

## Explaining the relation between thin ideal internalization and body dissatisfaction among college women: The roles of social comparison and body surveillance

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### ABSTRACT

Sociocultural models of disordered eating lack comprehensive explanations as to how thin ideal internalization leads to body dissatisfaction. This study examined two social psychological theories as explanations of this relation, namely social comparison and objectification theories, in a sample of 265 women attending a Southeastern university. Social comparison (both general and appearance-related) and body surveillance (the indicator of objectification) were tested as mediators of the relation between thin ideal internalization and body dissatisfaction using bootstrapping analyses. Results indicated that body surveillance was a significant specific mediator of this relation; however, neither operationalization of social comparison emerged as such. Results serve to elaborate upon the sociocultural model of disordered eating by providing a more comprehensive understanding of the processes by which thin ideal internalization manifests itself in body dissatisfaction. The current findings also highlight the importance of targeting body surveillance in clinical settings.

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### Introduction

In university settings, the statistics regarding eating disorder prevalence are alarming, as between 4% and 9% or more of college women suffer from diagnosable eating disorders (Hesse-Biber, Marino, & Watts-Roy, 1999; Keel, Heatherton, Dorner, Joiner, & Zalta, 2006; Pyle, Neuman, Halvorson, & Mitchell, 1991). When disordered eating estimates for this group are broadened to include subthreshold levels, prevalence ranges from 34% to 67% of college women (e.g., Berg, Frazier, & Sherr, 2009; Franko & Omori, 1999; Hoerr, Bokram, Lugo, Bivins, & Keast, 2002; Krahn, Kurth, Gombert, & Drewnowski, 2005; Mintz & Betz, 1988; Mintz, O'Halloran, Mulholland, & Schneider, 1997), indicating that disordered eating is relatively "normative" for this group. Furthermore, body dissatisfaction, which has been described as one of the "most consistent and robust risk and maintenance factors for eating pathology" (Stice, 2002, pp. 832–833) has been reported at rates as high as 80% for college women (Heatherton, Nichols, Mahamedi, & Keel, 1995; Neighbors & Sobal, 2007; Silberstein, Striegel-Moore, Timko, &

Rodin, 1988; Spitzer, Henderson, & Zivian, 1999; Vohs, Heatherton, & Herrin, 2001).

Research has found support for a sociocultural model of disordered eating among college women (e.g., Stice, 1994; Stice, Nemeroff, & Shaw, 1996; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). According to this model, disordered eating is a result of pressure for women in Western society (e.g., from media, family, and peers) to achieve an ultraslender figure (Malkin, Wornian, & Chrisler, 1999; Striegel-Moore, Silberstein, & Rodin, 1986; Sypeck, Gray, & Ahrens, 2004). Indeed, Chernin (1981) described that a "tyranny of slenderness" rules over women in the United States. For example, the media has espoused a viewpoint that the ultraslender look is both desirable and achievable, when in fact, this "ideal" is very difficult or near impossible for most women to achieve without engaging in extreme weight loss efforts (Brownell, 1991). Of course, for these sociocultural pressures to have harmful effects on an individual, they must be internalized. If a woman does not "buy in" to such pressures, it is unlikely that they would lead to disordered eating. However, if a woman does assimilate and internalize the thin ideal and the values associated with it into her worldview (e.g., in order to be considered attractive, I must be thin), it is likely that this internalization will have negative consequences (Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004). For example, research has indicated that those who most aspire to being thin are the most negatively affected by thin ideal images (e.g., Dittmar & Howard, 2004; Halliwell & Dittmar, 2004).

