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Body Guilt: Preliminary Evidence for a Further Subjective Experience of Self-Objectification

Rachel M. Calogero

Virginia Wesleyan College

Afroditi Pina

University of Kent

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Correspondence concerning this article should be addressed to Rachel M. Calogero, School of Psychology, Keynes College, University of Kent, Canterbury, UK, CT2 7NP. Email:

R.Calogero@kent.ac.uk

### **Abstract**

Two studies investigated body guilt (i.e., feeling regret and remorse over how the body looks and a desire for reparative action to “fix” the body) within the framework of objectification theory among predominantly White British undergraduate women. In Study 1 (N=225), participants completed self-report measures of interpersonal sexual objectification, self-surveillance, body shame, body guilt, and eating restraint. Path analyses indicated support for the inclusion of body guilt in the objectification model, with body shame and body guilt fully mediating the relationship between self-surveillance and eating restraint. In Study 2 (N=85), participants reported higher body guilt, self-surveillance, body shame, and eating restraint when self-objectification was situationally activated, compared to the activation of body empowerment or a neutral condition. Path analyses in the second study replicated the objectification model from Study 1 with a state measure of self-objectification. These findings suggest that women also feel guilt (in addition to shame) about their bodies when attention is directed toward their physical appearance and wish to “correct” their body via disordered eating. Acknowledging women’s feelings of guilt in relation to not meeting restrictive beauty standards furthers our understanding of women’s experience of objectification, and provides an additional target for reducing women’s mental health risks.

Keywords: body image, physical appearance, guilt, shame, eating disorders, body mass index, self-objectification, objectification theory

Body Guilt: Preliminary Evidence for a Further Subjective Experience of Self-  
Objectification

Feminist scholars have long discussed how the construction of women's bodies within particular sociocultural and heterosexist contexts determines the way that women's bodies will be evaluated and treated (Bartky, 1990; Berger, 1972; de Beauvoir, 1952; Dworkin, 1991; Henley, 1977; Martin, 1987). Objectification theory, proposed by Fredrickson and Roberts (1997), considers the pervasive sexual objectification of women in westernized societies as a macro-level context that produces a chain of negative micro-level consequences known to occur at a disproportionately higher rate among women. Sexual objectification occurs whenever a woman is reduced to and/or treated as a body or collection of body parts available for sexual use (Bartky, 1990). According to objectification theory, sexual objectification plays out most obviously in two arenas: actual interpersonal and social encounters (e.g., cat calls, checking out or gazing at women's bodies, sexual comments, harassment) and exposure to visual media that "spotlights" women's bodies and body parts. From this perspective, girls and women come to place excessive emphasis on physical appearance as a result of recurrent sexual objectification, ultimately adopting an external observational standpoint on themselves. Referred to as self-objectification, adopting this particular vantage point on the self requires women to chronically "police" or self-monitor their bodies in anticipation of being evaluated based on their appearance. This engagement in chronic body monitoring, or self-surveillance, is the common behavioral manifestation of self-objectification (McKinley & Hyde, 1996; Tiggemann & Slater, 2001).

### **Self-Objectification and Related Consequences**

In the framework of Fredrickson and Roberts' (1997) objectification theory, self-objectification is the primary psychological mechanism that accounts for the link between experiences of sexual objectification and detriments to the well being of individual girls and women. Objectification theory makes a distinction between trait and state forms of self-objectification. Whereas trait self-objectification refers to a chronic tendency to view one's own body through an objectified lens across public and private contexts, state self-objectification refers to a temporary condition in which individuals view themselves as objects in response to environmental cues. That is, situational experiences of sexual objectification call immediate attention to women's bodies, placing women's own bodies on display and producing a *state* of self-objectification. Because self-objectification directs women's attention toward how their bodies will be viewed, evaluated, and treated by others, Fredrickson and Roberts proposed that either trait or state forms of self-objectification may increase opportunities for girls and women to experience higher body shame, more appearance anxiety, reduced concentration on mental and physical tasks, and decreased awareness of internal bodily states (e.g., satiety, hunger, fatigue, emotions). In turn, this collection of negative psychological consequences is proposed to accumulate and lead directly to a subset of mental health risks that occur, again, at a disproportionately higher rate among girls and women: unipolar depression, sexual dysfunctions, and eating disorders.

Over a decade of research on objectification theory has provided considerable evidence for many of the propositions described above (Calogero, Tantleff-Dunn, & Thompson, 2011; Moradi & Huang, 2008). Empirical studies have demonstrated that both interpersonal forms (Hill & Fischer, 2008; Kozee & Tylka, 2006; Kozee, Tylka, Augustus-Horvath, & Denchik, 2007;

Moradi, Dirks, & Matteson, 2005) and media forms (Harper & Tiggemann, 2008; Morry & Staska, 2001) of sexual objectification predict state self-objectification and self-surveillance. Research has also demonstrated that subtle exposure to widely available sexist stereotypes about women that do not pertain directly to appearance increase women's self-objectification (Calogero & Jost, 2011). Moreover, there is strong evidence from studies of women across North America, Australia, and the United Kingdom that higher self-objectification, and the concomitant self-surveillance, may exact significant costs on women's subjective well-being (Breines, Crocker, & Garcia, 2008; Fairchild & Rudman, 2008) and cognitive performance (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998; Quinn, Kallen, Twenge, & Fredrickson, 2006). These costs include self-harming behavior (Harrell, Fredrickson, Pomerleau, Nolen-Hoeksema, 2006; Muehlenkamp, Swanson, & Brausch, 2005), cosmetic surgical procedures (Calogero, Pina, Park, & Rahemtulla, 2010), and a higher rate of mental health risks, including depression (Grabe, Hyde, & Lindberg, 2007; Tiggemann & Kuring, 2004), disordered eating (Calogero, Davis, & Thompson, 2005; Tylka & Hill, 2004), and poor sexual functioning (Calogero & Thompson, 2009; Steer & Tiggemann, 2008).

In particular, researchers have identified body shame – the degree to which women feel ashamed of their bodies when they perceive them as falling short of feminine beauty ideals (McKinley & Hyde, 1996) – as a key negative emotional consequence of self-objectification (Fredrickson & Roberts, 1997; Moradi & Huang, 2008; Tiggemann, 2010). Body shame consistently mediates the effects of self-objectification on disordered eating (Noll & Fredrickson, 1998; Quinn, Kallen, & Cathey, 2006; Tiggemann & Slater, 2001). In the context of objectification theory, self-objectification is expected to predict more body shame, which, in turn, predicts more disordered eating because habitual body monitoring leads women to compare

themselves to impossible internalized appearance standards against which they will inevitably fall short. These feelings of body shame fuel efforts to avoid a “defective” body by manipulating food intake to meet oppressive social mandates for a thinner and more feminine appearance (Fredrickson & Roberts, 1997; Fredrickson et al., 1998; Swami et al., 2010; Wolf, 1991).

### **Role of Body Guilt**

In the present work, we submit that body guilt may also be a key subjective experience associated with women’s experiences of sexual and self-objectification. The central purpose of our research was to examine the role of body guilt within the framework of objectification theory and disordered eating (Fredrickson & Roberts, 1997). Women report higher levels of interpersonal guilt and body guilt compared to men (Thompson, Dinnel, & Dill, 2003), suggesting that women also disproportionately experience body guilt, similar to their experiences of sexual objectification, self-surveillance, and body shame (Calogero & Jost, 2011; Calogero, Tantleff-Dunn et al., 2010; Davis, 1990; Fredrickson & Roberts, 1997; Puwar, 2004; Swim, Hyers, Cohen, & Ferguson, 2001). Although shame and guilt are both self-conscious emotions that often co-occur, they have been clearly differentiated in prior scholarship along cognitive, affective, and motivational dimensions (Lewis, 1971; Tangney, 1992, 1995; Tangney & Dearing, 2002; Tangney, Miller, Flicker, & Barlow, 1996), and in such a way that is useful to consider in the context of objectification theory.

