body Shame scale.Additionally, this study builds upon Moradi and Varnes (2017) study in offering strategies to achieve measurement efficiency while maintaining psychometric rigor. The testing of abbreviated models in this study suggest that, if measurement brevity was necessary in research or practice, using the abbreviated model might enhance structural properties of the data with little to no losses in regard to internal consistency.

## Practice Implications

Studies on body image have shown that the way a woman perceives her body is related to the development of an array of psychopathologies, such as eating disorders, depression, and sexual dysfunction. Considering the detrimental effects that sexual objectification may have on women through feelings of body shame delineated in the literature, this study builds on the evidence that the Body Shame scale can be used in clinical practice, prevention and intervention efforts. In particular, the abbreviated version of the Body Shame scale presented in this study can be useful in instances where instrument brevity is necessary. Given that the Body Shame scale measures feelings of shame caused by not being able to reach the cultural beauty ideals and weight stan-

dards perpetuated by society, this instrument can be used to keep track of changes in feelings of body shame over the course of therapeutic intervention or prevention efforts.

## Limitations and Recommendations

It is important to consider several limitations and future directions of the present research when interpreting these findings. First, the sample of this study was composed in its majority of heterosexual Puerto Rican women between the ages of 23 and 25 with, at least, a bachelor's degree. Future studies should consider administering and validating the Body Shame scale, as well as its parent scale, the Objectified Body Consciousness Scale, with heterogeneous samples made up of the general population and composed of differing characteristics, such as gender, age, education levels, ethnicity or race, sexual orientation, relationship status, and socioeconomic status. Secondly, given that the sample of this study was composed exclusively of cisgender women, future research should also consider studying the measure's validity with samples consisting not only of transgender women, but also cisgender and transgender men. Additionally, while the online data collection method might provide certain advantages in the realm of information dissemination, it presented difficulties in recruiting a large number of participants, since many people opened the webpage for the instrument, read the information in the consent form, but quit the process prematurely. There were also cases of technical difficulties with the website used. All these difficulties resulted in a small sample size, which likely resulted in limited information regarding the measure and its behavior within the present study. Thus, it is suggested that alternate methods of data collection, such as a combination of on-

**Table 4**
Confirmatory factor analysis loadings for full-length (Model 1) and abbreviated (Model 2, 3 & 4) Body Shame scale.

| Item number and content | Model 1 | Model 2 | Model 3 | Model 4 |
| --- | --- | --- | --- | --- |
| | 8-item scale | 7-item scale | 6-item scale | 6-item scale with freed covariances |
| 1. When I can't control my weight, I feel like something must be wrong with me/ Cuando no puedo controlar mi peso, siento que algo va mal en mí | .48 | .49 | .49 | .49 |
| 2. I feel ashamed of myself when I haven't made the effort to look my best/ Me siento avergonzada de mí misma cuando no me esfuerzo por tener el mejor aspecto posible | .61 | .62 | .61 | .57 |
| 3. I feel like I must be a bad person when I don't look as good as I could/ Me siento mal cuando mi apariencia no es tan buena como podría ser | .55 | .55 | .53 | .49 |
| 4. I would be ashamed for people to know what I really weigh/ Me daría vergüenza que la gente supiera cuánto peso | .67 | .69 | .71 | .74 |
| 5. Even when I can't control my weight, I think I'm an okay person/ Incluso cuando no puedo controlar mi peso, pienso que soy una persona valiosa | .39 | | | |
| 6. I never worry that something is wrong with me when I am not exercising as much as I should/ Nunca pienso que estoy haciéndolo mal, aunque no haga todo el ejercicio que debiera | .39 | .37 | | |
| 7. When I'm not exercising enough, I question whether I am a good enough person/ Cuando no hago suficiente ejercicio, me cuestiono si soy una persona suficientemente valiosa | .56 | .54 | .53 | .51 |
| 8. When I'm not the size I think I should be, I feel ashamed/ Me siento avergonzada cuando no tengo la talla de ropa que debería | .79 | .79 | .79 | .81 |

**Note**. All factor loadings are significant at $p < .001$. Reversed items were recoded prior to analysis; therefore, all loadings are positive. The 6-item Body Shame scale (Model 3) eliminates items 5 and 6.

line and physical questionnaires, be kept in mind for future studies. Finally, to further expand the field of study on the impacts of sexual objectification on the health and well-being of women, more research should be conducted to examine the relationship between body shame and sexual satisfaction as established in the literature (Calogero & Thompson, 2009; Claudat & Warren, 2014; Fredrickson & Roberts, 1997; Steer & Tiggemann, 2008). Gónzalez-Rivera and Hernández-Gato (2019) study validated a short version of the Subjective Sexual Satisfaction Scale (ES-SS-B) in a Puerto Rican population, which could be used in conjunction to the Body Shame scale

of the OBCS to examine the relationship of these two variables and how it affects women's daily lives.

*Conclusion*

In summary, the final 6-item version of the Body Shame scale demonstrated appropriate structure and internal consistency reliability, which suggests that the present study's findings support the future use in research and practice, of an abbreviated, 6-item version of the Body Shame scale within the Objectified Body Consciousness Scale in a sample of women residing in Puerto Rico. In particular, if measurement brevity is necessary, the results of this study provide support for using the abbreviated model, in which two of the items have been removed, given that this might enhance structural properties of the data with little to no losses in the internal consistency of the scale.

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