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Cross-sectional research has demonstrated a robust link between thin ideal internalization and body dissatisfaction, and prospective research has indicated that thin ideal internalization predicts increased body dissatisfaction (e.g., Keery, van den Berg, & Thompson, 2004; Shroff & Thompson, 2006; Stice & Whitenton, 2002); body dissatisfaction is in turn a strong predictor of disordered eating (e.g., Stice, 2002). However, sociocultural models of disordered eating (e.g., Stice, 1994; Stice et al., 1996) currently lack comprehensive explanations as to how thin ideal internalization leads to body dissatisfaction. Theoretically, women who have internalized the thin ideal would be at risk for developing body dissatisfaction when the ideal is not actualized; yet, how do these individuals come to know that they have not realized such an ideal – through what mechanisms does this occur? How does a woman come to know that there is a discrepancy between her ideal and what she currently is?

In the present study, we investigated two social psychological theories as explanations of the relation between thin ideal internalization and body dissatisfaction, namely social comparison (Festinger, 1954) and objectification (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996) theories. Specifically, social comparison and body surveillance (i.e., the indicator of objectification; Moradi & Huang, 2008) were examined as two important constructs that may mediate the thin ideal internalization–body dissatisfaction relation.

### Social Comparison as a Mediator of the Thin Ideal Internalization–Body Dissatisfaction Link

Festinger's (1954) social comparison theory forwards that humans engage in social comparison with others in order to understand how and where they fit into the world when objective standards are not available. Comparing oneself to others, both intentionally and unintentionally, is a pervasive aspect of social interactions and has been described as a “core element of human conduct and experience” (Suls, Martin, & Wheeler, 2002, p. 159). Further, college campuses provide environments that lend themselves to engaging in social comparisons; specifically, women are surrounded by many other women of approximately the same age with whom they interact with both directly (e.g., in class, roommate interactions) and indirectly (e.g., passing another woman on campus) on a daily basis (Lindner, Hughes, & Fahy, 2008).

Research has indicated that women frequently make appearance-related social comparisons (Leahey, Crowther, & Mickelson, 2007), and one negative psychological consequence that may result when the comparison is unfavorable is body dissatisfaction (e.g., Myers & Crowther, 2009; Trampe, Stapel, & Siero, 2007). Indeed, comparisons made by women on appearance-related dimensions are generally upward (i.e., the individual compares themselves to someone they deem as more attractive or “better off” in some area; Morrison, Kalin, & Morrison, 2004). For example, research has indicated that the majority of comparisons made by women in the naturalistic environment are in the upward direction (>80%; Leahey et al., 2007). Such upward comparisons generally result in feelings of discontent and dissatisfaction (Thompson et al., 1999) because of the gap that is created between one's actual and ideal selves (Cash & Szymanski, 1995). For example, Rodgers, Paxton, and Chabrol (2009) found that a latent variable encompassing appearance-related social comparison behavior and thin ideal internalization was associated with greater body dissatisfaction among college women. Similarly, Keery et al. (2004) found that the tendency to make appearance-related comparisons was significantly associated with body dissatisfaction.

Research has indicated that general social comparison tendencies are associated with body dissatisfaction, as well (e.g., Morrison

et al., 2003). For example, Gilbert and Meyer (2003) found that the general tendency to compare one's performance with others was significantly correlated with body dissatisfaction in a sample of college women. Morrison et al. (2003) similarly found that socially comparing one's performance (as well as one's opinions) with others was significantly associated with body dissatisfaction among university females.

Overall, the relation between social comparison and body dissatisfaction has been confirmed by meta-analytic work (Myers & Crowther, 2009). Further, research has indicated that internalization of the thin ideal may spur social comparison processes as a way for individuals to gain information regarding how they measure up to that ideal (Harrison, 2001; Richins, 1991), which in turn, may lead to dissatisfaction with the body (Engeln-Maddox, 2005; Shaw & Waller, 1995). While one cross-sectional study has found that social comparison behavior (specific to physical appearance) mediated the relation between internalization of the thin ideal and body dissatisfaction among preadolescent girls (Blowers, Loxton, Grady-Flessner, Occhipinti, & Dawe, 2003), to the authors' knowledge, such a mediation model has yet to be tested in a sample of college women.

