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Do you "like" your body?: The effect of Facebook investment on self-objectification, body shame, and disordered eating

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Do You "Like" Your Body? The Effect of Facebook Investment on Self-Objectification, Body Shame, and Disordered Eating

BY

Chandra Feltman

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Abstract

The model derived from objectification theory proposing that body shame mediates the relationship between self-objectification and disordered eating has been empirically supported in numerous past studies. The present study extended the research on objectification theory by first examining this model in a sample of 71 female undergraduates and then investigating what effect Facebook investment had on the study's variables. Participants completed self-report questionnaires assessing self-objectification, body shame, disordered eating symptoms, and Facebook investment. Results demonstrated that body shame fully mediated the relationship between self-objectification and disordered eating. Analyses also revealed Facebook investment to be a significant predictor of self-objectification in this study's sample. Time spent on Facebook was additionally significantly correlated with self-objectification, while number of photos on Facebook was correlated with disordered eating. Implications and future directions are discussed.

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The disproportionate number of women affected by eating disorders and their related symptomatology has warranted much attention during the last three decades. In Western culture in particular, the number of individuals affected by eating disordered behavior has risen steadily. These numbers have consistently shown that women are affected by these disorders at disproportionate rates, compared to men. The National Institute of Mental Health currently reports that women are three times more likely than men to develop Anorexia Nervosa or Bulimia Nervosa (2011). Additionally, the NIMH states that women are 75 percent more likely to develop binge eating disorder. Research has shown that women display greater rates of eating disordered behavior at a subclinical level as well. A recent study by Striegal-Moore et al. (2009) revealed that women were significantly more likely to report body checking and avoidance, binge eating, fasting, and vomiting when compared to men.

College-aged women seem to be at particular risk for developing eating disorders and eating disordered behavior. Mintz and Betz (1988) studied eating disordered behavior in a sample of 643 non-obese, non-anorexic undergraduate women and found that 82% participated in one or more dieting behaviors per day, and 33% reported engaging in more severe weight control behaviors that included vomiting and laxative use. Additionally, The National Institute of Mental Disorders reports that the average age of onset for Anorexia Nervosa and Bulimia Nervosa is currently 19 and 20 years of age (2011).

Objectification Theory

Theories as to why women display disproportionate rates of eating disorders and their related behaviors vary. In 1997, Fredickson and Roberts proposed objectification theory. This theory provided a framework to understand "the experiential consequences of being female in a culture that sexually objectifies the female body" and provided hypotheses as to how this objectification contributes to women's experiencing different rates of certain psychological disorders, including eating disorders (p. 173).

According to Fredrickson and Roberts (1997), objectification takes place when an individual's body is regarded as a "separate entity" from that of the individual. In other words, objectification occurs any time a woman's body, body parts, or sexual functions are evaluated apart from the woman herself and treated as if they were representative of the woman as an individual. The sexual objectification of women's bodies is quite prevalent in Western culture in particular (Fredrickson & Roberts). Many females begin regularly experiencing objectification following soon after puberty. This objectification may be presented in a multitude of fashions. According to Kaschak (1992), sexual objectification is often manifested through the objectifying gaze, or the visual inspection of the body. Kaschak thought this manifestation of objectification to be the most omnipresent and insidious way sexualized evaluation is acted out. Women directly experience objectifying gaze in social and interpersonal encounters. Additionally, women observe the objectifying gaze in a variety of visual media outlets (e.g., advertisements, television programs). Further, women consistently receive unsolicited sexually evaluative commentary from individuals in social settings. Consequently, girls and women may begin to internalize a third party perspective on their physical selves.

Essentially, they begin to regard themselves as objects to be looked at and evaluated; they begin to *self-objectify*. This self-objectification is then manifested through habitual body and appearance monitoring, according to the authors.

Self-Objectification and Body Shame in Disordered Eating

The consequences of self-objectification include an increase in body shame and appearance anxiety, as well as a decrease in internal state awareness and ability to achieve peak motivational states (Fredrickson & Roberts, 1997). The authors argue that these effects contribute to the development of a variety of psychological difficulties experienced by women, including eating disorders. While all of these factors may play a role in the gender differences observed in eating disorder prevalence rates, research seems to support body shame as the significant factor contributing to eating disordered behavior.

According to Lewis (1992), *shame* is an emotion elicited in individuals when they compare themselves against certain internalized or cultural standards and conclude that they do not meet these ideals. The standard of beauty in Western culture is often thought to be difficult, if not impossible, to attain by most women. Consequently, *bodyshame* is thought to occur when females, operating from an observer's perspective, evaluate their bodies and determine that it does not meet the cultural standard of physical beauty they have internalized (Fredrickson, et al., 1998; Noll & Fredrickson, 1998). Self-objectification is thought to proliferate the chances for women to feel shame, and more specifically, shame regarding their observable, physical selves because women become more concerned with evaluating their bodies based on how they *look* as opposed to what their bodies can *do* or how their bodies *feel*.

Fredrickson, Roberts, Noll, Quinn, and Twenge (1998) investigated the relationship between self-objectification, body shame, and restrained eating. The authors began by asking participants to try on either a one-piece bathing suit or sweater in front of a full-length mirror. Participants were then asked to answer a survey that included questions assessing body shame. Finally, participants were given an eating task in which they could consume up to two cookies. Cover stories were assigned to each task in order to conceal the aim of the study from participants. Results indicated that the women in the bathing suit condition displayed a stronger relationship between self-objectification and body shame than the participants in the sweater condition. Specifically, women who scored high on state and trait self-objectification in the bathing suit condition reported the greatest amount of body shame. Body shame was subsequently related to restrained eating as measured by how many cookies a participant chose to eat. That is, women reporting higher rates of body shame in turn limited the number of cookies they were willing to eat.

Due to self-objectification's not independently predicting restrained eating in this sample, these results did not support a true mediational model suggested by objectification theory. However, trait self-objectification significantly interacted with induced state self-objectification to produce body shame, and body shame subsequently acted as a significant predictor of restrained eating. These results provided initial support for the hypothesized relationship between self-objectification, body shame, and eating disordered behavior.

Noll and Fredrickson further tested the mediational model of disordered eating in two independent samples of undergraduate women (1998). Through use of self-report

measures, the authors found that body shame partially mediated the relationship between self-objectification and bulimic symptoms, anorexic symptoms, and dietary restraint. Additionally, a direct relationship between self-objectification and disordered eating was observed in these samples. The authors speculated that because body shame was not necessary in order to observe this relationship, both body shame and *anticipated* body shame could contribute to disordered eating in women who self-objectify. That is, even women who were currently content with their bodies could have been motivated to partake in disordered eating in order to avoid dissatisfaction with their bodies and the associated shame of not measuring up to internalized or cultural ideals in the future.

In 2001, Tiggemann and Slater examined this mediational model once again in two samples of women. The first sample included 50 former classical ballet dancers, while the second was comprised of 51 undergraduate psychology students with no dancing background. Both samples were asked to complete self-report questionnaires assessing general self-objectification, self-objectification as manifested by body surveillance, body shame, disordered eating, and a variety of other factors related to objectification theory. After performing a path analysis, results supported Noll and Fredrickson's past findings of body shame acting as a partial mediator between both measures of self-objectification and disordered eating in both groups of women. Slater and Tiggemann (2002) extended their research on the mediational model in dancers and non-dancers by examining the relationship between self-objectification, body shame, and disordered eating in a sample of adolescent girls. Similar to the results found in the samples of adult women, body shame acted as a partial mediator between both measures of self-objectification and disordered eating in both samples.

