

Objectification Theory: Applicability in a Sample of Rio Grande do Sul/Brazil

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ABSTRACT – The applicability of objectification theory on undergraduate female students from Rio Grande do Sul was analyzed, examining if the constructs of self-objectification, self-surveillance, appearance anxiety and body shame worked to predict disordered eating and depressive symptomatology. Participants were female undergraduate students from Rio Grande do Sul. Two quantitative, cross-sectional studies were conducted. On the first one ($n = 622$), the psychometric characteristics of the adapted instruments (English-Portuguese) were evaluated. On the second one, only data provided by Psychology students ($n = 371$) was used to test the framework using the innovative method of Bayesian Networks. Results indicate that the tested variables predict outcomes related to depression and eating disorders, partially explaining the gender disparity in the development of these pathologies. Objectification theory is useful to understand how the phenomenon can affect the mental health of Brazilian women.

KEYWORDS: anorexia, bulimia, depression, women, gender.

Teoria da Objetificação: Aplicabilidade em uma Amostra no Rio Grande do Sul/Brasil

RESUMO – Analisou-se a aplicabilidade da teoria da objetificação em universitárias do Rio Grande do Sul, examinando as variáveis objetificação do self, automonitoramento corporal, ansiedade de aparência e vergonha corporal como possíveis preditoras de sintomatologia associada à transtornos alimentares e depressivos. Trata-se de dois estudos quantitativos, de corte transversal. No primeiro ($n = 622$), avaliou-se as características psicométricas dos instrumentos adaptados (Inglês-Português). No segundo, usou-se apenas dados de estudantes de Psicologia ($n = 371$) para testar a estrutura através do método inovador de Redes Bayesianas. Os resultados indicam que as variáveis testadas predizem desfechos ligados a depressão e transtornos alimentares, explicando parcialmente a disparidade de gênero no acometimento destas patologias. A teoria mostra-se útil para entender como o fenômeno pode afetar a saúde mental de brasileiras.

PALAVRAS-CHAVE: anorexia, bulimia, depressão, mulheres, gênero.

Objectification has been discussed in philosophy since Kant (Loughnan et al., 2010), who argued that the phenomenon occurred when a person became a mere instrument of satisfaction for another, having their humanity denied and seen as something to be consumed. A more specific type of objectification, called sexual objectification, has been described by Sandra Bartky (1990) as the separation of the body, body parts, or sexual functions from the rest of the person's identity, resulting in instrumentalization and seeing these parts as representative of the subject as a whole.

Sexual objectification is a power relation, and like most power relations, it is traversed and shaped by gender issues. Its peak can be understood as the violence of rape (Holmes & Johnson, 2017). This oppression, however, also manifests itself in ways that are more symbolic and indirect, which may not be as recognizable. Sexism is made up of a multitude of practices, daily experiences that influence our beliefs, our understanding of who we are and, especially for women, this often includes the belief that physical appearance represents something fundamental and primordial about ourselves

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■ Submetido: 17/12/2020; Aceito: 02/02/2022.

(Bearman & Amrhein, 2014). Advertisements, as forms of communication that appeal to our emotions and shape our values, act as message vectors that correlate women's value to beauty, hypersexualizing them more often than men, invoking stereotypes of femininity and, consequently, limiting what are understood as proper ways of being a woman (Hatton & Trautner, 2011; Rudloff, 2020). Media pressures often equate the value of people with how well they can fit into an aesthetic standard, which ends up becoming a symbol of personal success or failure (Dakanalis et al., 2015).

In this sense, Bearman and Amrhein (2014) describe that objectification can be legitimizing (when there is a reward

for having an appearance) or derogatory (when there is criticism or punishment due to having an appearance), and in the absence of these, women may face the phenomenon of social invisibility. The idea of vanity, which in its etymology means "emptiness," is commonly associated with women. This adjective, however, can be better understood when we look critically at the contexts in which women are inserted. Faced with objectifying scenarios, it is understandable that women search for legitimizing forms of objectification and, even paradoxically, perpetuate this with each other, often in an attempt to avoid social invisibility or derogatory objectification (Bearman & Amrhein, 2014).