### Body Surveillance as a Mediator of the Thin Ideal Internalization–Body Dissatisfaction Link

Body surveillance, the indicator of objectification, may also mediate the relation between thin ideal internalization and body dissatisfaction. Objectification theory posits that within dominant American culture, the feminine body has been constructed as an object to be looked at and gazed upon; thus, girls and women learn to view themselves from an observer's perspective and to treat themselves as objects to be looked at (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996). In addition to being reduced to the status of mere objects, women are given the message that they have the ability to control their bodies and that given the appropriate amount of effort, it is possible to comply with cultural standards of beauty (i.e., the thin ideal; McKinley & Hyde, 1996). The internalization of the “objectifying observer's” (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998) perspective of one's own body is known as self-objectification, which manifests itself in the act of body surveillance (Moradi & Huang, 2008) – a behavior that many women feel they must engage in constantly in order to ensure their compliance with the thin ideal (Gilbert & Thompson, 1996; McKinley, 2004; Thompson & Stice, 2001). It is via this surveillance that many women perceive there to be a discrepancy between what they see and what they would ideally like to look like, which often results in negative consequences, such as dissatisfaction with the body (McKinley & Hyde, 1996). Indeed, research has found that the development of body dissatisfaction can be partly explained by body surveillance (e.g., Knauss, Paxton, & Alsaker, 2008; McKinley, 1998; Muehlenkamp, Swanson, & Brausch, 2005).

Harper and Tiggemann (2008) conceptualized objectification as an outcome that may result from internalization of the ultraslender ideal. It may be that women who have internalized the thin ideal are compelled to engage in body monitoring as a way to assess their standing relative to that ideal; when a woman comes to the realization that she does not measure up, discontent with her body may result. Indeed, Myers and Crowther (2007) found that the process of self-objectification mediated the relation between thin ideal internalization and body dissatisfaction in a cross-sectional study of college women. Although these results indicate that having an objectified perspective of oneself may be one mechanism by which thin ideal internalization leads to body dissatisfaction, research has

yet to investigate the behavioral indicator of self-objectification, body surveillance, as a mediator.

### The Current Study

In the present study, two social psychological theories, social comparison theory and objectification theory, were investigated as explanations of the thin ideal internalization–body dissatisfaction relation. Specifically, social comparison and body surveillance, the indicator of objectification, were tested as mediators of the relation between thin ideal internalization and body dissatisfaction in a sample of undergraduate women. We hypothesized that social comparison and body surveillance would each partially mediate this relation. Given that prior research has linked both general and appearance-related social comparison tendencies to body dissatisfaction, we chose to examine social comparison in this study in two ways (i.e., broadly and appearance-specific).

Hesse-Biber, Leavy, Quinn, and Zoino (2006) conceptualized both social comparison theory and objectification theory as part of a “nexus of influence” (p. 208) that helps explain the development and maintenance of women’s body image disturbance and other symptoms of disordered eating; however, to date, only one known simultaneous examination of these two theoretical frameworks has been undertaken. Tylka and Sabik (2010) found that body comparison partially mediated the relation between body surveillance and body shame in a sample of college women. These researchers also found that body comparison moderated the relation between body surveillance and disordered eating; in particular, results indicated that at high levels of body surveillance, women who also reported high levels of body comparison reported much greater levels of eating disorder symptomatology than those who reported low levels of body comparison. Research has yet to examine these two theoretical frameworks as explanations of the thin ideal internalization–body dissatisfaction relation. Examining these mediational relations and incorporating this information into an elaborated sociocultural model would provide researchers with a more comprehensive understanding of the social psychological processes by which thin ideal internalization manifests itself in body dissatisfaction.