Results of Tieggemann and Kurman's 2004 study regarding how objectification theory applied to depression and eating disorders also revealed that body shame acted as a mediator between self-objectification and eating disordered behavior in two separate samples. The research put forth by Tieggemann, Slater, and Kurmann not only provided evidence in support of the model for eating disorders proposed by objectification theory but also demonstrated that this model could be accurately applied to a variety of samples.

One of the fundamental concepts of objectification theory is based in the supposition that women are negatively affected by objectifying gaze and the inevitable evaluation attached to that gaze. Fredrickson and Roberts (1997) theorized that self-objectification was ultimately the result of internalizing an observer's sexually objectifying gaze on of one's own body. Calogero (2004) attempted to extend this framework and examine whether or not the mere anticipation of a male gaze would be enough to produce the negative consequences proposed by prior research (e.g., increased body shame, social physique anxiety, and intent to diet).

The author first provided 105 participants enrolled in introductory psychology courses with self-report measures assessing demographics (height, weight, age, and ethnicity), self-objectification, and a "bogus" questionnaire assessing physical health. After completing these questionnaires, participants were taken to another room and informed via an instruction sheet that they would either be, a) interacting with a male stranger, b) interacting with a female stranger, or c) interacting with no one. Participants in the experimental condition were told they would need to engage in "small talk" with this stranger for approximately 5 minutes. After being informed of their condition,

participants were asked to complete measures assessing body shame, social physique anxiety, and dietary intent.

Results indicated that the anticipation of the male gaze corresponded with increased body shame and social physique anxiety when compared to participants who anticipated a female gaze or those in the control group. These findings were consistent with objectification theory's assertion that it is the internalization of the male gaze specifically that has a potentially harmful effect on women. Additionally, this study drew attention to the notion that even seemingly harmless interactions in which a female may encounter the male gaze may have negative effects.

Muehlenkamp and Saris-Baglama (2002) further examined postulates put forth by objectification theory by testing the associations between self-objectification and disordered eating and depressive symptoms. Participants included 384 women currently taking an undergraduate psychology course. Participants were asked to complete a variety of self-report measures assessing self-objectification (as measured by body shame and body surveillance), disordered eating, depressive symptoms, and internal awareness. Data from participants were then analyzed using structural equation modeling.

Results confirmed a number of relationships proposed by objectification theory. The authors' model further substantiated a relationship between self-objectification and disordered eating. Direct relationships between self-objectification and both restrictive eating and bulimic symptoms were revealed. Muehlenkamp and Saris-Baglama then tested 'lack of internal awareness' as a possible mediator in the relationship between self-objectification and disordered eating but did not find support for this mediational model. The authors then examined the relationship between self-objectification and depressive

symptoms. In line with objectification theory, a direct relationship between self-objectification and depressive symptoms was observed in this sample. Additionally, internal awareness mediated this relationship. Interestingly, depressive symptoms also mediated the relationship between self-objectification and bulimic symptoms.

Tylka and Hill (2004) added to the body of research on objectification by concurrently examining a variety of fundamental constructs identified in objectification theory within one model. Specifically, the researchers examined sexual objectification, self-objectification, body shame, and poor interoceptive awareness of hunger, satiety, and emotions and attempted to identify which constructs predicted unique variance in others. The authors expected to find a direct path from sexual objectification (as manifested by pressure for thinness) to disordered eating. Additionally, the authors hypothesized that (a) pressure for thinness would predict unique variance in body surveillance (self-objectification), (b) pressure for thinness and body surveillance would predict unique variance in body shame, (c) body surveillance and body shame would predict unique variance in poor interoceptive awareness, and (d) body shame and poor interoceptive awareness would predict unique variance in disordered eating.

Participants included 460 female undergraduates currently enrolled in a psychology course. The women completed an assortment of self-report questionnaires in small groups. Data were then analyzed using structural equation modeling. Results supported all but one of the hypothesized paths; body surveillance did not predict unique variance in poor interoceptive awareness as expected.

It is important to note that only 26% of body surveillance variance was explained by pressure for thinness. In light of these findings, the authors assert that other variables

(e.g. sexual assault, sexual harassment) may encourage women to concentrate on their physical selves as opposed to internal experiences and should be investigated.

Moradi, Driks, and Matteson (2005) attempted to expand the literature associated with objectification theory by examining a proposed model that investigated the relationships between sexual objectification experiences, self-objectification (as manifested by body surveillance), body shame, and eating disorder symptoms. The authors speculated that reported experiences of sexual objectification would be associated with higher rates of internalization of sociocultural standards of beauty, body surveillance, body shame, and eating disorder symptoms. It was then hypothesized that the relationships found between sexual objectification experiences and body surveillance, body shame, and eating disorders would be either partially or fully mediated by internalization of sociocultural standards of beauty. Additionally, based on former findings in the literature, body shame was thought be a partial mediator between body surveillance and eating disorder symptomatology.

The authors provided 221 undergraduate women with self-report measures assessing each participant's reported sexual objectification experience (as measured by the frequency in which daily sexist events were encountered), internalization of sociocultural standards of beauty, body surveillance, body shame, eating disorder symptomatology, and BMI. Analyses of the data revealed several consistencies with the authors' hypotheses. After controlling for BMI, positive correlations were found between reported sexual objectification experiences and internalization of sociocultural standards of beauty, body surveillance, body shame, and eating disorder symptoms. Additionally, the authors found that internalization of sociocultural standards of beauty

did indeed mediate these links.

Regarding the relationship between reported sexual objectification experiences and body shame, body surveillance was identified as an additional mediator. Finally, consistent with prior findings, body shame was found to be a mediator between body surveillance and disordered eating, as well as internalization and disordered eating. These findings provided additional support to the literature that identified body shame as a mediator between body surveillance and eating disorder symptoms. Additionally, these findings identified what roles sexual objectification experiences and internalization of sociocultural standards of beauty play in the model for disordered eating within objectification theory's framework.

Calogero, Davis, and Thompson (2005) continued examining what role objectification played in the development of eating disorders by investigating the relationship between self-objectification, body shame, media influence, and drive for thinness in a clinical sample of women diagnosed with eating disorders. Specifically, the authors first examined aspects related to the media, i.e., "degree to which media are considered important sources of information about appearance," "feeling pressured by media to conform to ideal standards," and "internalizing general and athletic body ideals" (p. 44), and how these elements predicted self-objectification. Secondly, the authors investigated the existence of a direct or indirect relationship between these factors and eating disorder pathology (as measured by "drive for thinness") with self-objectification acting as a mediator. Additionally, the authors investigated the presence of a direct or indirect relationship between self-objectification and eating disorder pathology with body shame acting as a mediator.

The authors investigated their hypotheses among 209 women in a residential treatment center for women formally diagnosed with eating disorders. Women were given self-report measures assessing self-objectification, body shame, sociocultural attitudes toward appearance, and drive for thinness. Analyses of the data revealed that only "internalizing general and athletic body ideals" (p. 44) predicted self-objectification among this sample. Self-objectification was found to partially mediate the relationship between internalization of appearance ideals and eating disorder pathology (i.e., drive for thinness). Body shame was also found to partially mediate the relationship between self-objectification and eating disorder pathology. This study highlighted the impact that internalizing sexually objectifying images in media may have on some women's engagement in self-objectification and eating disordered behavior.