In general, shame arises from appraisals of one’s core self as bad or inadequate and leads to unresolved negative affect and avoidance, whereas guilt arises from appraisals of one’s specific actions as wrong and leads to taking reparative action (Lewis, 1971; Tangney & Dearing, 2002). From a self-regulation perspective, shame has been conceptualized as a *proscriptive* form of self-regulation, whereas guilt has been conceptualized as a *prescriptive*

form (Sheikh & Janoff-Bulman, 2010). In this framework, a shame response serves as an indicator of what one should not do in order to avoid negative outcomes. In contrast, a guilt response serves as an indicator of what one should do in order to attain positive outcomes. It is important to point out that shame and guilt have been consistently correlated with each other in the literature (Tangney et al., 1996; Thompson et al., 2003) and that there is substantial overlap in the situations that give rise to these two emotions (Niedenthal, Tangney, & Gavanski, 1994), but scholars have confirmed that they are quite distinct phenomenological experiences (Niedenthal et al., 1994; Tangney, 1993).

Of particular relevance to disordered eating are those facets of shame and guilt that occur specifically within body image-related contexts, namely body shame and body guilt (cf. Burney & Irwin, 2000; Bybee, Zigler, Berliner, & Merisca, 1996; Frank, 1991; Thompson et al., 2003). Body shame involves a painful overall negative evaluation of the self as a result of falling short of internalized cultural appearance standards. Thus, body shame brings about a desire to escape or hide from others and the imagined or real public humiliation (Fredrickson et al., 1998; Tangney, 1995). In contrast, body guilt does not involve such a global and painful evaluation of the self, but instead is focused on specific, presumably controllable, behavioral transgressions that bring about a sense of regret and remorse over what was done. Thus, body guilt triggers a desire for reparative action to “fix” the self (Tangney, 1995; Tangney et al., 1996; Thompson et al., 2003). The focus on reparative action to align the self with what one should be doing to rectify the situation seems to distinguish phenomenological guilt from phenomenological shame most clearly.

### **The Present Research**

Body guilt may be a relevant subjective experience in this context because of the focus



on regret or remorse over perceived body-related transgressions, which may spur reparative action via bodily correction. We argue that being female in westernized cultures that so systematically objectify the female body creates multiple opportunities for women to feel guilty about not trying hard enough or not doing enough to meet feminine beauty ideals. We also argue that body guilt encourages women to partake in a wide array of corrective measures to fix their body or appearance. That is, not only may women “feel bad” about their bodies, but they may also feel that they have “done a bad thing” to their bodies when attention is directed toward their physical appearance. As a consequence, women may seek to repair or correct their “problem areas.” In two studies, we examined the role of body guilt within the context of objectification theory.

In Study 1, we employed a survey methodology to investigate the relationship between body guilt and a specific set of objectification theory variables. First, we predicted that body guilt would be positively correlated with interpersonal experiences of sexual objectification, self-surveillance, body shame, and eating restraint. Second, we tested an objectification model with body guilt using path analysis, with a temporal ordering of variables consistent with the assumptions of objectification theory (Fredrickson & Roberts, 1997). The path diagram was constructed such that the variable of interpersonal experiences of sexual objectification was theorized to predict self-surveillance; self-surveillance, in turn, was theorized to predict body shame and the new variable of body guilt; and both body shame and body guilt were theorized to predict eating restraint (see Figure 1). BMI was included as a covariate in the test of each pathway. Because reciprocal causality cannot be statistically tested in correlational designs, the present study tested and hypothesized the direction of causality that has been most consistently described in the literature.

Study 2 provided an experimental test of the role of body guilt in women's self-objectification. Specifically, we used a scrambled sentence task to prime a state of body objectification or body empowerment to test whether body guilt would increase when the concept of self-objectification was activated. The inclusion of a neutral condition with non-body focused primes allowed us to examine whether exposure to body objectification or body empowerment primes increased or decreased body guilt. We hypothesized that body guilt (along with self-surveillance, body shame, and eating restraint) would be higher in the body objectification condition compared to the body empowerment or neutral condition. We also tested the same objectification model with body guilt from the first study with a state measure of self-objectification in the second study.

### Study 1

#### Method

**Participants and procedure.** A total of 225 college women attending a southeastern British university received psychology course credit for their participation. Mean age was 21.60 years ( $SD = 6.69$ ), ranging from 18 to 49. Mean body mass index (BMI:  $\text{kg/meters}^2$ ) was 21.94 ( $SD = 3.18$ ). The ethnic composition of the sample was 79% White, 9% Black African, 7% Asian, and 5% Other/Mixed Race. Participants were predominantly British (78%), and there was little variability in the reported sexual orientation of participants: 91% heterosexual, 6% bisexual, 1% homosexual, and 4% unspecified. Female psychology undergraduates were recruited via an on-line advertisement on the psychology department's website to participate in a study about college women's health and well-being. Students had a choice to participate in this study or one of several other studies advertised on the website. After reading a brief description of the research and providing consent, participants completed the self-report measures described below

in counterbalanced order, and then provided demographic information (i.e., BMI, age, ethnicity, sexual orientation). A full debriefing appeared on-screen immediately following completion of the study.

**Interpersonal sexual objectification.** The Interpersonal Sexual Objectification Scale (ISOS; Kozee et al., 2007) was used to measure the extent to which women have experienced interpersonal forms of sexual objectification (i.e., body evaluation and unwanted explicit sexual advances) throughout their lifetime. Participants rated 15 items on a scale from 1 (*never*) to 5 (*almost always*), such as “How often have you noticed someone staring at your breasts when you are talking to them?” In the present study, items were averaged to create scale scores ( $\alpha = .93$ ). Scores ranged from 1 to 5, with higher scores indicating more frequent experiences of interpersonal sexual objectification. Previous research on the ISOS among predominantly White American college women has shown stable 3-week test-retest reliability and internal reliability, with alphas ranging from .91 to .95, and good convergent, discriminant, and incremental validity (Kozee et al., 2007).

**Self-surveillance.** The Surveillance subscale of the Objectified Body Consciousness Scale (McKinley & Hyde, 1996) was used to measure the degree to which individuals habitually monitor their bodies from an external observer’s standpoint, thus focusing more on how their bodies look than on how their bodies feel. Participants were asked to rate eight items from 1 (*strongly disagree*) to 7 (*strongly agree*), such as “During the day, I think about how I look many times.” In the present study, items were averaged to create scale scores. Scores ranged from 1 to 7, with higher scores indicating more frequent body monitoring and thinking about how one looks ( $\alpha = .82$ ). Previous research on this subscale among predominantly White American college women has demonstrated stable 2-week test-retest reliability and moderate to high

internal reliability, with alphas ranging from .76 to .89, and good convergent and discriminant validity (McKinley & Hyde, 1996).

**Body shame.** The Body Shame subscale of the Objectified Body Consciousness Scale (McKinley & Hyde, 1996) was used to measure the degree to which individuals feel shame about their bodies when they perceive themselves as falling short of meeting cultural appearance standards. Participants rated eight items from 1 (*strongly disagree*) to 7 (*strongly agree*), such as “When I’m not the size I think I should be, I feel ashamed.” In the present study, items were averaged to create a scale score ( $\alpha = .82$ ). Scores ranged from 1 to 7, with higher scores indicating more body shame. Previous research on this subscale among predominantly White American college women has demonstrated stable 2-week test-retest reliability and moderate to high internal reliability, with alphas ranging from .70 to .75, and good convergent and discriminant validity (McKinley & Hyde, 1996).