OBJECTIFICATION THEORY

Fredrickson and Roberts (1997) developed the Objectification Theory (OT) from a feminist epistemological perspective, to understand the disparities and specificities of gender in the emergence of psychiatric pathologies. As for mental health outcomes, the authors focused particularly on eating disorders, depression, and sexual dysfunction, due to the disproportionality with which they affect more women than men (Fredrickson & Roberts, 1997). Based on the concept of sexual objectification proposed by Bartky (1990), OT operationalizes, in an integrative framework for mental health, the possible negative consequences of living in a culture that sexually objectifies girls and women. The theory postulates that recurrent experiences of this dimension of sexism, which women experience and are socialized from a very young age, can lead women to treat themselves as objects to be looked at and evaluated (Fredrickson & Roberts, 1997).

The transfer of this objectifying perspective does not come only from the media, but also through interpersonal actions, such as judgments and assessments, often unsolicited, made by others about women's bodies (Bartky, 1990). The phenomenon, shaped by patriarchy, is a common experience in social interactions, evidenced through behaviors, touches, comments and objectifying glances (Gervais et al., 2020). Bartky (1990) points out that, in public space, men could enjoy looking at women in silence, but the verbalization of sexual comments (such as "hottie") has the communicative function of making women know and perceive themselves in the same objectifying way as these men see them.

Thus, girls and women may end up introjecting the idea that corresponding to ideals of beauty is part of their role as people put in a space marked as "feminine." It is within this context that Fredrickson and Roberts (1997) conceptualize the internalization of an observer's perspective on one's own body as objectification of the self. This means that there is greater focus on observable body attributes (e.g., weight), as opposed to a first-person perspective, where there is a focus

on unobservable body attributes (e.g., motor coordination). This concept becomes key to understanding the psychological implications arising from the phenomenon of objectification.

After the publication of the OT in 1997, Noll and Fredrickson published the Self Objectification Questionnaire (SOQ) in 1998. In 1996, however, McKinley and Hyde (1996) had already published the Objectified Body Consciousness Scale, which measures components linked to bodily experiences in women. These components are constant self-surveillance, body shame, and appearance control beliefs. The theoretical postulates for these two frameworks are similar, since both articulate the consequences of sexual objectification in women, making these scales the most frequently used measures to work quantitatively on the objectification of the self (Calogero, 2011). In their 1998 work, Noll and Fredrickson found a positive correlation between the self-objectification questionnaire developed by them and appearance anxiety, a component measured by the Appearance Anxiety Scale (Dion et al., 1990). Therefore, this measure is also commonly used in research related to objectification.

By unraveling the components of this phenomenon and their interactions, the OT shows how these variables can contribute to increasing mental health risks in women, especially in relation to eating disorders and depression. The OT helps, at least partially, to unveil the reasons why these pathologies tend to affect more women than men (Roberts et al., 2018; Smink et al., 2012; World Health Organization, 2020).

According to Calogero (2011), there was a 1,920% increase in the number of peer reviewed articles dealing with objectification of the self or objectified body consciousness between 1996 and 2008, based on research done using these keywords in the database PsychINFO. Thus, internationally, the OT has already been empirically and repeatedly tested and evaluated. Mental health consequences linked to the

OT have already been analyzed with samples of women in Australia (Tiggemann & Slater, 2015), the United States (Holmes & Johnson, 2017), Belgium (De Wilde et al., 2020), Italy (Dakanalis et al., 2015), China (Sun, 2017), among other countries.

The framework continues to be used in research, especially to assess intersections in different groups of women, expanding the theory. Anderson et al. (2018), for example, found that black women are more sexually objectified by onlookers than white women. Another study (Beech et al., 2020) discussed the effects of objectification on pregnant and postpartum women, who had higher levels of body shame, concerns about appearance, eating disorders, concerns about the negative impact of breastfeeding, among other effects. For a theoretical review of the multiple studies already carried out in the area, see the works by Roberts et al. (2018), and Daniels et al. (2020).

Brazilian Context

In Brazil, only one author (Loureiro, 2014) researched this theory empirically, employing the concepts of self-surveillance and body shame and using global measures of self-esteem and body image. To our knowledge, there are no studies in Brazil evaluating the relationship between objectification of the self and symptomatology of pathological outcomes, that is, testing the framework as proposed by Fredrickson and Roberts (1997).

Western societies are often permeated by objectification, with the so-called cult of the body being commonplace, where bodies are treated as being valuable based on what is defined as beauty. One way to partially corroborate the existence of a strong culture of objectification in Brazil, indirectly, is the number of plastic surgeries that are performed in the country.

