

## **Influence of Body Ideals and Social Comparison in Body Image**

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The present study aimed at evaluating the effects of body ideals and social comparison on the body image of male and female participants. Body image has been defined as a multidimensional construct, encompassing attitudes, perceptions, and behavior (Grogan, 2008; Pruzinsky & Cash, 2002). Prior research demonstrates the relationship between body patterns, social comparison, and body image (Grabe, Hyde & Warde, 2008). The majority of studies in this area have shown evidence that females' body evaluation worsens after they are exposed to images of thin models, in comparison to those exposed to other sorts of images (Grabe et al., 2008).

This study evaluated different aspects of body image. Specifically, we intended to evaluate the impact of visual exposure to body ideals with regards to body satisfaction, body size discrepancy, and behavioral intention related to diet and exercise.

Women experience more social pressure to conform to body ideals than men. Females tend to overestimate their body size (Branco, Hilário & Cintra, 2006) and experience more concerns related to appearance than males do (Striegel-Moore & Franko, 2002). The present research hypothesized that females would exhibit lower levels of body size discrepancy and body satisfaction, and higher levels of exercise and diet behavioral intention than males. Moreover, we estimated that exposure and comparison with body standards would lower body satisfaction and discrepancy of body size (Durkin, Paxton & Sorbello, 2007; Grabe et al., 2008). Dittmar, Halliwell and Stirling (2009) found that women who internalized thin ideals worsened their body evaluation. Therefore, we hypothesized that people with high internalization levels would lower their body satisfaction and increase their discrepancy. Finally, we expected that individuals exposed to body ideals would show higher levels of diet and exercise behavioral intention.

Initially, we intended to evaluate if the pattern evidenced by international studies of extreme thinness in females and muscularity in males (Park, Yun, McSweeney, & Gunther, 2007) would be empirically confirmed in this Brazilian sample. A survey using images was conducted in the first study. Materials included images of men and women ranging in body mass index (BMI) and a questionnaire. The participants were 64 female and 64 male college students (average age = 20.3 years, SD = 2.5). This convenience sample was chosen in accordance with the population to be studied in the second study. After signing a participation agreement, the students answered a questionnaire, evaluating each image. Images for each gender were chosen based on the shared ideals determined from the questionnaire's ratings, and later used as experimental stimulus for the second study.

The second study was an experiment conducted to analyze the impact of the ideal body's visual priming in different body image measures. Three experimental treatments took place: (1) exposure to ideal body, (2) exposure and comparison to the ideal body, and (3) control (no exposure to ideal body). The sample consisted of 83 male and 82 female students. The average age of the participants was 22.3 years (SD = 5.0). The convenience sample was chosen due to the practical difficulties of carrying out an experimental study with a representative sample. After signing the participation agreement formulary, participants evaluated the images and answered dependent variables' measures.

Perceptual discrepancy was assessed through a Brazilian version of the Figure Rating Scale (Kakeshita & Almeida, 2006) composed of 9 male and female figures, each with corresponding BMI. The participants pointed out the figure they perceived best represented themselves. Self appraisal of height and weight was used for the BMI calculations. The difference between calculated BMI and the Scale's BMI was interpreted as a measure of discrepancy.

Two scales were adapted and validated for this study, the Body Satisfaction Scale Situational-ESSC (Hirata & Pilati, 2010) and the Body Patterns Scale. The ESSC was developed and validated in a sample of Brazilian students. Exploratory factor analysis revealed a four-factor structure, namely "lower body parts" ( $\alpha = .72$ ), "satisfaction and muscles," ( $\alpha = .82$ ), "external parts" ( $\alpha = .65$ ) and "dissatisfaction and fat" ( $\alpha = .82$ ). As suggested by

Thompson (2004), internal reliability was measured in this sample. As a result, alphas were satisfactory for half of the scale's factors, precisely "dissatisfaction and fat" ( $\alpha = .86$ ) and "satisfaction and muscles" ( $\alpha = .78$ ). "External parts" and "lower body parts" showed alphas inferior to .70, the minimum value suggested by Thompson (2004), and were therefore excluded from our analysis.

Female and Male Body Pattern Scales, EFIC and EMIC respectively, (Hirata, Pérez-Nebra & Pilati, 2010) were adapted from existing measures, and validated in a Brazilian sample. Exploratory factor analysis showed a two-factor structure for both scales. The "internalization" factor's alpha was of .81 (EFIC) and .88 (EMIC). The "intention and behavior" factor's alpha was of .87 (EFIC) and .81 (EMIC). Alphas for the "internalization" factor were of .88 (EFIC) and .89 (EMIC). In the "intention and behavior" subscale, alpha were of .79 (EFIC) and 0.78 (EMIC). Approval was obtained by the Ethics Committee for Research with Humans (184/08).

Results from the first study were consistent with international literature. Female's ideal body was that of an ultra thin model (BMI=16, 23Kg / m<sup>2</sup>). The male sample selected a muscular body as their ideal representation.

A MANCOVA was conducted in the second study, with BMI and body satisfaction pre-testing measures as covariates. Comparisons between men and women took place initially. We later evaluated the effects of experimental treatments. Wilk's criterion showed significant differences between sexes in dependent variables, with  $F(9.143) = 9.05$ ,  $p < .001$ ,  $\eta^2 = .36$ . Separate analyses showed no significant results in experimental treatments for the male sample. However, in the female sample, significant effects were noticed in the perceptual measures of body image, according to Wilk's criterion ( $F(14.134) = 2.44$ ,  $p = 0.004$ ,  $\eta^2 = .20$ ). Women in the comparison condition exhibited higher levels of perceptual discrepancy. Nevertheless, women who only observed the ideal, without comparing, viewed themselves to be thinner than those in the control condition. Significant effects on body satisfaction measures were found only among "thin-internalizers" ( $F = 3.66$ ,  $p = .048$ ,  $\eta^2 = .30$ ). Their body satisfaction was reduced after they viewed and compared their bodies with the ideal.

As expected, women had lower body satisfaction than men. However, this was true only with respect to body fat. Male students were more dissatisfied

with muscle mass. Thinness is an important feature in female body image (Park et al., 2007). Literature also points to the importance of muscularity in young male's body image (Stanford & McCabe, 2005). Additionally, women had significantly higher levels of perceptual discrepancy than men.

Experimental manipulation showed body satisfaction effects on "thin-internalizers." After comparing themselves, these women worsened their body satisfaction, as has been found in previous studies (Dittmar et al., 2009).

Women who only observed the ideal body exhibited lower perceptual discrepancy than those in the comparison and control conditions. After viewing ideal bodies, some women perceive themselves as thinner, or may experience a 'thin fantasy', as suggested by Mills, Polivy, Herman, and Tiggemann (2002).

Explicit body comparison resulted in enhanced perceptual discrepancy. Reflecting on one's own body adequacy, in comparison to an ideal, furthers the perceptual distance from the observed body, which may also lead participants to view themselves as larger than they actually are.

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