**Body guilt.** The Body Image Guilt and Shame Scale (BIGSS; Thompson et al., 2003) was used to measure body guilt – the degree to which individuals feel tension, remorse, or regret over specific body-related behaviors that evoke concerns with taking corrective action. To our knowledge, this is the only published scale that measures body guilt among individuals across the weight and shape spectrum. The format of the BIGSS items was constructed in line with the Test of Self-Conscious Affect (TOSCA; Tangney, Wagner, & Gramzow, 1989) with respect to the response alternatives and scenarios. The BIGSS instructs participants to indicate their degree of shame and/or guilt proneness in response to 15 specific body-related scenarios. Four response options (i.e., shame proneness, guilt proneness, externalization, and detachment) are presented for each scenario and participants are asked to rate each response option on a 5-point scale from 1 (*very unlikely*) to 5 (*very likely*). The ratings for externalization and detachment are used as

filler items. Because the BIGSS requires participants to make four different ratings in response to each of the 15 scenarios, the completion of the BIGSS requires 60 ratings. Because we were only interested in the measure of body guilt embedded in this scale and to reduce participant burden, we modified the BIGSS scale such that only the guilt response option was provided for each scenario. Participants were asked to rate the degree of body guilt they would feel on the same 5-point scale as described above for each of the 15 scenarios.

Whereas the TOSCA operationalizes guilt as a reparative action in response to an interpersonal transgression, the BIGSS items capture a reparative or corrective action in response to a *body-related* transgression that is accompanied by feelings of regret or remorse over what was done. That is, the BIGSS items are worded in such a way as to capture the potential reparations made to the body and appearance when feeling regret or remorse after a body-related transgression. This emphasis on reparative action in the operationalization of body guilt maps onto the conceptual definition of the construct and marks a critical distinction from the operationalization of body shame. For example, “Your partner asks you to lose weight. How likely is it that you would decide to do something about your weight?” or “You are watching a television show with a friend and notice that all the actors have perfect bodies. How likely is it that you would decide to stop eating junk food from now on?” Previous research on this subset of items among American university students has demonstrated excellent psychometric properties for this scale, including high internal reliability ( $\alpha = .88$ ); good convergent and discriminant validity with general self-conscious guilt ( $r = .48$ ), general self-conscious shame ( $r = .41$ ), body image concern ( $r = .43$ ), and personal identity ( $r = .19$ ); and women reported significantly higher body guilt than men (Thompson et al., 2003). In the present study, items were averaged to create a scale score ( $\alpha = .94$ ) wherein scores ranged from 1 to 5, with higher

scores indicating more body guilt.

**Eating restraint.** The Restraint subscale of the Eating Disorder Examination-Questionnaire (EDE-Q) was used to measure the extent to which participants engaged in dieting and restrictive eating behaviors over the past four weeks (Fairburn, 2008; Mond, Hay, Rodgers, & Owen, 2006). The full EDE-Q consists of 28 items that comprise four subscales: Restraint, Eating Concern, Shape Concern, and Weight Concern. In the present study, the five items comprising the Restraint subscale were averaged to create a scale score ( $\alpha = .89$ ). Scores ranged from 0 to 6, with higher scores indicating more restrained eating. Previous research on this subscale has demonstrated excellent internal consistency ( $\alpha = .84, .85$ ) and two-week test-retest reliability ( $r = .81$ ) for the EDE-Q and its subscales among predominantly White American undergraduate women (Luce & Crowther, 1999).

## **Results and Discussion**

We handled the few missing data points by substituting participants' mean scale scores for the missing value and then examined the normality of the data. Means, standard deviations, and correlations are presented in Table 1. In support of our first prediction, body guilt was positively correlated with each of the objectification theory variables, such that higher body guilt was related to more frequent experiences of sexual objectification, greater self-surveillance, higher body shame, and more eating restraint. Because of the relatively high correlation between body shame and body guilt, and the imperative to establish the unique validity of body guilt, we examined the independence of these two constructs before testing our main hypotheses. Specifically, we conducted a principal component analysis on the 23 items comprising the two scales constrained to produce a two-factor solution in order to determine whether the guilt items loaded on a separate factor from the shame items. Direct oblimin rotation was chosen because

these two scales were indeed correlated. The delta weight was specified to be zero, which permits a moderate correlation between the factors. Two clean factors emerged from this analysis. The first factor accounted for 41.18% of the total variance and the second factor accounted for 8.75% of the total variance. An examination of the rotated pattern matrix revealed that none of the items had cross-loadings greater than .30 and that the item loadings on the primary factor were greater than or equal to .37 on the primary factor. Compared to a common guideline to interpret factor loadings of .32 or higher (Tabachnick & Fidell, 1996), the primary and cross-loadings reported here bolster our confidence in the conceptual and operational distinction between the two factors that were derived.

To test the objectification model with body guilt, a path diagram was constructed as both a descriptive and analytic tool (e.g., Calogero, 2009; Tiggemann & Kuring, 2004; Tiggemann & Slater, 2001). In path analysis, path coefficients are estimated from multiple regression equations using a least squares approach. Standardized partial regression coefficients for the proposed pathways estimate the direct effects of the variables from multiple regression analyses where each variable is regressed on all variables assumed to occur temporally prior to it, thereby controlling for all prior variables (Bryman & Cramer, 1990; Pedhazur, 1997). In accordance with objectification theory, the path model was temporally ordered in such a way that sexual objectification was set to predict self-surveillance, which was then set to predict body shame and body guilt, which in turn were set to predict eating restraint. We did not have a priori predictions about the temporal precedence of shame or guilt relative to each other, and therefore we tested the role of these variables simultaneously. BMI was controlled in each equation. We were missing BMI data for 24 women; therefore the sample size for the path model analyses dropped to 201. The overall fit for this procedure is best described by multiple  $R$  or  $R^2$ . A full saturated

model was estimated with all possible pathways to test the direct and indirect relationships with eating restraint. Table 2 displays the standardized partial regression coefficients for all pathways in the model.

As depicted in Figure 1, the results of the path analysis revealed support for the temporal ordering of variables in the model. After controlling for BMI, sexual objectification directly predicted self-surveillance, which predicted body shame and body guilt, which, in turn, predicted eating restraint. Sexual objectification also directly predicted body shame. We used a Monte Carlo resampling simulation to test the significance of the indirect effects where appropriate using the interactive calculator created by Selig and Preacher (2008, June). In the present study, 20,000 Monte Carlo samples were generated to estimate 95% confidence intervals for the hypothesized indirect effects based on the distribution of the observed estimates. Indirect effects are significant when the lower limits of the confidence intervals are greater than zero. Results from the Monte Carlo simulation demonstrated that self-surveillance significantly mediated the relation between sexual objectification and body shame (95% CI: .04 – .24). No other tests of indirect effects were required. We examined the Tolerance and Variance Inflation Factor (VIF) values to determine the degree of multicollinearity among the predictors in the full model. All of these values were very close to 1 for all predictors (Tolerance = .97 to .99; VIF = 1.01 to 1.09), indicating that multicollinearity was not a problem in these analyses. The full model described 52% of the variance in women's restrained eating,  $R = .72$ ,  $R^2 = .52$ ,  $F(5,195) = 41.65$ ,  $p < .001$ . Only body shame ( $sr^2 = .16$ ) and body guilt ( $sr^2 = .03$ ) accounted for unique variance in eating restraint.

The path model demonstrated a good fit to the extended theory, whereby experiences of sexual objectification may lead to habitual body monitoring (self-surveillance), which in turn



may create opportunities for women to feel shame about their bodies (body shame) and to experience guilt about how their bodies look (body guilt), which may result in more restrained eating as a potential method for changing or “repairing” physical appearance. Consistent with the novel prediction of our study, self-surveillance predicted more guilt about bodily appearance, which in turn predicted unique variance in eating restraint. These findings are consistent with prior scholarship demonstrating the predictive value of objectification theory for explaining women’s subjective bodily experiences (Calogero, Tantleff-Dunn, et al., 2010; Fredrickson & Roberts, 1997; Moradi & Huang, 2008). The finding that sexual objectification also directly predicts women’s body shame warrants further consideration. Although this finding may underscore the significance of these sexualized environmental conditions and cultural practices for women’s psychological health, only indirect links between experiences of being sexually objectified and body shame have been demonstrated in prior research (e.g., Augustus-Horvath & Tylka, 2009; Kozee et al., 2007).