The body of research related to objectification theory has largely depended on convenience sampling in which participants have typically been young women attending universities. Augustus-Horvath and Tylka (2009) observed this gap in the literature and attempted to extend knowledge by testing the hypotheses put forth by objectification theory in a sample of women ages 25 and older, as well as a sample of women ages 18-24.

The authors provided 329 women ages 18-24 and 330 women ages 25-68 with self-report measures assessing "perceived sexual objectification," (p. 256) "poor awareness of hunger, satiety, and emotions (p. 257), self-objectification (as manifested by body surveillance), body shame, and disordered eating. After controlling for BMI, analyses of the data revealed that the path models proposed by objectification theory were observed in both samples of women. Higher rates of self-objectification were

associated with increased body shame in both samples. In turn, increased body shame predicted higher rates of disordered eating and a disconnection from internal hunger, satiety, and emotional cues. However, interestingly a stronger relationship between body shame and disordered eating and a weaker relationship between poor interoceptive awareness and disordered eating was observed in the older sample than in younger participants. These findings provided further empirical support for objectification theory by demonstrating that many of the pathways suggested by Fredrickson and Roberts could be observed in women over the age of 25 in addition to young adult females.

The body of research that examines the hypotheses originally put forth by objectification theory varies in some ways. Still, there are consistencies within the literature that should be highlighted. A direct relationship between self-objectification and disordered eating has been found in the majority of studies examining these factors. Likewise, body shame has been reliably identified as a partial mediator to this relationship. However, there are still some limitations within the literature that deserve attention. While it was common for researchers to find a link between self-objectification, body shame, and disordered eating, with the exception of Calogero's 2004 study examining the effect of an anticipated male gaze, specific experiences of sexual objectification that assumingly precede self-objectification have rarely been explored. An investigation of which specific variables encourage women to concentrate on their physical selves as opposed to internal experiences is an important piece to expanding the literature that surrounds objectification theory and should be investigated.

Social Networking

Since its beginning in 2004, the social networking site "Facebook" has gained

phenomenal popularity. Currently, the site has over 500 million active users worldwide, and over 250 million users log into the social networking site every day. In the United States, Facebook is most popular with 18-25 year olds who make up 35% of users. Due to the rapid and exceptional popularity of Facebook and social networking sites in general, researchers have been prompted to investigate what effects this social phenomenon has on users. To date, the literature surrounding social media has examined a myriad of constructs associated with the use of social networking, including how it affects narcissism, communication, self-presentation, privacy, and user risk. (e.g. Buffardi & Campbell, 2008; Coyle & Vaughn, 2008; Livingstone, 2008; Mehdizadeh, 2010).

Researchers recently attempted to expand the literature on social networking by investigating how gender affects self-presentation and interactions on MySpace in college students (Manago et al., 2008). The authors chose to examine these constructs using a focus group format in order to receive more qualitative data from participants. Twenty-three undergraduates ranging from 18 to 23 years old were selected to participate in focus groups that lasted 60 – 100 minutes. All focus groups consisted of 3 – 5 people and were ethnically diverse but same-sex. Facilitators led group conversations and concentrated discussions of topics related to self-presentation on MySpace. These conversations were then analyzed and present themes were identified and reported.

Analyses of focus group conversations revealed that both men and women used MySpace as an arena in which to present idealized versions of their identities. Impression management was present for both male and female participants. However, the attributes that each gender was inclined to highlight differed. Consistent with gender role constructions present in offline interactions, women tended to present themselves as

"affiliative and attractive," while men tended to present a "strong and powerful" persona. Additionally, Manago et al. (2008) discussed some of the data's implications with regard to female users specifically:

> ... increased pressure on young women to objectify their sexuality while also preserving their innocence may be a confusing and detrimental influence on their development. Further, the intensified social comparison to idealized self-presentations that may or may not have veracity may also be discouraging to emerging adults who may not feel like they can live up to these flawless images. (p. 455)

The themes derived from focus group conversations served as some of the first qualitative data in the literature to indicate that the use of social networking could have potential negative consequences to users, and female users in particular.

Tiggemann and Miller (2010) extended the literature on the effect that social networking may have on female users by investigating how adolescent girls' use of the internet impacted weight satisfaction and drive for thinness. The authors speculated that "internet appearance exposure" (p. 81) would be associated with higher rates of drive for thinness and lower endorsement of weight satisfaction. Additionally, Tiggemann and Miller hypothesized that these relationships would be mediated by internalization of thin ideals and appearance comparison.

Participants included 156 females enrolled in a private all-girls high school located in Australia. The participants were between the ages of 13 and 18 and were predominantly White. The girls were given a variety of self-report measures assessing internalization of the thin ideal, appearance comparison, weight satisfaction, drive for

thinness, and magazine, television, and internet appearance exposure as measured by frequency of exposure to a pre-determined list of popular magazines, television/music video programs, and websites. Participants were also asked to report the average length of time they spent on the internet each day of the week, which specific activities they used the internet for and spent the most time on, and which social networking sites they used.

Analyses of the data revealed several associations between appearance exposure and the varying measures of body image. Significant correlations between magazine, television, and internet appearance exposure and appearance comparison were found. Additionally, magazine and internet appearance exposure were significantly correlated to internalization and drive for thinness. Interestingly, internet appearance exposure was the only form of media that revealed a significant negative correlation with weight satisfaction. Further analyses revealed that internalization and appearance comparison fully mediated the relationship between internet appearance exposure and weight satisfaction. These factors also partially mediated the effect of internet appearance exposure on drive for thinness.

In addition to the support found for their hypotheses, Tiggemann and Miller found several interesting trends among participants' internet use. The average amount of time spent on the internet in this sample was 2 to 3 hours per day. This number is significantly higher than the findings obtained in previous research and indicates that internet use is increasing (e.g., Subrahmanyam and Lin, 2007). Additionally, the authors found that 60% of participants were members of MySpace and 40% had accounts on Facebook, spending over an hour and 45 minutes a day on the sites respectively. Increased time spent on

social networking sites was found to correlate with increased drive for thinness in girls. Further, those participants who spent more time on Facebook specifically displayed higher rates of drive for thinness and weight dissatisfaction. Time spent on other sites (e.g. Google) had no impact on measures of body image. These findings indicate that time spent on social networking sites may negatively impact female body image and deserves further attention.

The literature surrounding social networking is in its beginning stages and thus still contains several limitations. However, we are already beginning to see certain trends regarding how it may impact female users' appraisals of themselves and their bodies. Consequently, there appears to be a significant need to further investigate these effects and what other impact this new form of media might be having on women's thoughts and behavior.

Rationale and Hypotheses

Objectification theory and its proposed hypotheses have contributed a valuable dynamic to the body of research examining why eating disordered symptomatology disproportionately impacts women. However, there are still limitations within the research that deserve further investigation. While the literature reveals a consistent relationship between self-objectification, body shame, and disordered eating, specific experiences that may be impacting these various constructs have been minimally explored. With the recent advent of social networking, our society has been given a new arena in which objectification has the potential to occur. Further, prior research has begun to provide evidence that female users of social networking sites display more negative appraisals of themselves and their bodies. It is crucial that this new medium and its

impact on women be further studied in order to increase our understanding of social networking's potential influences on users. The proposed study attempted to do so by examining the following hypotheses:

Hypothesis 1: Self-objectification and body shame will be significant predictors of disordered eating. Body shame will act as a partial mediator between self-objectification and disordered eating.