## Method

### Participants

Participants were 265 women attending a Southeastern university; they ranged in age from 17 to 27 years, with a mean age of 19.12 years ( $SD = 1.46$ ). Recruitment occurred through introductory psychology courses and other psychology courses. Most women (66.0%) identified themselves as Caucasian, 17.0% as African American or African, 6.4% as Asian, 1.9% as Hispanic, 1.1% as Native American, 7.2% as biracial/biethnic, and 0.4% as other races/ethnicities. Highest parental education was used as a proxy for socioeconomic status and ranged from 7 to 21 years ( $M = 16.45$  years,  $SD = 2.63$ ).

### Procedures

Participants completed a set of computer-based questionnaires in a research laboratory as part of a study presented as an investigation of personality and cognition. Questionnaires were presented in a fixed order and were administered to participants in a quiet room after obtaining written consent. Study completion took 45 minutes to one hour, and participants received course credit for their involvement. This study was reviewed and approved by the university’s Institutional Review Board.

## Measures

**Demographics.** Demographic data for age, parents’ highest levels of education attained, and race/ethnicity were collected via a set of questionnaires created for this study.

**Thin ideal internalization.** Thin ideal internalization was measured with the Internalization–General subscale of the Sociocultural Attitudes Toward Appearance Questionnaire-3 (SATAQ-3; Thompson et al., 2004). This subscale consists of nine items that indicate endorsement and acceptance of media messages that espouse unrealistic ideals for female beauty and the striving toward such ideals. However, four of the nine items reference comparison (e.g., “I compare my body to the bodies of people who are on TV”). In order to minimize issues related to construct overlap, these four items were not included when computing the subscale score. All analyses were run using the resulting 5-item version of the SATAQ-3 Internalization–General subscale. An example of an item that was retained is, “I would like my body to look like the models who appear in magazines.” These items are rated on a 5-point scale ranging from *definitely disagree* to *definitely agree*. Evidence of good construct validity has been demonstrated (e.g., relatively high correlation with drive for thinness; Calogero, Davis, & Thompson, 2004; Thompson et al., 2004), and high internal consistency has been reported in two studies (alphas of .96 and .92; Thompson et al., 2004). In the current study, Cronbach’s alpha was .88 for the 5-item version of the SATAQ-3 Internalization–General subscale.

**Social comparison.** Social comparison behavior was measured using the Iowa–Netherlands Comparison Orientation Measure (INCOM; Gibbons & Buunk, 1999). This scale consists of eleven items that are rated on a 5-point scale ranging from *disagree strongly* to *agree strongly*, with higher scores indicating a greater tendency to engage in social comparisons across life domains. An example item is, “If I want to find out how well I have done something, I compare what I have done with how others have done.” Evidence of construct validity is suggested by the measure’s significant relationships with neuroticism, self-monitoring, public and private self-consciousness, and social anxiety (Gibbons & Buunk, 1999). Gibbons and Buunk (1999) found that estimates of internal consistency ranged from .78 to .85; in the present study, alpha was .82.

Appearance-related social comparison tendencies were assessed using the Physical Appearance Comparison Scale (PACS; Thompson, Heinberg, & Tantleff, 1991). This scale assesses an individual’s tendency to compare her own appearance to the appearance of others and consists of five items that are rated on a 5-point scale ranging from *never* to *always*. An example item is, “At parties or other social events, I compare my physical appearance to the physical appearance of others.” Construct validity is demonstrated by the strong correlations between the PACS and measures of body dissatisfaction and eating disturbance (Thompson et al., 1991). Thompson et al. (1991) found adequate internal consistency (coefficient alpha = .78) in a sample of college women; in the present study, alpha was .82.