Although theorized as a causal model, the correlational design of our first study limits our ability to draw any firm conclusions about the role of body guilt in women’s self-objectification. Study 2 extends this program of research by providing an experimental test of body guilt within the objectification theory framework. Past research has demonstrated that subtle exposure to sexually objectifying cues (vs. bodily empowerment cues) via lexical priming increases women’s appearance focus and feelings of shame, disgust, appearance anxiety, as well as decreasing the appeal of physical sex (Roberts & Gettman, 2004). We relied on a similar priming methodology to test whether experimentally activating a state of body objectification versus a state of body empowerment would increase women’s body guilt, thereby providing causal evidence for the link between self-objectification and body guilt. In addition to body guilt, we hypothesized that

priming a state of body objectification would increase self-surveillance, body shame, and eating restraint compared to priming body empowerment.

We also sought to test the same objectification model of disordered eating with body guilt as in the first study. Specifically, we tested whether we could replicate the same temporally ordered pathways when exposure to sexually objectifying cues was manipulated instead of measured as an individual difference variable. We hypothesized the same set of mediational relationships to emerge after controlling for BMI, such that a self-objectified state was set to predict self-surveillance, self-surveillance was set to predict body shame and body guilt, and these subjective states were set to predict eating restraint. The experimental design of this second study would offer causal evidence for the relationship between self-objectification and body guilt in relation to eating restraint.

## Study 2

### Method

**Participants and procedure.** A total of 85 college women attending a southeastern British university received psychology course credit for their participation. The mean age was 21.89 years ( $SD = 7.09$ ), ranging from 18 to 34. Mean body mass index (BMI: kg/meters<sup>2</sup>) was 22.01 ( $SD = 3.26$ ). The ethnic composition of the sample was 80.4% White, 4.8% Black African, 6% Asian, and 8.8% Other/Mixed Race. Participants were predominantly British (91%), and there was little variability in the reported sexual orientation of participants: 98.9% identified as heterosexual. Female psychology undergraduates were recruited via an on-line advertisement on the psychology department's website to participate in a study on verbal proficiency and college health. Upon arrival, consenting participants were randomly assigned to one of three priming conditions: (a) body objectification, (b) body empowerment, or (c) body neutral. In a same-sex

testing session facilitated by a female experimenter (for whom the condition was masked), three to five participants were administered the respective paper-and-pencil *Scrambled Sentence Test* (Srull & Wyer, 1979) in a separate envelope from the other materials, ostensibly as a separate experiment on verbal proficiency. After completing this first envelope, participants were instructed to complete the set of measures in a second envelope, ostensibly as part of a study on college health. All participants completed the priming measure first, then the four outcome measures in counterbalanced order, and then the demographic information (e.g., age, ethnicity). Each participant completed her packet of measures alone at an individual table. Participants were fully debriefed immediately following the completion of the study (as detailed below).

**Experimental conditions.** The priming manipulation was designed to activate a state of body objectification or a state of body empowerment using *The Scrambled Sentence Test* (Srull & Wyer, 1979), following a similar method implemented by Roberts and Gettman (2004) to manipulate self-objectification. This manipulation was presented as a 20-item test of language proficiency and instructed participants to create a grammatically correct 4-word sentence from five words presented in scrambled order. For the two priming conditions, 15 of the 20 items contained a target word related to body objectification or body empowerment. In the body objectification condition, the target words included *sexiness, weight, attractive, glamour, slender, thinness, appearance, beauty, physique, shapely, figure, posing, desirable, proportional, and elegant*. In the body empowerment condition, the target words included *playing, fitness, health, stamina, coordinated, endurance, strong, wellness, feeling, survival, vitality, powerful, durable, balanced, and energetic*. In the body neutral condition, the target words included *here, tasty, together, silly, fine, crossed, honesty, music, interesting, similar, truthfulness, car, happy, crunchy, and trainer*.

**Manipulation checks and dependent variables.** Participants completed a funnel debriefing form, which probed for awareness of the priming manipulation. Identical to the funnel debriefing recommended by Chartrand and Bargh (1996), they were asked (a) what they thought the purpose of the study had been, (b) whether they thought any of the different tasks had been related, (c) whether anything they had done on one task had affected what they had done on any of the other tasks, (d) whether they had ever seen or completed a Scrambled Sentence Test for another experiment, and (e) whether they remembered any of the words from the Scrambled Sentence Test or thought any of the words seemed unusual or distinctive. Responses from the funnel debriefing confirmed that the majority of the participants did not guess the true nature of the study; however, five participants were familiar with the scrambled sentence methodology and identified sexiness, thinness, and beauty as keywords from the manipulation in the body objectification condition. Data from these five participants were excluded from analysis, leaving a total sample size of 80 across the three conditions of body objectification ( $n = 28$ ), body empowerment ( $n = 26$ ), and neutral/control ( $n = 26$ ). The four dependent measures were identical to the first study: the Self-Surveillance (body function;  $\alpha = .89$ ) and Body Shame ( $\alpha = .87$ ) subscales of the *Objectified Body Consciousness Scale*, the *Body Guilt Scale* ( $\alpha = .87$ ), and the Restraint subscale of the *EDE-Q* ( $\alpha = .93$ ).

## **Results and Discussion**

To begin, we conducted a manipulation check to verify that the priming manipulation was effective in activating a state of self-objectification, whereby women were focusing more heavily on their physical appearance and how they look to others. Immediately following the experimental priming tasks, participants were instructed to complete a modified version of the Twenty Statements Test (TST; see Roberts & Gettman, 2004, for similar procedure). For the

purposes of this study, participants were instructed to make 10 different statements about themselves that would complete 10 statements beginning with “I am \_\_\_\_\_.” We emphasized that participants should complete the statements as if they were describing themselves to themselves and not to someone else. Responses were coded as appearance-based if they referred to body shape, weight, or general physical appearance. A one-way ANOVA revealed a significant effect of the manipulation, such that women in the body objectification condition responded with more appearance-based attributes to describe themselves on the TST ( $M = 1.54$ ,  $SD = 0.92$ ) compared to women in the body empowerment condition ( $M = 0.81$ ,  $SD = 0.57$ ),  $F(1,52) = 11.99$ ,  $p < .001$ ,  $\eta^2 = .19$ . Thus, the manipulation confirms that women were more self-conscious about their physical appearance after the body objectification prime compared to the body empowerment prime.

Zero-order correlations among the study variables were significant and in the expected direction (at  $p < .01$ ,  $df = 53$ ). State self-objectification was positively correlated with self-surveillance ( $r = .41$ ), body shame ( $r = .35$ ), body guilt ( $r = .44$ ), and eating restraint ( $r = .31$ ). Self-surveillance was positively correlated with body shame ( $r = .56$ ), body guilt ( $r = .51$ ), and eating restraint ( $r = .35$ ). Body shame and body guilt were also positively correlated with each other ( $r = .37$ ), and both were correlated with eating restraint ( $r = .44$  and  $r = .49$ , respectively). All dependent variables were analyzed using a one-way, three-level ANOVA with priming condition (body objectification, body empowerment, neutral) as the between-subjects variable (see Table 3). Effect sizes are reported for all analyses, indexed by eta-squared ( $\eta^2$ ) for the omnibus  $F$ -tests and by  $r$  for the planned comparisons (Rosnow & Rosenthal, 1996). As expected, the priming condition had a significant effect on body guilt,  $F(2, 77) = 5.17$ ,  $p = .008$ ,  $\eta^2 = .12$ , as well as on self-surveillance,  $F(2, 77) = 5.43$ ,  $p = .006$ ,  $\eta^2 = .12$ , and body shame,  $F(2,$

77) = 4.80,  $p = .01$ ,  $\eta^2 = .11$ ; however, the overall effect for eating restraint was not significant,  $F(2, 77) = 2.77$ ,  $p = .09$ ,  $\eta^2 = .06$ .