Brazil is the country that most consumes plastic surgeries in the world (International Society of Aesthetic Plastic Surgery [ISAPS], 2019), according to data collected in 2018. These surgeries are mostly sought after by women and the most performed procedures are breast augmentation and liposuction (ISAPS, 2019). The trend for these procedures to be at the top of the list has continued for years. Brazil also leads in the number of adolescents who seek these procedures, being the country responsible for the majority of breast augmentation surgeries performed worldwide in teenagers under 17 years of age (ISAPS, 2019). Adolescence is a particularly critical period when thinking of gender and body image issues, which are associated with the development of

eating disorders, low self-esteem and depression (Nogueira-de-Almeida et al., 2018; Rentz-Fernandes et al., 2017).

Cook and Cusack (2010) understand the phenomenon of plastic surgery as an echo of stereotyped notions of beauty, which suggest that women have value only through beauty, sexual attractiveness and submission, as Fredrickson and Roberts (1997) also point out. Considering the Brazilian context, it is relevant to conduct research on objectification and its possible contributions to damages and risks for the mental health of girls and women.

Although there are few epidemiological studies on the prevalence of mental disorders in the general population, Brazil seems to follow the international pattern in terms of gender disparities when it comes to depression (Andrade et al., 2006). The research by Almeida-Filho et al. (2004) found the prevalence of depressive symptoms to be around 12% in the general population, in a ratio of 2:1 women:men.

This gender disparity is also present in eating disorders (ED) in the country, such as *bulimia nervosa* (BN) (Andrade et al., 2002), similarly to the international literature. According to Smink et al. (2012), *anorexia nervosa* (AN) is relatively common in young women in the West, with an increase in the age group between 15 and 19 years. Among women, overall AN rates can reach 4%, while for BN this figure is 2% (Smink et al., 2013). In Brazil, however, the prevalence of BN, based on a study carried out in the urban region of São Paulo, can reach 4.7% (Smink et al., 2013), showing higher incidence compared to European and North American countries.

The research carried out by Andrade (2016), with over 27 thousand participants, showed that about 10% of Brazilian men and 18% of Brazilian women, with Body Mass Index (BMI) considered normal, practice at least one behavior such as use of diuretics, laxatives or appetite suppressants, forced vomiting, prolonged fasting and exhaustive physical exercise. Among men, the most common behavior was intense exercise routines, while for women it was prolonged fasting.

Taking this scenario into account, we conducted two studies. Our objective in the first study was the translation and adaptation of instruments related to the Objectification Theory. The second study evaluated the applicability of the theory in Brazil, together with the proposed outcomes of symptoms of depression and eating disorders. The hypothesis was that self-objectification and self-surveillance would be related to higher scores on the depressive symptomatology and eating disorders scales, being mediated by the variables body shame and appearance anxiety.

STUDY I: TRANSCULTURAL ADAPTATION

Method

Participants

The participants were women, undergraduate students aged at least 18 years, enrolled in different courses at universities in the state of Rio Grande do Sul (RS). A minimum of 560 participants was calculated, considering 10 participants per item of the adapted scales (Terwee et al., 2007). Women were invited to participate in the study in two ways: through an email sent to 1,466 undergraduate Psychology students from a large university in RS and through a sponsored ad on Facebook containing the research link on the Qualtrics platform. The ad was aimed at the target audience of female university students in Rio Grande do Sul. The data collection period was three months.

In order to access the questionnaire, the participants had to read and agree to the Informed Consent Term (ICF) that explained the voluntary nature of participation and the possibility of withdrawing at any time. The informed consent form, which could be printed, also contained information to contact the researchers and the university's ethics committee, which approved the research. The university's free psychological care service was also mentioned in the ICF in case the participants felt the need for psychological support.

Instruments

Four instruments were adapted. The Self-Objectification Questionnaire (Noll & Fredrickson, 1998), the Appearance Anxiety Scale (Dion et al., 1990), and the Self-Surveillance and Body Shame scales, both belonging to the Objectified Body Consciousness Scale (McKinley & Hyde, 1996).

Self-Surveillance

The Self-Surveillance Scale (McKinley & Hyde, 1996) was adapted to assess the construct with the same name. The scale assesses the frequency with which individuals surveil their bodies. McKinley and Hyde (1996) propose that constant self-surveillance is necessary for women to ensure that they are complying with cultural body standards, thus avoiding negative judgments. The scale has eight 6-point items varying between *strongly agree* and *strongly disagree*, with the option of NA (*not applicable*) if the participant understands that that item does not apply to her. An example item is "During the day, I think about how I look many times." Scores can range from eight to 48, with higher scores representing people who monitor their bodies frequently in relation to their appearance. The option NA is marked as missing data and the total score of the scale is only reached if more than 75% of the items (six out of eight) are answered.