**Body surveillance.** Body surveillance behavior was measured with the Body Surveillance subscale of the Objectified Body Consciousness Scale (OBCS; McKinley & Hyde, 1996). This subscale consists of eight items that are rated on an 7-point scale ranging from *strongly disagree* to *strongly agree*, with higher scores indicating higher levels of surveillance or habitual body monitoring and thinking of one’s body in terms of how it looks rather than how one feels. An example item is, “During the day, I think about how I look many times.” This subscale contains one comparison-related item (i.e., “I rarely compare how I look with how other people look”); in order to minimize issues related to construct overlap, this item was not included when computing the subscale score. All analyses were run using the 7-item version of the OBCS

**Table 1**  
Correlations among and means and standard deviations of the measured variables ( $N = 265$ ).

	1	2	3	4	5	
1. SATAQ-3, Internalization	–					$M = 15.24, SD = 5.27$
2. INCOM	.29***	–				$M = 40.23, SD = 6.44$
3. PACS	.58***	.53***	–			$M = 15.40, SD = 3.85$
4. OBSC, Surveillance	.57***	.38***	.60***	–		$M = 4.64, SD = 1.00$
5. EDI-BD	.43***	.17**	.37***	.46***	–	$M = 30.51, SD = 8.78$

Note. SATAQ-3 = Sociocultural Attitudes Toward Appearance Questionnaire-3. INCOM = Iowa-Netherlands Comparison Orientation Measure. PACS = Physical Appearance Comparison Scale. OBSC = Objectified Body Consciousness Scale. EDI-BD = Eating Disorder Inventory-Body Dissatisfaction. Possible ranges for the study variables are as follows: SATAQ-3, Internalization (5–25), INCOM (11–55), PACS (5–25), OBSC, Surveillance (1–7), and EDI-BD (9–54).

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

Body Surveillance score. Also of note, if more than two items are missing on an OBSC subscale (with a “not applicable” option being counted as missing), then the score for that subscale is not computed (McKinley & Hyde, 1996). Only one study participant had more than two items missing on the Body Surveillance subscale and thus a score for this subscale was not computed for this individual. Construct validity is demonstrated by high correlations with public self-consciousness ( $r = .73$ ) and non-significant relations with private self-consciousness (McKinley & Hyde, 1996). McKinley and Hyde (1996) reported a coefficient alpha of .89 in a sample of student and nonstudent women, and in the current study, alpha was .80 for the 7-item version of the OBSC Body Surveillance subscale.

**Body dissatisfaction.** The 9-item Body Dissatisfaction subscale of the Eating Disorder Inventory (EDI; Garner, Olmstead, & Polivy, 1983) was used to assess the belief that specific parts of the body are too large (e.g., hips, thighs, buttocks). An example item is, “I think that my stomach is too big.” These items are rated on a 6-point scale ranging from *never* to *always*, with higher scores indicating greater body dissatisfaction. Garner et al. (1983) originally recommended that item responses *never*, *rarely*, and *sometimes* receive a score of 0, and the responses *often*, *usually*, and *always* receive scores of 1, 2, and 3 respectively; however, because this reduces the variability in responses in nonclinical samples, like others, we coded these responses using the continuous 6-point scale (see Tylka & Subich, 2004). Construct validity is demonstrated by the measure’s high correlation with body preoccupation (Tylka & Subich, 2004) and association with eating disordered behavior (Spillane, Boerner, Anderson, & Smith, 2004). Reliability coefficients for college women range from .83 to .93 (Garner et al., 1983); in the current study, alpha was .89.

### Analytic Strategy

In this study, bootstrapping analyses were conducted using methods described by Preacher and Hayes (2008) for estimating indirect effects with multiple mediators. This analytic procedure allows multiple mediators to be tested simultaneously, it does not assume a normal sampling distribution (of note, this sampling distribution is normal only in very large samples, and in general, indirect effects are rarely normal), and the number of inferential tests is minimized, resulting in a reduced likelihood of Type I errors (MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2004, 2008; Shrout & Bolger, 2002). Bootstrapping (using 5,000 resamples) was used to obtain estimates of the indirect effects and to test their significance via confidence intervals. Additionally, contrasts were utilized to examine whether the indirect effects of the hypothesized mediators were equal in size. Mplus Version 5.21 (Muthén & Muthén, 2007) was used to run these analyses.