A priori planned comparisons were used to test our hypotheses for group differences across the four outcome variables. Results indicated that women in the body objectification condition reported significantly more body guilt than women in the body empowerment condition,  $F(1, 52) = 12.78$ ,  $p < .001$ ,  $r = .44$ , and the neutral condition,  $F(1, 52) = 6.37$ ,  $p = .015$ ,  $r = .32$ . Compared to the other conditions, women exposed to body objectification primes also reported higher self-surveillance (body empowerment:  $F(1, 52) = 10.47$ ,  $p = .002$ ,  $r = .40$ ; neutral:  $F(1, 52) = 4.41$ ,  $p = .04$ ,  $r = .28$ ) and higher body shame (body empowerment:  $F(1, 52) = 7.07$ ,  $p = .01$ ,  $r = .34$ ; neutral:  $F(1, 52) = 7.99$ ,  $p = .007$ ,  $r = .36$ ). The body objectification condition also increased eating restraint compared to the body empowerment condition,  $F(1, 52) = 5.37$ ,  $p = .02$ ,  $r = .30$ , but not in comparison to the neutral condition,  $F(1, 52) = 2.48$ ,  $p = .12$ ,  $r = .21$ . The body empowerment condition did not differ from the body neutral condition across any of the study variables: body guilt,  $F(1, 50) = 0.26$ ,  $p = .62$ ,  $r = .07$ ; self-surveillance,  $F(1, 50) = 1.29$ ,  $p = .26$ ,  $r = .16$ ; body shame,  $F(1, 50) = 0.01$ ,  $p = .92$ ,  $r = .01$ ; eating restraint,  $F(1, 50) = 0.25$ ,  $p = .62$ ,  $r = .07$ .

We relied on the same path analysis procedure that was used in the first study to test the objectification model in the second study. Because our purpose was to compare bodily objectification to bodily empowerment, and for ease of interpretation, we only included the two experimental conditions in our analysis. Participants in the body objectification condition were coded as 1 and participants in the body empowerment condition were coded as -1. Similar to Study 1, we used a Monte Carlo resampling simulation to test the significance of the indirect effects where appropriate. Table 4 displays the standardized partial regression coefficients for all

pathways in the model. As depicted in Figure 2, the results of the path analysis revealed support for the temporal ordering of variables in the model. After controlling for BMI, state self-objectification directly predicted self-surveillance, which then predicted body shame and body guilt. In turn, body shame and body guilt predicted eating restraint. The direct pathway from state self-objectification to body guilt was also significant. Results from the Monte Carlo simulation demonstrated that self-surveillance (95% CI: .07, .58) significantly mediated the relation between state self-objectification and body guilt. No other tests of indirect effects were required. We examined the Tolerance and VIF values to determine the degree of multicollinearity among the predictors in the full model. All of these values were very close to 1 for all predictors (Tolerance = .78 to .89; VIF = 1.11 to 1.19), indicating that multicollinearity was not a problem in these analyses. The full model described 32% of the variance in women's eating restraint,  $R = .57$ ,  $R^2 = .32$ ,  $F(4,49) = 5.84$ ,  $p < .001$ . Only body shame ( $sr^2 = .06$ ) and body guilt ( $sr^2 = .09$ ) accounted for unique variance in eating restraint.

Overall, these findings demonstrate that increased levels of body guilt stem, in part, from self-objectification – a state in which women may be reminded of the cultural beauty ideals that they are unable to meet and the beauty-related behaviors they should (or should not) undertake to match these ideals – the body becomes the site of reparative action. Mere exposure to sexually objectifying words increased women's levels of self-surveillance, body shame, and they reported dietary restraint as well, whereas exposure to words that emphasized bodily empowerment did not. In addition, the path model with state self-objectification demonstrated the same direct and indirect pathways to eating restraint as our first study. Interestingly, when self-objectification was manipulated through exposure to sexually objectifying cues, the relationship between self-objectification and body guilt was not completely carried by self-surveillance, suggesting a direct

link to body guilt when women experience sexual objectification. These results build on the findings of our first study to offer causal evidence for body guilt as another subjective consequence of self-objectification.

### **General Discussion**

Experiences of sexual and self-objectification have been associated with a variety of negative psychological consequences for girls and women (Calogero, Tantleff-Dunn et al., 2010; Moradi & Huang, 2008). Drawing from and extending objectification theory (Fredrickson & Roberts, 1997), we investigated the possibility that women would also report body guilt in relation to experiences of sexual objectification, self-surveillance, and body shame. We also examined whether body guilt would serve as an additional mediating variable between self-objectification and disordered eating. Whereas body shame triggers global negative evaluations about the self when judged to fall short of feminine beauty standards, body guilt may be a powerful motivator to appease regret over a specific transgression against the body – and to correct one’s behaviors in order to bring the body in line with feminine beauty ideals. Although our first study was based on correlational data, the results of our second study demonstrated a causal chain, such that when self-objectification was induced, higher body guilt was one psychological consequence. Compared to other manipulations of self-objectification (e.g., the swimsuit-sweater paradigm), the priming method used in our second study was much more subtle (i.e., unobtrusive exposure to target words), yet the effects were similar to what was found with more obtrusive methods. It is noteworthy that the pattern of findings for both studies was unrelated to women’s self-reported BMI, suggesting that actual weight and shape is not a driving force in women’s self-objectification. The results of these two studies provide preliminary evidence that body guilt may represent another key subjective experience for women that occurs



in conjunction with sexually objectifying contexts.

It is interesting to note that the correlation between body shame and body guilt varied considerably between the two studies. The correlation between the two variables in Study 1 ( $r = .64$ ) was higher than the correlation reported in Study 2 ( $r = .37$ ). One explanation for this difference may be associated with the experimental nature of the second study. That is, when self-objectification was subtly primed, it led to less variability in participants' responses on these measures of their subjective experience. A survey of the standard deviations for body shame and body guilt in Study 1 (see Table 1) and Study 2 (see Table 3) lends some support for this possibility, but notably homogeneity of variance was not violated in any case. Building on this notion, it is possible that the ISOS used in our first study elicited more concrete memories and images of sexual objectification due to the nature of the items. More vivid imagery may have produced more variable responses with respect to shame and guilt. The supraliminal exposure to sexually objectifying word cues in our second study may not have generated such imagery and memories for participants.

We also wish to consider two other unexpected but intriguing findings. First, the frequency of interpersonal sexual objectification directly predicted body shame but not body guilt. In our research, it appears that when women think about how often they are sexually objectified (e.g., someone leering at their breasts or receiving cat calls), they also report more body shame, even if they do not also report more chronic body monitoring. This pattern suggests that thinking about how one's body is on public display may be directly shaming for some women. Second, women's exposure to sexually objectifying word cues directly led to more body guilt, but not to more body shame. When women were not specifically directed to think about their own sexual objectification, but merely read a set of sexually objectifying word cues such as

those encountered in print media, they also report more body guilt, even without engagement in self-surveillance. This point underscores the insidious nature of sexual objectification for women's health and well-being.