Body Shame

The Body Shame Scale by McKinley and Hyde (1996) also has eight 6-point items ranging from *strongly agree* to *strongly disagree*, with the option of NA (*not applicable*). According to McKinley and Hyde (1996), a person with a high score on this scale would feel that they are bad or not good enough if they are not meeting culturally established body standards. This would be a reflection of how much these patterns were internalized by her. An example item is "When I can't control my weight, I feel like something must be wrong with me."

Appearance Anxiety

The Appearance Anxiety Scale (Dion et al., 1990) consists of 30 items answered on a five-point scale ranging from zero (*never*) to four (*almost always*). The objective is to verify the anxiety generated by one's appearance. An example item is "I feel that most of my female friends are more physically attractive than I am." Scores can range from zero to 56, with higher scores indicating greater appearance anxiety.

Self-Objectification Questionnaire

The Self-Objectification Questionnaire (Noll & Fredrickson, 1998) aims to measure individual differences in self-objectification by estimating the extent to which people view their bodies in an objectified manner. The questionnaire consists of ordering 10 attributes that must be marked from nine (*most important*) to zero (*least important*) in relation to physical self-concept. Five of these attributes are based on physical appearance (physical attractiveness, weight, sexual attractiveness, body measurements/proportions, and firm/defined muscles). Another five are based on physical competence (motor coordination, health, energy level, strength and physical fitness). The scores are calculated as the difference between the sum of attributes linked to appearance and the sum of attributes linked to competence, which can vary between -25 and 25. According to Noll and Fredrickson (1998), positive scores indicate a greater emphasis on appearance, which is understood as a more objectified self.

Procedures

The instruments adaptation was inspired by the steps described by Borsa et al. (2012), with the translation from English to Portuguese by three independent translators, syntheses of the translated versions and evaluation of the syntheses by expert judges. The complete questionnaire was evaluated by women with expertise in the area of feminist studies. Two evaluation methods were applied to verify the psychometric characteristics of the adapted instruments,

observing the adequacy of the data matrix in relation to factorization: the Kaiser-Meyer-Olkin (KMO) criterion and Bartlett's Test of Sphericity.

Then, exploratory factor analyses were conducted from the main factorization axis, with oblique rotation. The number of factors was determined by the original factor structure of the instruments. Factor loadings above .40 were considered adequate for the item to remain in the factors. In order to investigate internal consistency, Cronbach's alpha was calculated for all items in the scales. Lastly, to investigate evidence of validity in relation to the convergence criterion, Pearson correlations were performed between the scale scores and the Sociocultural Attitudes towards Appearance Questionnaire-3 (SATAQ-3) instrument (Thompson et al., 2004), which evaluates similar constructs in relation to body image.

The semantic equivalence of this instrument in relation to the Portuguese language has already been established (Amaral, 2011) and validated for the Brazilian context with young adults (Amaral et al., 2013). The instrument's core concept is that the beauty stereotypes propagated especially by the media can lead to internalization of these ideals and comparing appearances, affecting satisfaction with one's own body. The instrument consists of four subscales that total 30 items. Overall internalization assesses the overall influence of media through television, magazines and film; athletic internalization assesses the influence of athletic and sport-related models; the pressure dimension subscale assesses personal feelings in relation to the pressures exerted on the body by media messages, and the information subscale reflects how much the media functions as a source of information about appearance (Amaral et al., 2015). According to Thompson et al. (2004), the SATAQ-3 shows excellent convergence validity with measures of body image and eating disorders. All analyses were performed in the SPSS software, version 17.

Results

Participants

A total of 963 women responded to the survey, among which there were two refusals, as well as 339 who did not answer sufficient questions for their data to be analyzed. This resulted in a sample of 622 people. Participants identified mostly as white (89.9%, $n = 559$) and heterosexual (79.9%, $n = 496$), aged between 18 and 66 years ($M = 25.27$, $SD = 7.31$). Regarding monthly income, 54.9% ($n = 342$) answered in the range between 4,852 and 9,254 Brazilian reais, followed by 33.8% ($n = 211$) who were in the range between 768 and 2,705 Brazilian reais, and 11% ($n = 69$) with income above 20 thousand Brazilian reais.