Hypothesis 2: Self-objectification will be a significant predictor of disordered eating and that relationship will be moderated by Facebook investment, such that increased investment will strengthen the relationship between the two constructs.

Hypothesis 3: Self-objectification will be a significant predictor of body shame and that relationship will be moderated by Facebook investment, such that increased investment will strengthen the relationship between the two constructs.

Hypothesis 4: Body shame will be a significant predictor of disordered eating and that relationship will be moderated by Facebook investment, such that increased investment will strengthen the relationship between the two constructs.

Method

Participants

Participants were 71 undergraduate women recruited from psychology courses at a small Midwestern university and ranged in age from 18 to 38 years (M = 19.74, SD = 2.55). Seventy-two percent of the sample identified as Caucasian, 18% African American, 4% as "other," 1.5% as Hispanic, 1.5% as Native American, and 3% declined to answer. Forty-nine percent of participants were in their Freshman year of college, 27% in their Sophomore year, 17% in their Junior year, 4% in their Senior year, and 3%

declined to answer. Participants received course credit for participating in the study. Participants signed up and answered study questions through the online system, SONA. Only females were recruited for this study because self-objectification is a construct that focuses specifically on a female experience. Additionally, body shame and disordered eating are issues affecting females at higher rates than men, particularly for women who are of college age. Further, the existing literature on social networking indicated that negative consequences regarding self-concept and body image might impact female users specifically.

Procedures

The study was administered online via the SONA survey system. Participants were told that the project examined social networking use and how it may impact thoughts and behaviors of women who were in college. Participants were then asked to complete a series of three self-report measures assessing investment in Facebook, self-objectification and body shame, and disordered eating respectively. Participants were given an unlimited amount of time to complete these surveys. All data were recorded and contained within the SONA system for further analysis. Any information obtained in connection with this study remained confidential. The only personally identifiable information survey questions contained were those regarding demographic data. Upon completion, each participant was directed to a debriefing form that explained the purpose of the study. Additionally, links to sites developing and promoting a positive body image and contact information for local counseling services were provided to participants.

Measures

Disordered Eating. The present study used *The Eating Attitudes Test* (EAT-26;

Garner et. al, 1982, Appendix A) to assess disordered eating. The EAT-26 is currently one of the most widely used self-report measures used to screen for symptoms and concerns related to eating disorders (Garner, 1997). Participants are first asked to list their age, sex, height, current weight, lowest adult weight, highest adult weight (excluding pregnancy), and ideal weight. Next, the measure consists of 26 items that evaluate participants' eating behaviors and attitudes. Some examples of items are, "Avoid eating when I am hungry," "Find myself preoccupied with food," and "Am terrified of being overweight." Finally, four behavioral questions regarding eating disordered behavior displayed in the last 6 months are assessed. Examples of behavioral items include, "Gone on eating binges where you feel that you may not be able to stop?" and "Ever made yourself sick (vomited) to control your weight or shape?"

Responses to items 1-26 are presented in a 6-point Likert scale ranging from *1=never* to *6=always*. The responses for each item are weighted from 0 to 3. For items 1-25, a score of 3 is assigned to the response "*always*;" a score of 2 is assigned to the response "*usually*;" a score of 1 is assigned to the response "*often*;" and the remaining responses receive a score of 0. Item 26 is reverse scored and responses *"never," "rarely," and "sometimes"* receive scores of 3, 2, and 1 respectively. Scores are then added together and participants receive an EAT-26 total score, with higher scores corresponding to greater disordered eating behaviors.

After obtaining the total EAT-26 score, scorers are instructed to note whether or not a "yes" was marked for behavioral questions A, B, C, or D. Additionally, scorers are asked whether or not the participant is underweight. (This is determined using a table provided within the measure and is based off the self-reported height and weight obtained

at the beginning of the measure.) Individuals who score above the cutoff of 20, who answer "yes" to any of the four behavioral questions, or who are significantly underweight are referred for a diagnostic interview. There is empirical evidence that supports the EAT-26's sound psychometric properties (Gross, et al., 1986; Rosen et al., 1988). The scale demonstrated good reliability within the current sample ($\alpha = .83$).

Self-objectification and body shame. The Surveillance and Shame subscales of the Objectified Body Consciousness Scale (OBCS; McKinley & Hyde, 1996, Appendix B) were used to measure self-objectification (as manifested by body surveillance) and body shame. The OBCS has been used quite often in previous research examining the relationship between self-objectification, body shame, and disordered eating. It consists of 24 items making up three separate subscales: Body Surveillance, Body Shame, and Control Beliefs. Responses to items are presented on a 7-point Likert scale ranging from 1 = *Strongly Disagree* to 7 = *Strongly Agree.* Participants are also given an option of selecting "*NA*" as a response. Some examples of items include, "I think more about how my body feels than how my body looks," "I feel ashamed of myself when I haven't made an effort to look my best," and "Even when I can't control my weight, I think I am an okay person." Responses for each item are either scored consistent with the Likert scale or reverse scored (items requiring reverse scoring are specified in the scoring manual). *NA* responses are given a score of 0 and two or more of these responses result in an invalid score. Scores are then totaled and interpretations may be made based on how high or low the total number is for each subscale. According to McKinley and Hyde, higher scores on the body surveillance subscale indicates the individual may "frequently watch her appearance" or "think of her body in terms of how it looks." Additionally, higher

scores on the body shame subscale indicate that the individual may "feel like a bad person if she does not fulfill cultural expectations for her body." Both the body surveillance and body shame subscales exhibit strong internal consistency, validity, and test-retest reliability (McKinley & Hyde, 1996). Both the body surveillance and body shame subscales also demonstrated good reliability within the current sample ($\alpha = .80$, $\alpha = .78$).

Facebook Investment. As there was no existing measure to assess "Facebook investment," a 6-item survey was created in order to obtain the data for this construct (Appendix C). Responses to items presented on an 8-point scale ranging from 0=*I do not have a Facebook account* to 8 represent a variety of responses associated with increased investment in Facebook. Examples of items include, "Approximately how much time do you spend on Facebook in one day?" and "I am concerned with how physically attractive the photos of me on Facebook appear." Scores from the 6 items are then totaled with higher scores being associated with increased investment in Facebook. The scale demonstrated good reliability within the current sample ($\alpha = .74$).

Results

Hypothesis 1

Hypothesis 1 proposed that self-objectification and body shame would predict disordered eating. Body shame was also expected to partially mediate the relationship between self-objectification and disordered eating. Means and standard deviations of self-objectification (as manifested by body surveillance), body shame, and disordered eating are shown in Table 1. Following Baron and Kenny's (1986) procedures for testing mediation, a series of three simple regression analyses were first conducted in order to

test the predictive ability of self-objectification on disordered eating and body shame, as well as the predictive ability of body shame on disordered eating. A multiple regression analysis was then conducted in order to test the proposed meditational model.