The results of our second study are especially troubling because of the high potential for women to encounter sexually objectifying words and appearance management advice in print media. As noted by Roberts and Gettman (2004), print media may play a bigger role in women's negative body image than television. For example, not only may magazine covers remind women of the highly sexualized and curvaceously thin ideal that they should aspire to reach (Aubrey, 2010; Harrison, 2003; Overstreet, Quinn, & Agocha, 2010; Zurbriggen, Ramsey, & Jaworski, 2011), but the magazine content offers a broad array of beauty tips, tools, and techniques to purportedly achieve this ideal. This content communicates the notion that (a) their bodies and appearance are indeed malleable and (b) this ideal set of physical attributes is actually attainable if they work on it. Hence, the increased body guilt in situations where attention has been drawn to their appearance and how they *should* look.

It could be argued that there are some positive, even adaptive, functions of body guilt because it prompts action – perhaps in ways that motivate women to be proactive about exercise or healthier eating habits (Sabiston et al., 2010). We view this perspective as unsatisfactory for several reasons. First, prompting women to action to repair their “flawed” bodies by increasing body guilt only serves to reinforce the process of evaluating women based on their appearance. Second, because the basis of body guilt is the perceived failure to behave in ways that would bring the body in line with current beauty ideals, body guilt is not easily alleviated simply by regular exercise because these ideals are so extreme and unattainable for virtually all women (Calogero, Boroughs, & Thompson, 2007; Harrison, 2003; Wolf, 1991). Indeed, in an effort to

mitigate such recurrent body guilt, a more sure-fire method for “repairing” perceived bodily imperfections would be in the form of cosmetic surgical procedures or more extreme eating behaviors, and less likely to be in the form of health-enhancing or health-promoting activities. Relatedly, results of a recent study demonstrated that interpersonal sexual objectification, self-surveillance, and body shame uniquely predict more positive attitudes toward having cosmetic surgery in the future, even after controlling for more general impression management and self-esteem concerns (Calogero, Pina et al., 2010). We would expect body guilt to play a significant role as well in women’s psychological and behavioral support of cosmetic surgery. Third, even if body guilt does prompt more physical activity, we know that exercise motivated by external appearance goals is more closely linked to disordered eating and dysfunctional exercise behavior (Calogero & Pedrotty, 2004; Calogero & Pedrotty-Stump, 2010; Strelan, Mehaffey, & Tiggemann, 2003), especially exercise undertaken primarily for weight loss and control of body shape (Mond & Calogero, 2009). Finally, weight loss attempts via dieting and related behaviors are linked to worsened health outcomes and more weight regain over time (Bacon, 2008; Howard et al., 2006). Thus, dietary restraint that might occur in relation to body guilt is arguably health-impairing and not health-promoting. In this light, then, we consider body guilt to be detrimental, not adaptive, to women’s psychological and physical health.

There are several limitations of our research to consider. First, our sample comprised predominantly White British university students, which limits the generalizability of these findings to women across the age, ethnicity, and the socioeconomic spectrum (cf. Sabik, Cole, & Ward, 2010). The relationship between body guilt and experiences of objectification across the life span, and among non-university samples, requires further research. Although self-objectification and appearance investment have been found to decrease with age (Halliwell &

Dittmar, 2003; McKinley, 2006; Tiggemann & Lynch, 2001), some forms of appearance control, such as cosmetic surgical procedures, appear to be on the rise among older adults, primarily women (British Association of Aesthetic and Plastic Surgeons, 2009; Slevec & Tiggemann, 2010). With the increased marketing to women of anti-aging products as solutions to purportedly slow the inevitable changes to physical appearance (Muise & Desmarais, 2010), body guilt may become an increasingly significant psychological experience for some older women in response to sociocultural appearance pressures. Second, although a combination of correlational and causal evidence was presented here, more experimental and prospective data are needed to confirm the causal ordering of body guilt in relation to these variables.

Finally, more research is clearly needed to support the inclusion of body guilt within the objectification theory framework. For example, it is necessary to examine the relationship between the Self-Objectification Questionnaire (SOQ; Noll & Fredrickson, 1998) and body guilt, because the SOQ is also a standard measurement tool for the assessment of trait self-objectification in the objectification literature. The relationship between self-objectification, body guilt, and disordered eating among men compared to women should also be investigated. If body guilt is more unique to women's subjective experience, and linked specifically to encounters of sexual objectification and high self-objectification, then the relationship between self-objectification and body guilt should be markedly weaker for men compared to women, as demonstrated in past research for other objectification theory variables (Fredrickson et al., 1998; Tiggemann & Kuring, 2004). It would also be critical to examine the role of body guilt in the relationship between self-objectification and the other mental health consequences proposed by objectification theory (i.e., unipolar depression and sexual dysfunction), and in conjunction with other subjective experiences associated with self-objectification (e.g., appearance anxiety,

reduced concentration and attention, and disrupted internal awareness). For these empirical tests, we would suggest utilizing measures that tap into the behavioral components of these phenomena as opposed to the more affective components (e.g., math performance, body checking, cosmetic surgery), if attempting to relate them to guilt-based processes.

We are wary at this point to extrapolate too far beyond our data, but we would suggest that if body guilt is a psychological event linking women's self-objectification to disordered eating, then more attention might be given to interventions that reduce feelings of guilt that arise from specific behaviors undertaken (or not) around physical appearance. In particular, alleviating body guilt may disengage some of the behavioural dimensions of disordered eating, such as following fad diets, using diet pills, frequent body checking and weighing, dysfunctional exercise, and surgical procedures. Body guilt may also be associated with more ruminative and intrusive thoughts (Ferguson & Crowley, 1997), suggesting another mechanism through which body guilt might predict disordered eating as well as unipolar depression. In sum, women's feelings of accountability and responsibility for failing to meet unrealistic standards for weight, shape, and appearance fuel body guilt and reparative action, and would seem to warrant direct attention in clinical contexts.

In conclusion, we acknowledge that only preliminary evidence was reported here. Yet these findings suggest a possible extension to objectification theory, such that body guilt may also be positioned as a critical psychological consequence of self-objectification that is linked to women's disordered eating. Consistent with the claims of Fredrickson and Roberts (1997), finding ways to value women's bodies for more than their potential sexual attraction and appearance could go a long way toward changing not only how women feel about their own bodies, but what they are willing to do to them.

### References

- Aubrey, J. S. (2010). Looking good versus feeling good: An investigation of media frames of health advice and their effects on women's body-related self-perceptions. *Sex Roles, 63*, 50-63.
- Augustus-Horvath, C. L., & Tylka, T. L. (2009). A test and extension of objectification theory as it predicts disordered eating: Does women's age matter? *Journal of Counseling Psychology, 56*, 253-265.
- Bacon, L. (2008). *Health at every size: The surprising truth about your weight*. Dallas, TX: Benbella Books, Inc.
- Bartky, S. (1990). *Femininity and domination*. New York: Routledge.
- Berger, J. (1972). *Ways of seeing*. London: Penguin.
- Breines, J. G., Crocker, J., & Garcia, J. A. (2008). Self-objectification and well-being in women's daily lives. *Personality and Social Psychology Bulletin, 34*, 583-598. doi: 10.1177/0146167207313727
- British Association of Aesthetic and Plastic Surgeons. (2009). *Cosmetic rates of inflation: Male, female breast ops on the rise*. Retrieved from <http://www.baaps.org.uk/content/view/453/62>
- Bryman, A., & Cramer, D. (1990). *Quantitative data analysis for social scientists*. London: Routledge.
- Burney, J., & Irwin, H. J. (2000). Shame and guilt in women with eating-disorder symptomatology. *Journal of Clinical Psychology, 56*, 51-61.
- Bybee, J., Zigler, E., Berliner, D., & Merisca, R. (1996). Guilt, guilt-evoking events, depression, and eating disorders. *Current Psychology, 15*, 113-127.