Appearance Anxiety

Evaluation of the adapted instrument showed a KMO index of .93, considered excellent. The results of Bartlett's Test of Sphericity also indicated adequacy for factorization ($p < .001$). The results for factor extraction in the AFE indicated a single factor solution. The remaining factors explained 31.06% of the scale variation. Ten items did not reach factor loading above .40 (items 17, 19, 11, 18, 15, 10, 12, 5, 30, and 6). Cronbach's alpha for this sample was .93 and the correlation with the SATAQ-3 instrument was $r = .49$, $p < .001$. Table S1 of the supplementary material contains the factor loadings of the scale, and can be accessed via the link <https://bit.ly/3KXLkgo>.

Self-Surveillance

In the assessment of the instrument adapted for Portuguese and the Brazilian context, the KMO index was .82 and considered appropriate. The results of Bartlett's Test of Sphericity also indicated suitability for factorization ($p < .001$). The results for factor extraction in the AFE were forced to a single factor solution. The rest of the factors explained 33% of the variance of the scale. Cronbach's alpha for this sample was .79 and the correlation with the SATAQ-3 instrument was $r = .56$, $p < .001$. Table S2 of the supplementary material contains the scale factor loadings, and can be accessed via link <https://bit.ly/3KXLkgo>.

Body Shame

Evaluation of the adapted instrument showed a KMO index of .82, which is considered appropriate. The results of Bartlett's Test of Sphericity also indicated adequacy for factorization ($p < .001$). The results for factor extraction in the AFE indicated a single factor solution. The remaining factors explained 37.7% of the scale variation. One item did not reach factor loading above .40 (item five). Cronbach's alpha for this sample was .84 and the correlation with the SATAQ-3 instrument was $r = .54$, $p < .001$. Table S3 of the supplementary material contains the scale factor loadings, and can be accessed via link: <https://bit.ly/3KXLkgo>.

Self-Objectification Questionnaire

For this questionnaire, translation options were discussed, especially for the attributes that in English are listed as sexual appeal, energy level, measures and defined muscles. After debate, there was consensus on the translation, which resulted in the attributes being translated into *atratividade sexual*, *nível de energia (vigor físico)*, *medidas/proporções corporais*, and *músculos firmes/definidos*.

Discussion

This study suggests that the adapted instruments are reliable for measuring the constructs of body shame, appearance anxiety and self-surveillance in the Brazilian culture, although one item on the Body Shame scale and ten items

on the Appearance Anxiety scale did not reach the required factorial loading. Due to space limitations, the entirety of the adaptation process will be described in a future article, where the hypotheses of the reasons why these items did not work in our culture will be explored.

STUDY 2: TESTING THE OT FRAMEWORK ON BRAZILIAN WOMEN

Method

Participants

For purposes of homogeneity, only data referring to undergraduate Psychology students were used to test the theoretical framework, with a sample of 371 being reached, extracted from the larger sample of study 1 ($n = 622$).

Instruments

Study 2 was conducted through an online survey, containing the instruments adapted from study 1, plus an assessment measure for symptomatology of eating disorders and a scale of depressive symptomatology.

Eating Disorders

In order to assess symptomatology of eating disorders, the short version of the Eating Attitudes Test (EAT-26) by Garner and Garfinkel (1979) was used. The instrument consists of 26 statements, whose responses vary on a six-point scale (ranging from *never* to *always*). The EAT-26 has already been adapted and validated for the Brazilian context, with a sample of 365 female adolescent students from the state of São Paulo, with a Cronbach's alpha of .80 (Bighetti, 2003).

Depression

Depressive symptomatology was assessed using the Depression, Anxiety and Stress Scale (DASS-21), a shorter version of the original that contained 42 items, by Lovibond and Lovibond (1995). DASS-21 is a set of three self-report scales that vary by 4 frequency/severity points to check the extent to which the respondent has experienced these states in the last week. Each subscale contains seven items aimed at assessing the emotional states of depression, anxiety and stress. The main symptoms of depression assessed by the scale are dysphoria, hopelessness, self-depreciation, devaluation of life, lack of interest/involvement, anhedonia and inertia. An adapted version of DASS-21 for the Brazilian context was used, validated with a sample of 242 adults. The adaptation indicated high adequacy of the model, with Cronbach's alpha of .92 for the depression subscale, 0.90 for the stress subscale, and .86 for the anxiety subscale (Vignola & Tucci, 2013).