Each regression model used an entry criterion of $p < .05$. Self-objectification, as measured by scores from the Body Surveillance subscale of the OBCS, was entered as the independent variable in the first regression model and scores from the Body Shame subscale of the OBCS were used as the outcome variable. Results revealed that self-objectification significantly predicted scores on the body shame subscale, $F(1,61) = 22.61$ $p < .001$, and accounted for 27% of the variance in body shame (See Table 2). This model accounted for the first criterion of mediation by showing the initial variable to be predictive of the mediator (Baron & Kenny, 1986). These findings supported the hypothesis that self-objectification would be a significant predictor of body shame. This finding indicates that females who reported higher rates of self-objectification were more likely to experience body shame than females who reported lower rates of self-objectification.

Also using self-objectification as the independent variable, a second regression model was run with scores from the Eating Attitudes Test (EAT-26) as the outcome variable. Results revealed that self-objectification significantly predicted scores on the EAT-26, $F(1,65) = 5.22$, $p < .05$, and accounted for 7% of the variance in EAT-26 scores (See Table 2). This model accounted for the second criterion of mediation by showing the initial variable to be predictive of the outcome variable (Baron & Kenny, 1986). These findings supported the hypothesis that self-objectification would be a significant predictor of disordered eating symptomatology. This finding indicates that females who reported

higher rates of self-objectification were more likely to experience symptoms and concerns related to eating disorders than females who reported lower rates of self-objectification.

A third regression model was run using body shame as the independent variable and scores from the Eating Attitudes Test (EAT-26) as the outcome variable. Results revealed that body shame significantly predicted scores on the EAT-26, $F(1,63) = 44.50$ $p < .001$, and accounted for 41% of the variance in EAT-26 scores (See Table 2). This model accounted for the third criterion of mediation by showing the hypothesized mediator to be predictive of the outcome variable (Baron & Kenny, 1986). These findings supported the hypothesis that body shame would be a significant predictor of disordered eating symptomatology. This finding indicates that females who reported higher rates of body shame were more likely to experience symptoms and concerns related to eating disorders than females who reported lower rates of body shame.

Given that all three criteria of mediation were satisfied, a multiple regression analysis was then conducted in order to test the meditational model proposed in hypothesis 1. The overall model was significant, $F(2,60) = 22.85$, $p > .001$, and accounted for 35.0% of the variance in EAT-26 scores. When body shame was added to the model, self-objectification was no longer found to be a significant predictor (See Table 3). It was predicted that body shame would at least partially mediate the relationship between self-objectification and disordered eating behaviors and concerns. The reduction of self-objectification from a significant to a non-significant predictor supports hypothesis 1 and indicates that body shame fully mediated the relationship between self-objectification and eating disordered behavior and concerns in this sample. This finding suggests that

females who reported higher rates of self-objectification as manifested by body surveillance were more likely to experience body shame. Higher rates of body shame then increase the probability that females will experience eating disordered behavior and concerns.

Hypotheses 2, 3, and 4

Hypotheses 2, 3, and 4 explored Facebook investment acting as a moderator in the relationships between self-objectification and disordered eating, self-objectification and body shame, and body shame and disordered eating, respectively. Following Baron and Kenny's (1986) procedures for establishing moderation, three separate regression analyses were conducted to examine the moderating effect of Facebook investment. Each model entered mean-centered Facebook investment scores and the mean-centered scores for self-objectification, body shame, and eating disordered behavior. Mean-centering has been recommended to reduce the interaction between linear and interaction terms in moderated models, thus reducing collinearity (Aiken & West, 1991). For each model, the enter method and an entry criterion of $p < .05$ was used.

To test hypothesis 2, a hierarchical regression analysis was conducted to predict eating disordered behavior and concern in females. Self-objectification and Facebook investment scores were entered as predictors in the first block and the interaction term between these two variables was entered on the second block. The overall model was not significant, $F(3,63) = 1.73$, $p > .05$. Only self-objectification was a statistically significant predictor of eating disordered behavior and concern accounting for 7% of the variance. Facebook investment accounted for an additional 0.1% of the variance in disordered eating (See Table 4).

The interaction term for the two variables was then entered into the regression model, however it did not account for a statistically significant amount of variance or have a statistically significant magnitude (See Table 4). The insignificant effect of Facebook investment on the relationship between self-objectification and eating disordered symptomatology suggests that Facebook investment did not play a significant role in predicting eating disordered behavior and concern or moderating the relationship between self-objectification and disordered eating. The findings of this regression model failed to provide support for hypothesis 2.

To test hypothesis 3, a hierarchical regression analysis was conducted to predict body shame in females. Self-objectification and Facebook investment scores were entered as predictors in the first block and the interaction term between these two variables was entered on the second block. The overall model was not significant, $F(3, 59) = 7.51, p < .05$. Only self-objectification was a statistically significant predictor of body shame accounting for 27% of the variance. Facebook investment accounted for an additional 0.5% of the variance in disordered eating (See Table 5).

The interaction term for the two variables was then entered into the regression model; however it did not account for a statistically significant amount of variance or have a statistically significant magnitude (See Table 5). The insignificant effect of Facebook investment on the relationship between self-objectification and body shame suggests that Facebook investment did not play a significant role in predicting body shame or moderating the relationship between self-objectification and body shame. The findings of this regression model failed to provide support for hypothesis 3.

To test hypothesis 4, a hierarchical regression analysis was conducted to predict

eating disordered behavior and concern in females. Body shame and Facebook investment scores were entered as predictors in the first block and the interaction term between these two variables was entered on the second block. The overall model was not significant, $F(3, 61) = 14.86, p < .05$. Only body shame was a statistically significant predictor of disordered eating symptomatology accounting for 42% of the variance. Facebook investment accounted for an additional 0.7% of the variance in disordered eating (See Table 6).

The interaction term for the two variables was then entered into the regression model; however it did not account for a statistically significant amount of variance or have a statistically significant magnitude (See Table 6). The insignificant effect of Facebook investment on the relationship between body shame and eating disordered symptomatology suggests that Facebook investment did not play a significant role in predicting eating disordered behavior and concern or moderating the relationship between body shame and disordered eating. The findings of this regression model failed to provide support for hypothesis 4.

Although Facebook investment was not found to be a significant moderator in any of the hypothesized pairs of variables, one additional analysis was conducted to investigate its possible impact on the study variables. A linear regression analysis was run with Facebook investment as the predictor and self-objectification as the outcome variable. This relationship was found to be significant, $F(1,65) = 5.05, p > .05$, and accounted for 7% of the variance in self-objectification (See Table 7). This finding indicates that females who reported higher rates of Facebook investment were more likely to report higher rates of self-objectification as manifested by body surveillance.

Discussion

Analysis of Findings

The first goal of the present study examined the empirically supported relationship between self-objectification, body shame, and disordered eating. Findings from analyses confirmed previous research identifying body shame as a mediator between self-objectification and disordered eating. That is, females who reported higher rates of self-objectification as manifested by body surveillance were more likely to experience body shame. Higher rates of body shame then increased the probability that these females experienced eating disordered behavior and concerns. These results provide further support for the theory set forth by Fredrikson and Roberts (1997) postulating that experiences of objectification in Western culture may lead to an increased possibility of women developing certain mental illnesses including eating disorders. Additionally, these results support the model originally proposed by Noll and Fredrikson (1998) suggesting that the emotion of body shame mediates the relationship between self-objectification and disordered eating.