## Results

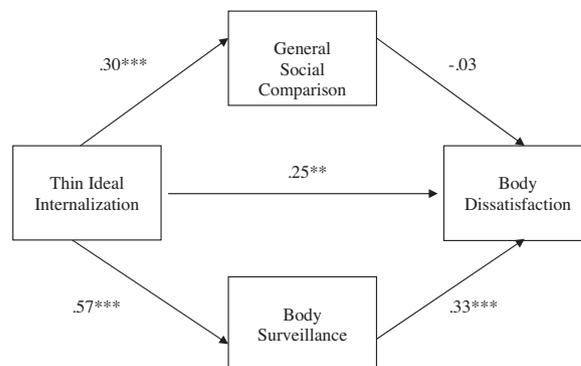
### Descriptive Statistics

Means and standard deviations for the study variables and their correlations are presented in Table 1. Correlations were in the directions expected based on the literature; that is, we found positive correlations between all measured variables. However, the correlation between the general measure of social comparison and body dissatisfaction ( $r = .17, p = .005$ ) was less strong than was expected.

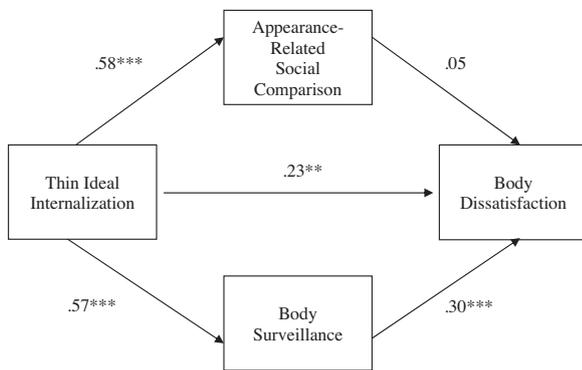
### Mediation Analyses

When examining general social comparison and body surveillance as mediators, the bootstrap results indicated that the total indirect effect of thin ideal internalization on body dissatisfaction through this set of mediators was significant, with a standardized point estimate of 0.18 ( $p < .001$ ) and a 95% BC (bias-corrected) bootstrap confidence interval (CI) of 0.10–0.26. Thus, general social comparison and body surveillance partially mediated the relation between thin ideal internalization and body dissatisfaction. The specific indirect effects of each mediator showed that body surveillance was a unique and significant mediator, with a standardized point estimate of 0.19 ( $p < .001$ ) and a 95% BC CI of 0.10–0.27. However, general social comparison did not add significantly to the model, with a standardized point estimate of  $-0.01$  ( $p = .674$ ) and a 95% BC CI of  $-0.05$  to 0.03. A contrast confirmed that the indirect effect of body surveillance in the thin ideal internalization–body dissatisfaction relation was significantly stronger ( $p < .001$ ) than the indirect effect of general social comparison (see Fig. 1 for the full mediational model).

When examining appearance-related social comparison and body surveillance as mediators, the bootstrap results indicated that the total indirect effect of thin ideal internalization on body



**Fig. 1.** General social comparison and body surveillance as mediators of the relation between thin ideal internalization and body dissatisfaction. Path values represent standardized regression coefficients. \*\* $p < .01$ . \*\*\* $p < .001$ .



**Fig. 2.** Appearance-related social comparison and body surveillance as mediators of the relation between thin ideal internalization and body dissatisfaction. Path values represent standardized regression coefficients. \*\* $p < .01$ . \*\*\* $p < .001$ .

dissatisfaction through this set of mediators was significant, with a standardized point estimate of 0.20 ( $p < .001$ ) and a 95% BC CI of 0.09–0.31. These results indicate that appearance-related social comparison and body surveillance partially mediated the relation between thin ideal internalization and body dissatisfaction. Specific indirect effects estimates again indicated that body surveillance was a unique and significant mediator of the thin ideal internalization–body dissatisfaction relation, with a standardized point estimate of 0.17 ( $p < .001$ ) and a 95% BC CI of 0.09–0.25. Like general social comparison, appearance-related social comparison did not add significantly to the model, with a standardized point estimate of 0.03 ( $p = .558$ ) and a 95% BC CI of  $-0.07$  to 0.13. A contrast indicated that the indirect effect of body surveillance in the thin ideal internalization–body dissatisfaction relation was marginally significantly stronger ( $p = .053$ ) than the indirect effect of appearance-related social comparison in this model (see Fig. 2 for the full mediational model).<sup>1</sup>