- Calogero, R. M. (2009). Objectification processes and disordered eating in British women and men. *Journal of Health Psychology, 14*, 394-402. doi: 10.1177/1359105309102192
- Calogero, R. M., Boroughs, M., & Thompson, J. K. (2007). The impact of Western beauty ideals on the lives of women and men: A sociocultural perspective. In V. Swami & A. Furnham (Eds.), *Body beautiful: Evolutionary and sociocultural perspectives* (pp. 259-298). New York: Palgrave Macmillan.
- Calogero, R. M., Davis, W. N., & Thompson, J. K. (2005). The role of self-objectification in the experience of women with eating disorders. *Sex Roles, 52*, 43-50. doi: 10.1007/s11199-005-1192-9
- Calogero, R. M., & Jost, J. T. (2011). Self-subjugation among women: Exposure to sexist ideology, self-objectification, and the protective function of the need to avoid closure. *Journal of Personality and Social Psychology, 100*, 211-228.
- Calogero, R. M., & Pedrotty, K. N. (2004). The practice and process of healthy exercise: An investigation of the treatment of exercise abuse in women with eating disorders. *Eating Disorders: The Journal of Treatment and Prevention, 12*, 273-291.
- Calogero, R. M., & Pedrotty-Stump, K. N. (2010). Incorporating exercise into eating disorders treatment and recovery: Cultivating a mindful approach. In M. Maine, D. Bunnell, & B. H. McGilley (Eds.), *Treatment of eating disorders: Bridging the research-practice gap* (pp. 425-441). New York: Elsevier.
- Calogero, R. M., Pina, A., Park, L. E., & Rahemtulla, Z. K. (2010). Objectification theory predicts college women's attitudes toward cosmetic surgery. *Sex Roles, 63*, 32-41. doi: 10.1007/s11199-010-9759-5
- Calogero, R. M., Tantleff-Dunn, S., & Thompson, J. K. (2011). *Self-objectification in women:*

- Causes, consequences, and counteractions*. Washington, DC: American Psychological Association.
- Calogero, R. M., & Thompson, J. K. (2009). Potential implications of the objectification of women's bodies for women's sexual satisfaction. *Body Image, 6*, 145-148. doi: 10.1016/j.bodyim.2009.01.001
- Chartrand, T. L., & Bargh, J. A. (1996). Automatic activation of impression formation and memorization goals: Nonconscious goal priming reproduces effects of explicit task instructions. *Journal of Personality and Social Psychology, 71*, 464-478.
- Davis, S. (1990). Men as success objects and women as sex objects: A study of personal advertisements. *Sex Roles, 23*, 43-50. doi: 10.1007/BF00289878
- de Beauvoir, S. (1952). *The second sex*. New York: Vintage Books.
- Dworkin, A. (1991). *Pornography: Men possessing women*. New York: Plume.
- Fairburn, C. G. (2008). *Cognitive behavior therapy and eating disorders*. New York: Guildford Press.
- Fairchild, K., & Rudman, L. A. (2008). Everyday stranger harassment and women's objectification. *Social Justice Research, 21*, 338-357. doi: 10.1007/s11211-008-0073-0
- Ferguson, T. J., & Crowley, S. L. (1997). Measure for measure: A multitrait-multimethod analysis of guilt and shame. *Journal of Personality Assessment, 69*, 425-441.
- Frank, E. S. (1991). Shame and guilt in eating disorders. *American Journal of Orthopsychiatry, 61*, 303-306.
- Fredrickson, B. L., & Roberts, T. A. (1997). Objectification theory: Towards understanding women's lived experience and mental health risks. *Psychology of Women Quarterly, 21*, 173-206. doi: 10.1111/j.1471-6402.1997.tb00108.x



- Fredrickson, B. L., Roberts, T. A., Noll, S. M., Quinn, D. M., & Twenge, J. M. (1998). That swimsuit becomes you: Sex differences in self-objectification, restrained eating, and math performance. *Journal of Personality and Social Psychology, 75*, 269-284. doi: 10.1037/h0090332
- Grabe, S., Hyde, J. S., & Lindberg, S. M. (2007). Body objectification and depression in adolescents: The role of gender, shame, and rumination. *Psychology of Women Quarterly, 31*, 164-175. doi: 10.1111/j.1471-6402.2007.00350.x
- Halliwell, E., & Dittmar, H. (2003). A qualitative investigation of women's and men's body image concerns and their attitudes toward aging. *Sex Roles, 49*, 675-684. doi: 10.1023/B:SERS.0000003137.71080.97
- Harper, B., & Tiggemann, M. (2008). The effect of thin ideal media images on women's self-objectification, mood, and body image. *Sex Roles, 58*, 649-657. doi: 10.1007/s11199-007-9379-x
- Harrell, Z. A., Fredrickson, B. L., Pomerleau, C. S., & Nolen-Hoeksema, S. (2006). The role of trait self-objectification in smoking among college women. *Sex Roles, 54*, 735-743. doi: 10.1007/s11199-006-9041-z
- Harrison, K. (2003). Television viewers' ideal body proportions: The case of the curvaceously thin woman. *Sex Roles, 48*, 255-264.
- Henley, N. M. (1977). *Body politics: Power, sex, and nonverbal communication*. Englewood Cliffs, NJ: Prentice-Hall.
- Hill, M. S., & Fischer, A. R. (2008). Examining objectification theory: Lesbian and heterosexual women's experiences with sexual and self-objectification. *The Counseling Psychologist, 36*, 745-776. doi: 10.1177/0011000007301669

Howard, B. V., Manson, J. E., Stefanick, M. L., Beresford, S. A., Frank, G., Jones, B., ...

Prentice, R. (2006). Low-fat dietary pattern and weight change over 7 years: The women's health initiative dietary modification trial. *Journal of the American Medical Association, 295*, 39-49.

Kozee, H. B., & Tylka, T. L. (2006). A test of objectification theory with lesbian women.

*Psychology of Women Quarterly, 30*, 348-357. doi: 10.1111/j.1471-6402.2006.00310.x

Kozee, H. B., Tylka, T. L., Augustus-Horvath, C. L., & Denchik, A. (2007). Development and psychometric evaluation of the interpersonal sexual objectification scale. *Psychology of Women Quarterly, 31*, 176-189. doi: 10.1111/j.1471-6402.2007.00351.x

Lewis, H. B. (1971). *Shame and guilt in neurosis*. New York: International University Press.

Luce, K., & Crowther, J. (1999). The reliability of the Eating Disorder Examination-Self-Report Questionnaire Version (EDE-Q). *International Journal of Eating Disorders, 25*, 349-351.

Martin, E. (1987). *The woman in the body: A cultural analysis of reproduction*. Boston: Beacon Press.

McKinley, N. M. (2006). The developmental and cultural contexts of objectified body consciousness: A longitudinal analysis of two cohorts of women. *Developmental Psychology, 42*, 679-687. doi:10.1037/0012-1649.42.4.679

McKinley, N. M., & Hyde, J. S. (1996). The Objectified Body Consciousness Scale. *Psychology of Women Quarterly, 20*, 181-215. doi: 10.1111/j.1471-6402.1996.tb00467.x

Mond, J. M., & Calogero, R. M. (2009). Excessive exercise in eating disorder patients and in healthy women. *Australian and New Zealand Journal of Psychiatry, 43*, 227-234.

Mond, J. M., Hay, P. J., Rodgers, B., & Owen, C. (2006). Eating Disorder Examination Questionnaire (EDE-Q): Norms for young adult women. *Behavior Research and*

*Therapy, 44*, 53-62.