While numerous past studies have found body shame to at least partially mediate the relationship between self-objectification and eating disordered behavior (e.g. Tieggman & Slater, 2001; Slater & Tieggmen; 2002; Augustus-Horvath & Tylka, 2009), it is important to note that the present study's results established a fully mediated relationship. That is, once body shame was introduced to the model, the relationship between self-objectification and disordered eating was no longer significant. Since body shame is such a strong predictor of disordered eating in the present study and in the literature, it is imperative that we remain aware of what contributes to the experience of

body shame in females and what individuals may do to safeguard against this experience.

Based on the present study's findings, self-objectification increases a woman's likelihood of experiencing body shame. Future studies should further explore the events that precede a woman's self-objectification, specifically her perceptions of sexually objectifying experiences. Future research should also explore what variables may act as protective factors against adopting an observer's perspective on one's own body (e.g., adherence to less traditional gender roles, endorsement of feminist ideology, knowledge of organizations that fight against sexual harassment). If research better identifies ways to increase a woman's ability to contest experiences of sexual objectification (i.e., perceiving those experiences as a symptom of a flawed sociological framework), perhaps rates of self-objectification may decrease and consequently experiences of body shame and disordered eating will decrease as well.

While the literature reveals a consistent relationship between self-objectification, body shame, and disordered eating, specific experiences that may impact these various factors have been minimally explored. The present study attempts to contribute to the literature by investigating the potential relationship between Facebook investment, self-objectification, body shame, and disordered eating. It was hypothesized that Facebook investment would act as a moderator in the relationships between self-objectification and disordered eating, self-objectification and body shame, and body shame and disordered eating, respectively. However, the present study's analyses did not reveal Facebook investment to be a significant moderator in any of the hypothesized pairs of variables.

When Facebook investment was not found to be a significant moderator in any of the hypothesized pairs of variables, an additional analysis was conducted to investigate

its possible impact on the study variables. Results indicated that females who reported higher rates of Facebook investment were more likely to report higher rates of self-objectification. Additionally, simple correlations were conducted between the specific aspects of Facebook measured (e.g., time spent on Facebook, number of photos, number of comments, etc.) and self-objectification, body shame, and disordered eating. Results revealed a significant positive correlation between time spent on Facebook and self-objectification and between number of Facebook photos and EAT-26 scores.

While the present study's findings indicate that there is a link between Facebook usage and self-objectification, why this link exists is uncertain. It is possible that overall Facebook investment and time spent on Facebook contributes to adopting an observer's perspective on one's self and one's body. Facebook is a unique media form in that it allows users to view their online personas regularly. Whether a user views photos tagged of her, comments written to her, or updates she posts, there is an underlying awareness that other people ("Facebook friends") view these items and evaluate them either positively or negatively. Essentially, Facebook provides users with an increased opportunity to be evaluated by others. Thus, users may become more conscious of how they appear to others both online and in "real-life" interactions. This awareness may contribute to the increased body surveillance seen in female users who displayed higher rates of Facebook investment and time spent on Facebook.

Another possibility explaining the link between Facebook and self-objectification may depend on what types of commentary a user receives. Increased Facebook investment and time spent on Facebook has the potential to expose female users to more sexual objectifying commentary via wall posts, photo comments, and so forth. However,

direct access to users' profiles and an analysis of the specific nature of commentary would be necessary in order to find support for this suggestion.

The present study also found a correlation between an increased number of photos on Facebook and scores on the EAT-26. It is possible that having more photographs on one's Facebook profile contributes to an individual's awareness of her physical appearance. Many Facebook users log into the site multiple times a day and thus have easy access to photographs of themselves. This convenient access could cause certain Facebook users to view pictures of themselves more often than non-users. This increased viewing could lead to an increased awareness of one's body size and shape. Consequently, female users with more photographs on their Facebook profiles may become more likely to adopt eating disordered behavior and concerns.

Additionally, Facebook allows users to present idealized versions of their physical selves online if they so choose. Users may only post photos of themselves that they deem attractive or flattering. Some users may even alter photographs of themselves to mask physical traits that they dislike. Having this opportunity online may lead to an increased likelihood of posting photographs, while simultaneously contributing to dissatisfaction and disappointment with one's physical appearance offline. This discontentment may lead to the increased rates of eating disordered symptomatology witnessed in the present study's sample.

Future Directions

It is important to keep in mind that the present study's findings were correlational and therefore causation cannot be established. Although the correlation between Facebook investment and self-objectification has only been discussed in terms of

Facebook investment's effect on self-objectification rates, the direction of this relationship may point the other way. That is, higher rates of self-objectification may predict Facebook investment in women. This study's results indicated that women who self-objectify are more likely to experience body shame. Although there was no statistically significant link between body shame and Facebook investment in the present study, it is plausible that body shame could mediate the relationship between self-objectification and Facebook investment in future research. Women who experience higher rates of body shame may find socializing on Facebook more appealing than socializing face-to-face because it allows them to better conceal their bodies. These female users may then invest more in Facebook because they do not feel as ashamed of their bodies during online interactions. Future studies may investigate this model further to examine its significance.

Future studies may also choose to investigate the relationships between Facebook investment, self-objectification, body shame, and disordered eating further in order to establish direction and causality. Given that the present study found Facebook investment, as well as specific aspects of Facebook use, to be associated with self-objectification and eating disorder symptomatology, a future study may choose to run a path analysis between Facebook investment, self-objectification, body shame, and disordered eating in order to better detect and understand the links between these various factors.

Additionally, although the present study measured self-objectification using scores from the body surveillance subscale of the OBCS, future studies may also include self-objectification as measured by the Self-Objectification Questionnaire (SOQ). The

SOQ measures self-objectification in terms of how much individuals view their bodies in "observable, appearance-based (objectified terms) terms versus non-observable, competence-based (non-objectified) terms" (Noll & Frerickson, 1998, p. 628). By assessing self-objectification in a more comprehensive manner, in addition to employing a path analysis, future studies may reveal a more complete model (see Figure 1) and potentially gain a better understanding of the effects social networking may have on self-objectification, body shame, and eating disordered behavior in women.

Limitations

Limitations within the present study may have contributed to the unsupported hypotheses regarding Facebook investment acting as a moderator among self-objectification, body shame, and disordered eating. Although the measure created to assess for Facebook investment had adequate reliability upon analysis, this measure has not been normed and there is no empirical evidence regarding its psychometric properties. It will be important for a valid and reliable measure to be obtained or created before further investigation may be conducted assessing Facebook use. Future studies may also incorporate personal access to participants' Facebook pages in order to obtain less subjective information. It should be noted that this study's sample was relatively small (71 participants). Participants were primarily Caucasian (72%), college-aged, and all were college educated. In order to assess the possible effects of Facebook investment in a broader population of women, future studies must be conducted.

Conclusions

The present study provided useful preliminary findings with regard to the association between Facebook investment and experiences of self-objectification, body

shame, and eating behavior. Although no causal conclusions can be determined from this study's findings, there is evidence that increased use of social networking sites may affect how women perceive and appraise their bodies. This result deserves further attention from researchers. Understanding what impact this new medium has on women's body image and eating behavior is imperative if clinicians are to better treat both at-risk clients and those currently diagnosed with eating disorders. Increasing our awareness of the risk factors associated with eating disorder symptomatology provides a better opportunity to identify the tools necessary to combat these factors both online and in person.