## Discussion

The present study sought to examine the potential mediating roles of social comparison (both as general tendencies and related to appearance) and body surveillance (i.e., the indicator of self-objectification) in the relation between thin ideal internalization and body dissatisfaction. Results indicated that, as a set, these two constructs mediated this relation; however, only body surveillance emerged as a significant specific mediator. That is, neither general nor appearance-related social comparison was a significant specific mediator of the thin ideal internalization–body dissatisfaction relation beyond the explanatory power of body surveillance.

Overall, body surveillance acted as we had expected – as a factor that may explain how thin ideal internalization translates itself into body dissatisfaction. Results of the current study provide some evidence that this behavior may serve as a mechanism that enables women to assess their standing relative to the thin ideal. Such body monitoring may lead a woman to realize there is a discrepancy between her current and ideal selves, which may in turn lead to dissatisfaction with the body.

However, contrary to our hypotheses, neither general nor appearance-related social comparison tendencies emerged as a significant specific mediator of the relation between thin ideal

internalization and body dissatisfaction. Although research generally supports the theorized mediational role of social comparison in this relation (e.g., Blowers et al., 2003; Harrison, 2001; Myers & Crowther, 2009), it may have been that the general measure of social comparison used in this study (i.e., the INCOM) was too general and that the appearance-related social comparison measure (i.e., the PACS) was too narrow. For example, other social comparison domains, such as those related to muscularity, eating, and exercise, may stem from such internalization and lead to body image disturbance. It may also be that social comparison does not mediate the thin ideal internalization–body dissatisfaction relation and/or that these constructs are associated with one another in other ways. For example, as put forth by the Tripartite Influence Model of body image and eating disturbance (e.g., Keery et al., 2004; Shroff & Thompson, 2006), it may be that thin ideal internalization mediates the relation between social comparison and body dissatisfaction. In the future, researchers should use prospective data and a more generative measure of social comparison to examine and compare the Tripartite Influence Model and the model put forth in the current study to better understand the temporal ordering of thin ideal internalization and comparison tendencies.

Additionally, although research has indicated that the majority of comparisons that females make are in the upward direction (e.g., Leahey et al., 2007), it is unclear that this was necessarily the case in the current study. Thus, some participants may have been reporting on upward comparisons while others may have been reporting on downward comparisons (which research has generally found to be associated with positive effects; e.g., Marsh & Parker, 1984; Testa & Major, 1990); such a pattern of responding may have washed out the potential mediating effects of upward social comparisons in the thin ideal internalization–body dissatisfaction relation. Indeed, O'Brien et al. (2009) noted that the tendency to make upward versus downward appearance comparisons differs across individuals. Given this, it may be important for future research to examine a measure that captures only upward appearance-related comparisons (such as the Upward Physical Appearance Comparison Scale (UPACS); O'Brien et al., 2009) in the study model. In sum, future research will likely benefit from more nuanced definitions of social comparison.

In terms of strengths, the current study adds to the sociocultural model of disordered eating by examining exactly *how* thin ideal internalization may manifest itself in body dissatisfaction. The measurement of social comparison tendencies in two ways is a strength of the current study; that is, social comparison was measured both broadly (i.e., tendency to compare generally, as measured by the INCOM) and specific to a domain that we hypothesized would be likely to affect body dissatisfaction (i.e., tendency to make appearance-related social comparisons, as measured by the PACS), permitting the investigation of both comparison constructs. The examination of body surveillance as a mediating variable is also a strength since it follows up on Myers and Crowther's (2007) work by testing the behavioral indicator of self-objectification, body surveillance, which is a behavior that could be targeted in prevention and treatment efforts. Finally, the rigorous mediational analyses (i.e., bootstrapping) are a strength of the current study and permitted the comparison of mediators in a potential "nexus of influence" (Hesse-Biber et al., 2006).