Procedures

In order to test the adequacy of the descriptive models and central trends, statistics were performed for the variables under evaluation. In order to verify the applicability of the objectification model and its relationship with symptoms of depressive mood and eating disorders in the Brazilian context, two procedures were carried out.

First, the Bayesian Networks (BN) method was used. This is a widely used class of probabilistic graphical models, but which had not yet been applied to the OT. Bayesian Networks model the general dependency structure of multiple variables, visualized in Directed Acyclic Graphs (DAG) (Spirites et al., 2000). DAGs incorporate "nodes" (the specific variables being analyzed), joined together by edges (lines representing the identified effect directions). One of the great and innovative advantages of the BN is that their algorithms can be used in an exploratory way, allowing an inference process from the data to efficiently generate a DAG, joining graph and probability theories (Borsboom & Cramer, 2013). In this exploratory use, BNs locate all possible independent conditional relationships present in the data. Therefore, the structural properties of a set of variables are derived by learning the underlying graph from the data.

For this study, the BN learning structure was based on Hill-Climbing and Tabu Search metrics and on a hybrid approach (constraint and score-based) using the MMHC and RSMAX2 algorithms (Tsamardinos et al., 2006). The Conditional Probability Table (CPT) was calculated using "bnfit" from the bnlearn package (Scutari, 2008). These procedures were performed using the RStudio software.

Then, a confirmatory factor analysis was performed to confirm the model generated by the BN, a procedure that has been gaining strength in the literature (Duarte et al., 2011). The polychoric correlation matrix of the items was submitted to the Maximum Likelihood (ML) estimation method, using the AMOS 21 software. The fit indices considered were: Comparative Fit Index and Tukey-Lewis Index (CFI and TLI $\geq .95$), Root Mean Square Error of Approximation (RMSEA $\leq .06$ or $\leq .08$ with confidence interval of 90%), and the statistical significance of the Chi-square test ($p \geq .05$).

Results

Participants were between 18 and 66 years of age ($M = 25.49$, $SD = 7.33$). Most self-reported as white (91.6%, $n = 339$) and heterosexual (78.4%, $n = 290$). Regarding monthly income, 57.2% ($n = 212$) answered in the range between 4,852 and 9,254 Brazilian reais, followed by 28.6% ($n = 106$) who were in the range between 768 and 2,705 Brazilian reais, and 14.3% ($n = 53$) with monthly income above 20 thousand Brazilian reais.

Means for self-objectification, mediating variables and symptomatologic outcomes are shown in Table 1. Overall negative scores were obtained from the Self-Objectification Questionnaire, indicating that, in this sample, there was a relatively greater emphasis on bodily competence than on body appearance. Our scores were lower, in contrast to the original study by Fredrickson et al. (1998), who found $M = .82$ in a sample of women. Calculating the EAT-26 score as proposed by Garner and Garfinkel (1979), where scores above 21 indicate a positive test, it was found that 27% of the

sample in this study met clinical criteria for symptomatology of eating disorders.

For the depression outcome, DASS-21 scores showed that 44.5% of the sample met criteria for some level of symptomatology, with the following intensity percentages: 11.6% mild; 13.7% moderate; 5.9% severe; and 13.2% extreme. The remainder (55.5%) did not meet criteria for any level of depressive mood symptomatology. This variable was analyzed as dichotomous (exhibiting or not exhibiting any of the levels of depressive symptoms).

Table 2 shows the correlations between self-objectification, mediating variables and pathological outcomes. Self-objectification was positively correlated with all variables, with the exception of depression.

Figure 1 shows the model in its entirety and how it applies to the outcomes analyzed through different paths provided by Bayesian Networks. The test of the proposed model using path analysis through AMOS obtained good fit indices: $\chi^2 = 11.65$ (7,371), $p = .11$, CFI = .99, TLI = .99, RMSEA = .04, 90% CI [.00, .08].

Table 1
Mean between self-objectification and the proposed outcomes.

	Mean (SD)	95% CI
Self-Objectification	-4.62 (.68)	[-5.96, -3.28]
Self-Surveillance	3.57 (.04)	[3.49, 3.66]
Body Shame	2.44 (.05)	[2.33, 2.54]
Appearance Anxiety	2.95 (.04)	[2.86, 3.03]
Depression	1.77 (.03)	[1.69, 1.85]
Eating Disorders	4.29 (.03)	[4.37, 4.22]

Table 2
Correlations between self-objectification and the proposed outcomes.