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Figure 1

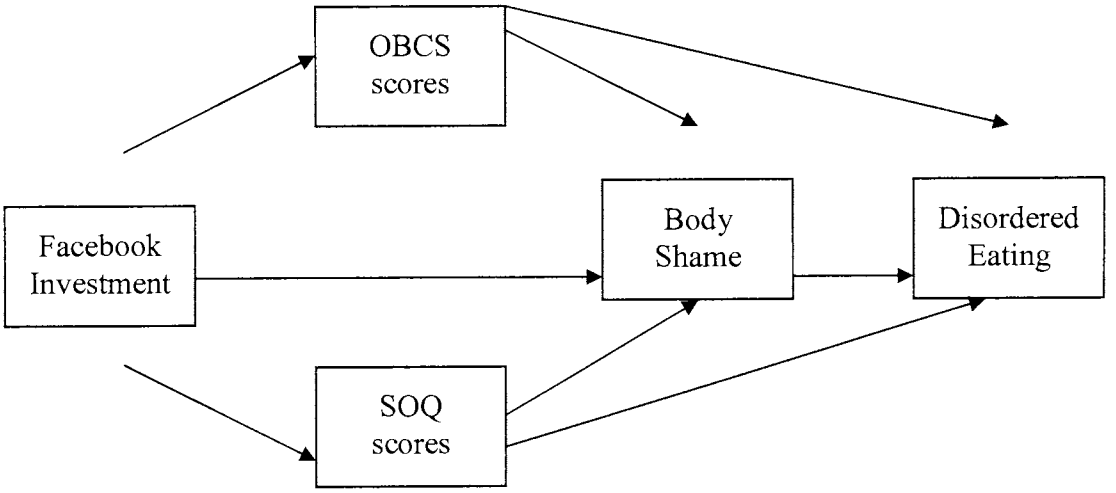
OBCS scores
Facebook Investment
Body Shame
Disordered Eating
SOQ scores

Table 1
Means and standard deviations of the present study's variables

	M	SD
Self-objectification (Body Surveillance)	4.64	0.97
Body Shame	3.61	1.15
Disordered Eating	9.15	8.30
Facebook Investment	27.28	7.75

Table 2
Results of simple linear regressions to establish criteria for mediation

Analysis	Total R^2	β	*t*	*p*-value
1 Body Surveillance predicting Disordered Eating	.074	.273	2.28	<.05
2 Body Surveillance predicting Body Shame	.270	.520	4.76	<.001
3 Body Shame predicting Disordered Eating	.414	.643	6.67	<.001

Table 3
Hierarchical regression to predict disordered eating

Step	Δ R^2	Total R^2	β	*t*	*p*-value
1 Body Surveillance	.083	.083	.289	2.36	.022
2 Body Shame	.349	.432	.692	6.07	.000

Table 4

Regression results testing Facebook Investment as a moderator between Body Surveillance and Disordered Eating

Step	Δ R^2	Total R^2	β	*t*	*p*-value
1 Body Surveillance	.074	.074	.273	2.28	.026
2 Facebook	.001	.075	.026	.206	.838
3 Facebook x Body Surveillance	.001	.076	.035	.284	.777

Table 5

Regression results testing Facebook Investment as a moderator between Body Surveillance and Body Shame

Step	Δ R^2	Total R^2	β	*t*	*p*-value
1 Body Surveillance	.270	.270	.520	4.76	.000
2 Facebook	.001	.272	.036	.316	.753
3 Facebook x Body Surveillance	.005	.276	.70	.628	.532

Table 6

Regression results testing Facebook Investment as a moderator between Body Shame and Disordered Eating

Step	Δ R^2	Total R^2	β	*t*	*p*-value
1 Body Shame	.414	.414	.643	6.67	.000
2 Facebook	.001	.415	-.033	-.334	.739
3 Facebook x Body Shame	.007	.422	-.088	-.871	.387

Table 7
Simple linear regression results for Facebook Investment as a predictor of Body Surveillance

Analysis	Total R^2	β	*t*	*p*-value
Facebook predicting Body Surveillance	.072	.269	2.25	<.05

Appendix A

Eating Attitudes Test (EAT-26)

The following screening questionnaire is designed to help you determine if your eating behaviors and attitudes warrant further evaluation. The questionnaire is **not intended to provide a diagnosis**. Rather, it identifies the presence of symptoms that are consistent with either a possible eating disorder.

Answer the questions as honestly as you can, and then score questions using the instructions at the end.

Please mark a check to the right of each of the following statements:

Always Usually Often Sometimes Rarely Never

1. Am terrified about being overweight.
2. Avoid eating when I am hungry.
3. Find myself preoccupied with food.
4. Have gone on eating binges where I feel that I may not be able to stop.
5. Cut my food into small pieces.
6. Aware of the calorie content of foods that I eat.
7. Particularly avoid food with a high carbohydrate content (i.e. bread, rice, potatoes, etc.)
8. Feel that others would prefer if I ate more.
9. Vomit after I have eaten.
10. Feel extremely guilty after eating.
11. Am preoccupied with a desire to be thinner.
12. Think about burning up calories when I exercise.
13. Other people think that I am too thin.
14. Am preoccupied with the thought of having fat on my body.
15. Take longer than others to eat my meals.
16. Avoid foods with sugar in them.
17. Eat diet foods.
18. Feel that food controls my life.
19. Display self-control around food.
20. Feel that others pressure me to eat.
21. Give too much time and thought to food.
22. Feel uncomfortable after eating sweets.
23. Engage in dieting behavior.
24. Like my stomach to be empty.
25. Have the impulse to vomit after meals.
26. Enjoy trying new rich foods.

Total Score =

Behavioral Questions:

In the past 6 months have you: **Yes No**

A. Gone on eating binges where you feel that you may not be able to stop? (Eating much more than most people would eat under the same circumstances)

If you answered yes, how often during the worst week: _____

B. Ever made yourself sick (vomited) to control your weight or shape?

If you answered yes, how often during the worst week: _____

C. Ever used laxatives, diet pills or diuretics (water pills) to control your weight or shape?

If you answered yes, how often during the worst week? _____

D. Ever been treated for an eating disorder? When: _____

SCORING THE EATING ATTITUDES TEST (EAT-26)

Follow the steps below:

Step 1

EAT-26 ITEM SCORING:
Score each item as indicated below and put score in box to the right of each item.

Items # 1-25:
Always = 3
Usually = 2
Often = 1
Sometimes = 0
Rarely = 0
Never = 0

Item #26 only:
Always = 0
Usually = 0
Often = 0
Sometimes = 1
Rarely = 2
Never = 3

Step 2

Add item scores together for a Total EAT-26 score:
Total =

Step 3

Determine if you are significantly underweight according to the table to the right.

Step 4

If your EAT-26 score is 20 or more or if your weight is below the number on the weight chart to the right, we suggest that you discuss your results with your physician or therapist.

Appendix B

The Objectified Body Consciousness Scale

This scale was developed using feminist theory about the social construction of the female body. Subscales consist of *body surveillance* (viewing the body as an outside observer), *body shame* (feeling shame when the body does not conform to cultural standards), and *appearance control beliefs*. The subscales have been shown to be distinct dimensions with acceptable reliabilities for young and middle-aged women (McKinley & Hyde, 1996) and for undergraduate men (McKinley, 1998). Test-retest reliability has also been established for undergraduate women (McKinley & Hyde, 1996). The OBC scale is related to body esteem (McKinley & Hyde, 1996; McKinley, 1998; McKinley, 1999) and eating problems (McKinley & Hyde, 1996) and to some dimensions of psychological well-being (McKinley,1999).