- Moradi, B., Dirks, D., & Matteson, A. (2005). Roles of sexual objectification experiences and internalization of standards of beauty in eating disorder symptomatology: A test and extension of objectification theory. *Journal of Counseling Psychology, 52*, 420-428. doi: 10.1037/0022-0167.52.3.420
- Moradi, B., & Huang, Y.-P. (2008). Objectification theory and psychology of women: A decade of advances and future directions. *Psychology of Women Quarterly 32*, 377-398. doi: 10.1111/j.1471-6402.2008.00452.x
- Morry, M. M., & Staska, S. L. (2001). Magazine exposure: Internalization, self-objectification, eating attitudes and body satisfaction in male and female university students. *Canadian Journal of Behavioral Sciences, 4*, 269-279.
- Muehlenkamp, J. J., Swanson, J. D., & Brausch, A. M. (2005). Self-objectification, risk taking, and self-harm in college women. *Psychology of Women Quarterly, 29*, 24-32. doi: 10.1111/j.1471-6402.2005.00164.x
- Muise, A., & Desmarais, S. (2010). Women's perceptions and use of "anti-aging" products. *Sex Roles, 63*, 126-137.
- Niedenthal, P. M., Tangney, J. P., & Gavanski, I. (1994). "If only I weren't" versus "If only I hadn't": Distinguishing shame and guilt in counterfactual thinking. *Journal of Personality and Social Psychology, 67*, 585-595.
- Noll, S. M., & Fredrickson, B. L. (1998). A mediational model linking self-objectification, body shame, and disordered eating. *Psychology of Women Quarterly, 22*, 623-636. doi: 10.1111/j.1471-6402.1998.tb00181.x
- Overstreet, N. M., Quinn, D. M., & Agocha, V. B. (2010). Beyond thinness: The influence of a

curvaceous body ideal on body dissatisfaction in Black and White women. *Sex Roles*, *63*, 91-103.

Pedhazur, E. J. (1997). *Multiple regression in behavioral research* (3rd ed.). Orlando, FL: Harcourt Brace.

Puwar, N. (2004). Thinking about making a difference. *British Journal of Politics and International Relations*, *6*, 65-80. doi: 10.1111/j.1467-856X.2004.00127.x

Quinn, D. M., Kallen, R. W., & Cathey, C. (2006). Body on my mind: The lingering effect of state self-objectification. *Sex Roles*, *55*, 869-874. doi: 10.1007/s11199-006-9140-x

Quinn, D. M., Kallen, R. W., Twenge, J. M., & Fredrickson, B. L. (2006). The disruptive effect of self-objectification on performance. *Psychology of Women Quarterly*, *30*, 59-64. doi: 10.1111/j.1471-6402.2006.00262.x

Roberts, T-A., & Gettman, J. Y. (2004). Mere exposure: Gender differences in the negative effect of priming a state of self-objectification. *Sex Roles*, *51*, 17-27.

Rosnow, R. L., & Rosenthal, R. (1996). Computing contrasts, effect sizes, and counternulls on other people's published data: General procedures for research consumers. *Psychological Methods*, *1*, 331-340.

Sabik, N. J., Cole, E. R., & Ward, L. M. (2010). Are all minority women equally buffered from negative body image? Intra-ethnic moderators of the buffering hypothesis. *Psychology of Women Quarterly*, *34*, 139-151.

Sabiston, C. M., Brunet, J., Kowalski, K. C., Wilson, P. M., Mack, D. E., & Crocker, P. R. E. (2010). The role of body-related self-conscious emotions in motivating women's physical activity. *Journal of Sport & Exercise Psychology*, *32*, 417-437.

Selig, J. P., & Preacher, K. J. (2008, June). Monte Carlo method for assessing mediation: An

- interactive tool for creating confidence intervals for indirect effects [Software]. Available from <http://www.people.ku.edu/~preacher/medmc/medmc.htm>
- Sheikh, S., & Janoff-Bulman, R. (2010). The “shoulds” and “should nots” of moral emotions: A self-regulatory perspective on shame and guilt. *Personality and Social Psychology Bulletin, 36*, 213-224.
- Slevec, J., & Tiggemann, M. (2010). Attitudes toward cosmetic surgery in middle-aged women: Body image, aging anxiety, and the media. *Psychology of Women Quarterly, 34*, 65-74.
- Srull, T. K., & Wyer, R. S., Jr. (1979). The role of category accessibility in the interpretation of information about persons: Some determinants and implications. *Journal of Personality and Social Psychology, 37*, 1660-1672.
- Strelan, P., Mehaffey, S. J., & Tiggemann, M. (2003). Self-objectification and esteem in young women: The mediating role of reasons for exercise. *Sex Roles, 48*, 89-95.
- Steer, A., & Tiggemann, M. (2008). The role of self-objectification in women’s sexual functioning. *Journal of Social and Clinical Psychology, 27*, 205-225. doi: 10.1521/jscp.2008.27.3.205
- Swami, V., Coles, R., Wilson, E., Salem, N., Wyrozumska, K., & Furnham, A. (2010). Oppressive beliefs at play: Associations among beauty ideals and practices and individual differences in sexism, objectification of others, and media exposure. *Psychology of Women Quarterly, 34*, 365-379.
- Swim, J. K., Hyers, L. L., Cohen, L. L., & Ferguson, M. J. (2001). Everyday sexism: Evidence for its incidence, nature, and psychological impact from three daily diary studies. *Journal of Social Issues, 57*, 31-53. doi: 10.1111/0022-4537.00
- Tabachnick, B. G., & Fidell, L., S. (1996). *Using multivariate statistics* (3rd ed.). New York:

HarperCollins.

Tangney, J. P. (1992). Situational determinants of shame and guilt in young adulthood.

*Personality and Social Psychology Bulletin*, 59, 102-111.

Tangney, J. P. (1993). Shame and guilt. In C. G. Costello (Ed.), *Symptoms of depression*

(pp.161-180). New York: Wiley.

Tangney, J. P. (1995). Shame and guilt in interpersonal relationships. In J. P. Tangney & K. W.

Fischer (Eds.), *Self-conscious emotion: Shame, guilt, embarrassment, and pride* (pp. 114-139). New York: Guilford Press.

Tangney, J. P., & Dearing, R. (2002). *Shame and guilt*. New York: Guilford.

Tangney, J. P., Miller, R. S., Flicker, L., & Barlow, D. H. (1996). Are shame, guilt, and

embarrassment distinct emotions? *Journal of Personality and Social Psychology*, 70,

1256-1269. doi: 10.1037/0022-3514.70.6.1256

Tangney, J. P., Wagner, P., & Gramzow, R. (1989). *The test of self-conscious affect (TOSCA)*.

Fairfax, VA: George Mason University.

Thompson, J. K., Dinnel, D. L., & Dill, N. J. (2003). Development and validation of a body

image guilt and shame scale. *Personality and Individual Differences*, 34, 59-75.

Tiggemann, M. (2010). Mental health risks of self-objectification: A review of the empirical

evidence for disordered eating, depressed mood, and sexual dysfunction. In R. M.

Calogero, S. Tantleff-Dunn, & J. K. Thompson (Eds.), *Objectification of women:*

*Innovative directions in research and practice* (pp. 139-159). Washington, DC: American Psychological Association.

Tiggemann, M., & Kuring, J. K. (2004). The role of body objectification in disordered eating and

depressed mood. *British Journal of Clinical Psychology*, 43, 299-311. doi: 10.1348/

0144665031752925

- Tiggemann, M., & Lynch, J. E. (2001). Body image across the life span in adult women: The role of self-objectification. *Developmental Psychology, 37*, 243-253. doi: 10.1037/0012-1649.37.2.243
- Tiggemann, M., & Slater, A. (2001). A test of objectification theory in former dancers and non-dancers. *Psychology of Women Quarterly, 25*, 57-64. doi: 10.1111/1471-6402.00007
- Tylka, T. L., & Hill, M. S. (2004). Objectification theory as it relates to disordered eating among college women. *Sex Roles, 51*, 719-730. doi: 10.1007/s11199-004-0721-2
- Wolf, N. (1991). *The beauty myth*. New York: Morrow.
- Zurbriggen, E. L., Ramsey, L. R., & Jaworski, B. K. (2011). Self- and partner-objectification in romantic relationships: Associations with media consumption and relationship satisfaction. *Sex Roles, 64*, 449-462.