	SO	BSL	BS	AA	DEP	ED
SO	1	.45*	.33**	.40**	.09	.28**
SS		1	.44*	.60**	.20*	.41**
BS			1	.70*	.40*	.61**
AA				1	.42*	.53**
DEP					1	.24**
ED						1

Note. SO = self-objectification; SS = self-surveillance; BS = body shame; AA = appearance anxiety; DEP = depression; ED = eating disorders.

** $p < .01$.

* $p < .05$.

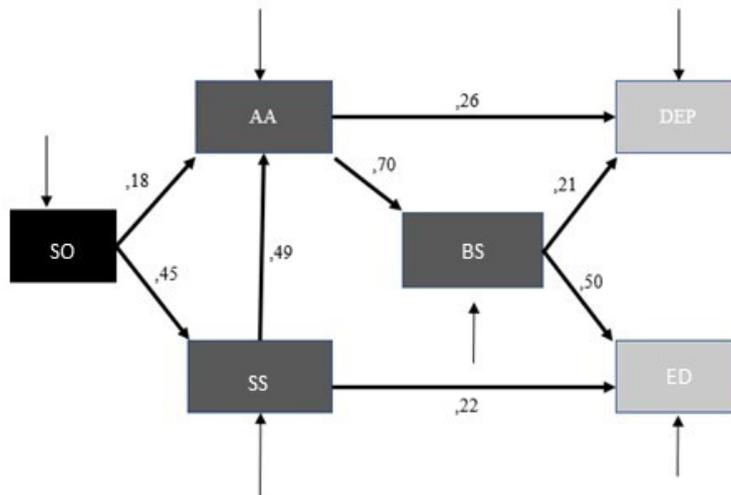


Figure 1. Self-Objectification theory model for the sample.

Note. SO = self-objectification; SS = self-surveillance; BS = body shame; AA = appearance anxiety; DEP = depression; ED = eating disorders.

Discussion

Even with the negative SOQ mean indicating that, at first, in this sample there was a relatively greater emphasis on body competence than on body appearance, the objectification theory model was applicable, with the proposed mediators of self-surveillance, appearance anxiety and body shame in relation to the outcomes of depression and eating disorders. It is possible that the negative mean of the SOQ can be explained in the Brazilian context by the existence of a strong “fitness” culture (Jacob, 2014), where there is not only the propagation and construction of desire for thin bodies, but also for athletic bodies. Therefore, issues related to beauty, physical ability and health can end up being interchangeable. The SOQ was used in this research in order to remain faithful to the original proposal by Noll and Fredrickson (1998), considering that this is the first study to test the authors’ framework in Brazil.

It is also important to consider that in several studies, such as Schaefer et al. (2018), the SOQ was not used, and the objectification of the self was evaluated directly through the self-surveillance instrument. This occurs because constant self-surveillance is considered as the behavioral manifestation of internalized objectification, which will be related to other mediating variables and subsequently to psychopathologies, especially food-related (Schaefer et al., 2018).

Thus, as shown in Figure 1, the fact that there is a direct path between constant self-surveillance (SS) and the symptomatologic outcome of eating disorders, denotes precisely the relationship between objectification and ED’s. Explaining this relationship helps to understand why there is so much gender disparity in regards to this psychopathology, showing that the body needs to be understood, in health areas, not only as a biological structure or even an agent of

culture, but also as a place traversed by social controls. Body shame (BS), another important predictor of eating disorders (Schaefer et al., 2018) in conjunction with SS, also appears in connection with this outcome. Other research findings show that comparisons with unrealistic thinness ideals, in association with objectification of the self, lead to body shame and unhealthy eating attitudes (Roberts et al., 2018).

At the same time, there was no direct pathway between SS and BS, which suggests that women may experience this harmful emotion even if there is no practice of constant self-surveillance. This finding is consistent with studies such as that of Tylka and Hill (2004), which proposed that women who experience pressure to be thin may report feeling BS without necessarily engaging in SS. Body shame involves not only self-evaluation, but also beliefs about how we believe others evaluate us (Fredrickson & Roberts, 1997), resulting, according to the authors, from a fusion between negative personal evaluations and the potential for social exposure. Precisely for this reason, there is a relevant connection between BS and appearance anxiety (AA), which is characterized by the attempt to anticipate these threats or negative judgments about the body, also affected by the possibility of exposure.