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Scoring the OBC Scales

1. Reverse items 1, 3, 4, 6, 7, 9, 12, 13, 15, 18, 19, 20, 21, 24

2. Add scores for each of three scales: (score 0 for any "NA" response).

   SURVEILLANCE: 1, 3, 7, 9, 14, 16, 18, 20

   BODY SHAME: 2, 5, 8, 11, 13, 15, 17, 22

   CONTROL BELIEFS: 4, 6, 10, 12, 19, 21, 23, 24

3. Divide score for each scale by the number of responses. Do not count any NA responses or missing responses.

4. NA responses and missing responses should be counted as missing. If more than 2 items are missing for any scale, that scale is counted as "missing."

Descriptive Statistics and Internal Consistency for Selected Samples

	Surveillance	Body Shame	Control Beliefs
	M (SD)	*M (SD)*	*M (SD)*
	Missing [a]	*Missing* [a]	*Missing* [a]
	Consistency	*Consistency*	*Consistency*
Undergraduate	4.22 (.91)	3.25 (1.04)	3.93 (.70)
Women [b]	0%	7%	0%
	α = .89	α = .75	α = .72
[c]	4.82 (1.07)	3.46 (1.27)	4.62 (.93)
	0%	3%	0%
[d]	4.91 (.94)	3.48 (1.22)	4.84 (.88)
	0%	5%	0%
	α = .79	α = .84	α = .68
Undergraduate	4.38 (.92)	2.80 (.88)	4.65 (.86)
Men [c]	0%	10%	0%
	α = .79	α = .73	α = .64
Middle-aged	4.33 (1.03)	2.98 (.97)	4.94 (1.02)
Women [d]	0%	2%	0%
	α = .76	α = .70	α = .76

Notes: [a] Percentage scores dropped because fewer than 6 items rated; [b] McKinley & Hyde (1996); [c] McKinley (1998); [d] McKinley (1999)

Interpreting the OBC Scales

The following descriptions are provided to clarify what the OBC scales are measuring. There is currently no "cut-off point" for a high or low scorer.

BODY SURVEILLANCE

High scorer: frequently watches her appearance; thinks of her body in terms of how it looks.

Low scorer: rarely watcher her appearance; thinks of her body in terms of how it feels.

BODY SHAME

High scorer: feels like she is a bad person if she does not fulfill cultural expectations for her body.

Low scorer: feels like she is an okay person even if she does not fulfill cultural expectations for her body.

CONTROL BELIEFS

High scorer: believes that she can control her weight and her appearance if she tries hard enough.

Low scorer: believes she does not control her weight or appearance and that these are controlled by factors such as heredity.

INSTRUCTIONS:

Circle the number that corresponds to how much you agree with each of the statements on the following pages.

Circle NA only if the statement does not apply to you. Do not circle NA if you don't agree with a statement.

For example, if the statement says "When I am happy, I feel like singing" and you don't feel like singing when you are happy, then you would circle one of the disagree choices. You would only circle NA if you were never happy.

	Strongly Disagree						Neither agree nor	
1. I rarely think about how I look.....	1	2	3	4	5	6	7	NA
2. When I can't control my weight, I feel like something must be wrong with me.....	1	2	3	4	5	6	7	NA
3. I think it is more important that my clothes are comfortable than whether they look good on me.	1	2	3	4	5	6	7	NA
4. I think a person is pretty much stuck with the looks they are born with.....	1	2	3	4	5	6	7	NA
5. I feel ashamed of myself when I haven't made the effort to look my best.	1	2	3	4	5	6	7	NA
6. A large part of being in shape is having that kind of body in the first place.	1	2	3	4	5	6	7	NA
7. I think more about how my body feels than how my body looks.	1	2	3	4	5	6	7	NA
8. I feel like I must be a bad person when I don't look as good as I could.	1	2	3	4	5	6	7	NA
9. I rarely compare how I look with how other people look.	1	2	3	4	5	6	7	NA
10. I think a person can look pretty much how they want to if they are willing to work at it.....	1	2	3	4	5	6	7	NA

	Strongly Disagree						Neither agree nor
11. I would be ashamed for people to know what I really weigh..... ....1 2	3	4	5	6	7	NA	
12. I really don't think I have much control over how my body looks.. ....1 2	3	4	5	6	7	NA	
13. Even when I can't control my weight, I think I'm an okay person. 1 2	3	4	5	6	7	NA	
14. During the day, I think about how I look many times. 1 2	3	4	5	6	7	NA	
15. I never worry that something is wrong with me when I am not exercising as much as I should. 1 2	3	4	5	6	7	NA	
16. I often worry about whether the clothes I am wearing make me look good. 1 2	3	4	5	6	7	NA	
17. When I'm not exercising enough, I question whether I am a good enough person. 1 2	3	4	5	6	7	NA	
18. I rarely worry about how I look to other people. 1 2	3	4	5	6	7	NA	
19. I think a person's weight is mostly determined by the genes they are born with. 1 2	3	4	5	6	7	NA	
20. I am more concerned with what my body can do than how it looks..... ....1 2	3	4	5	6	7	NA	
21. It doesn't matter how hard I try to change my weight, it's probably always going to be about the same..1 2	3	4	5	6	7	NA	
22. When I'm not the size I think I should be, I feel ashamed..... ....1 2	3	4	5	6	7	NA	
23. I can weigh what I'm supposed to when I try hard enough..... ....1 2	3	4	5	6	7	NA	
24. The shape you are in depends mostly on your genes.....1 2	3	4	5	6	7	NA	

Appendix C

1) On average, approximately how much time do you spend on Facebook in one day?

0 = I do not have a Facebook account 1 = 1 – 10 minutes 2 = 11 – 30 minutes

3 = 31 minutes – 1 hour 4 = 1 – 2 hours 5 = 2 – 3 hours 6 = 3 – 4 hours 7 = More than 4 hours

2) Approximately how many Facebook friends do you have?

0 = I do not have a Facebook account 1 = Less than 100 2 = 100 – 200 3 = 200 – 300

4 = 300 – 400 5 = 500 – 600 6 = 600 – 700 7 = More than 700

3) Approximately how many photos of you are on Facebook?

0 = I do not have a Facebook account 1 = 0 – 100 2 = 100 - 200 3 = 200 – 400

4 = 400 - 600 5 = 600 - 800 6 = 800 – 1000 7 = 1000 +

4) Approximately how often do other users post comments on photos of you?

0 = I do not have a Facebook account 1 = Less than once a month 2 = Once a month

3 = Every 3 – 4 weeks 4 = Every 2 – 3 weeks 5 = Every 1 – 2 weeks 6 = Every week

7 = Every day

5) Approximately how often do you receive Facebook comments regarding your physical appearance?

0 = I do not have a Facebook account 1 = Less than once a month 2 = Once a month

3 = Every 3 – 4 weeks 4 = Every 2 – 3 weeks 5 = Every 1 – 2 weeks 6 = Every week 7 = Every day

6) I am concerned with how physically attractive the photos of me on Facebook appear.

0 = I do not have a Facebook account 1 = Strongly Disagree 2 = Disagree 3 = Somewhat Disagree 4 = Neutral 5 = Somewhat Agree 6 = Agree 7 = Strongly Agree