While results of the current study extend prior research, there are several limitations that should be addressed in the future. Such limitations include the cross-sectional nature of the study, which limits our ability to make causal conclusions, and the utilization of measures that raise some conceptual overlap concerns (although, efforts were made to minimize such concerns). Future research should test this model longitudinally and in the context of the full elaborated sociocultural model of disordered eating. Future research may also wish to examine the study mediation models in a

<sup>1</sup> When the full versions of the SATATQ Internalization-General and OBCS Body Surveillance subscales were used, the same pattern of results emerged (i.e., for the correlational analyses and mediation models) with the exception that the contrast between the appearance-related social comparison and body surveillance indirect effects went from marginally significant when using the modified versions of the subscales to significant ( $p = .016$ ) when using the full versions.

more diverse sample of women, as participants in the current study were undergraduate women and mostly Caucasian. As previously mentioned, future research will likely benefit from examining and measuring social comparison as it relates to body dissatisfaction in a more nuanced way. Additionally, future research may benefit from utilizing ecological momentary assessment (EMA)/daily diary methods in examining the complex interrelations between social comparison, body surveillance, body dissatisfaction, and disordered eating, as well as other potentially important constructs, such as negative affect. Such intense data collection methods would likely provide more detailed information on the relations between these constructs (e.g., whether they reciprocally influence on another, how emotions play a role). For instance, it may be that social psychological theories, such as those addressed in the current study, could be incorporated into an elaborated sociocultural model of disordered eating, providing researchers and clinicians with a more comprehensive understanding of college women's body dissatisfaction and eating disorder symptoms (Fitzsimmons-Craft, 2011). The development of more integrative theories of body image may then contribute to the creation of effective prevention and intervention programming tailored specifically for this group. Lastly, it will likely be informative for future research to assess whether the presence of certain moderating factors (e.g., acculturation, perfectionism) makes it more likely for social comparison and body surveillance to mediate the thin ideal internalization–body dissatisfaction relation.

The current findings highlight the importance of targeting body surveillance in clinical settings. Indeed, body checking, or persistently surveying one's body (e.g., touching one's collar bones to determine the bones' prominence) is conceptualized as a form of body surveillance and has been suggested as an important focus in cognitive-behavioral therapy for eating disorders (Fairburn, 2008). Many individuals engaging in body checking may not disclose these behaviors to clinicians or even notice their repeated checking, as many women have been socialized to assume monitoring and enhancing their physical appearance is natural (Calogero, Davis, & Thompson, 2005; Fairburn, 2008). Thus, building awareness of these surveillance behaviors through self-monitoring as well as structuring cognitive and behavioral change of these behaviors may help halt the translation of thin ideal internalization into body dissatisfaction. Decreasing surveillance behaviors may facilitate an individual's conceptualization of her body as an instrument of function rather than her body as an object not meeting her internalized, idealized standards. In addition, future research investigating nuanced components of social comparison (e.g., upward appearance-related comparison) and their influence on body dissatisfaction may further inform treatment approach.

In conclusion, the results reported here provide evidence that overall, social comparison and body surveillance mediated the relation between thin ideal internalization and body dissatisfaction in a sample of college women. However, only body surveillance emerged as a significant specific mediator of this relation – that is, neither general social comparison tendencies nor appearance-related social comparison tendencies emerged as specific mediators. Thus, results of the current study provide support for primarily body surveillance helping to explain how thin ideal internalization may lead to body dissatisfaction, providing researchers and clinicians with some understanding of *how* one comes to recognize she does not live up to her own internalized appearance standards and subsequently, feel badly about her body.

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