In studies like that by Tiggemann and Slater (2001), the objectification of the self (OS) usually presents a direct path only to SS, but in this case, AA, although in a smaller magnitude, was also found to be a corollary construct. This indicates that, at least in this sample, appearance anxiety could, together with self-surveillance, be understood as a direct manifestation of internalized objectification.

This anxiety, which in the outcome of eating disorders appears to be mediated by body shame, presented a direct path to symptoms of depression. The same happened with the BS variable. In this sample, 44.5% of women met

criteria for some level of intensity of depression symptoms. Symptoms of this type of mood include self-deprecation, social withdrawal, guilt, punishment, self-accusations, lack of satisfaction, among others. Both the internalization of shame about one's own body and the state of fear about situations in which this body may be judged can be related to these symptoms. In the classic *The Beauty Myth*, Wolf (1992) discusses the state of vulnerability in which women can find themselves when beauty is a main pillar of their identities, since their self-esteem would be strongly connected to external approval or disapproval.

In this sense, feeling ashamed about one's own body can contribute to feelings of self-devaluation, failure, and guilt for not being within the standard that is socially acceptable and broadcasted by the media. On the other hand, appearance anxiety may have been significantly related to depression due to symptoms such as social avoidance, as a way of trying to avoid negative judgements. The direct association of this variable with depression may also be linked to concerns and excessive fear about how appearance will be evaluated, especially in contexts such as the current ones, with increasing virtual imagery communication. The study by Lamp et al. (2019) with young women in the US, for example, revealed that objectification of the self predicted depression precisely in women who digitally manipulated their photos before releasing them, also affected by an unease about "deceiving" others.

Regarding the number of women with a positive test on the EAT-26, we consider the percentage of 27% expressive, corroborating the theory of Fredrickson et al. (1998) that body shame, self-surveillance, and appearance anxiety may contribute to problematic eating attitudes. It is believed that the Objectification Theory model can be used to understand, at least partially, how objectification can affect mental health outcomes in Brazilian women. This theory enhances scientific knowledge by explaining previously latent aspects related to the experiences of being a woman in a culture that sexually objectifies their bodies. The OT helps to expand and reveal the multiple cognitive mechanisms involved in the development of psychopathologies, being especially useful in the dismantling of strictly biological explanations to justify gender disparities in the development of certain disorders.

Mental health specialties must recognize the impact of sociocultural influences on psychological experiences, including sociopolitical factors arising from oppressions such as sexism (Bearman & Amrhein, 2014; Roberts et al., 2018). The OT is not an end in itself, but opens doors for other oppressions, experiences and variables to be included in the model. It also demonstrates how an analytical and critical look at power hierarchies such as sex/gender, race and class can (and often should) go hand in hand with empirical approaches, generating scientific evidence of the damages of these structures of oppression.

FINAL REMARKS

This research generated evidence that supports the use of the objectification theory framework with Brazilian women, to think about the relationships between sociocultural and psychological variables to understand the gender disparities in the prevalence of psychopathologies such as depression and eating disorders. The large body of research already carried out with OT at the international level has mostly used methods that determine the relationship between the variables a priori. Considering these previous studies, the methodological choice for Bayesian Networks was made to test the OT model against methodologies where the relationship between the variables was pre-defined. In this type of network analysis, the relationships between the a priori variables are not reported. This innovative use of Bayesian Networks proved to be useful, since its exploratory capacity allows the modeling of the general structure of dependence of multiple variables. This proved the strength of the model, as well as revealed different paths between the predictor variables of the analyzed outcomes, so it is

recommended that future research continue exploring this method. The research points out part of the objectification context in Brazil, expanding the range of countries that can benefit from the OT, but our sample was composed mostly of white, heterosexual women with financial status above the national average, which is a relevant limitation. Expanding and qualifying the model, considering the heterogeneity of the population of Brazilian women regarding race/ethnicity, economic status, sexuality, among other social markers and intersections, is of paramount importance, especially due to the long history of colonization, slavery and inequality that mark the history of our country. Research with younger populations, such as pre-teens and adolescents, is also necessary, as these are critical periods for the internalization of beauty standards. We emphasize the importance of including issues related to objectification, as well as other forms of internalization of oppression, in future research in the area of psychology and in the planning of interventions in the area of mental health.

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