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The Medium is the Message: Social Media and Body Dissatisfaction

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Abstract
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Social media platforms have quickly become a pervasive part of today's cultural landscape. Given the sizable body of empirical work exploring the negative influence of mass media on body image, as well as the prevalence of body concerns facing the female population, it is important to examine how these new, more immersive and interactive platforms might influence women's attitudes toward their bodies. The present study examined whether social media platforms negatively influence body satisfaction in the same way as mass media, along with the role that social media image exposure might play in moderating the effects of individual differences in thin-ideal internalization, body comparison, and body consciousness. A sample of 131 undergraduate women participated in the study, which consisted of a series of questionnaires related to social media habits and preferences, body dissatisfaction, and other psychological measures related to body concerns. Contrary to predictions, image exposure via social media was not directly associated with body dissatisfaction. However, image exposure did moderate the significant relationships between the individual characteristics of thin-ideal internalization, body comparison, and body consciousness and the outcome of body dissatisfaction, as predicted. Results suggest that these associations are more pronounced when women encounter more social media imagery; thus, the exposure-dissatisfaction link may be more nuanced than previously found within mass media research. More work is needed to better understand the impact of social media exposure on women's psychological health.

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The Medium is the Message: Social Media and Body Dissatisfaction

Pressure on women to be thin is widespread in Western society. The thin ideal is propagated in many aspects of life: In particular, the media that women consume on a daily basis is saturated with idealized images of thinness. Repeated exposure to these images via traditional mass media has been shown to lead women to internalize (Thompson & Stice, 2001) and strive for the thin ideal (Stice, 2001). This drive for thinness has in turn been linked to a host of negative psychological outcomes, including negative mood (Hawkins, Richards, Granley, & Stein, 2004; Harper & Tiggemann, 2008; Dittmar & Howard, 2004; Bessenoff, 2006), low self-esteem (Klaczynski, Goold, & Mudry, 2004; Shroff & Thompson, 2006), body dissatisfaction (Harper & Tiggemann, 2008; Hargreaves & Tiggemann, 2003; Rodgers, McLean & Paxton, 2015; Bessenoff, 2006), and clinical dysfunction (e.g., disordered eating, depression, anxiety; Grabe, Ward & Hyde, 2008; Stice & Shaw, 1994; Stice & Bearman, 2001; Bessenoff, 2006; Dittmar & Howard, 2004; Harper & Tiggemann, 2008).

In recent years, the proliferation of social media platforms has both expanded the scope and changed the nature of women's exposure to idealized images of thinness, therefore raising important questions concerning the consequences for women's psychological health. Given the reach of these new media platforms, the frequency and ease with which women now encounter images of the thin ideal, and the well-documented links between such images and negative psychological outcomes, it is crucial that researchers work to understand if and how exposure to thin ideals via social media platforms impacts psychological well-being.

Drive for Thinness, Body Dissatisfaction, and the Role of Mass Media

Western standards of beauty have long emphasized "thin" as the most desirable body type, and cultural pressure to meet the often unattainable thin ideal is more prevalent than ever.

Drive for thinness is particularly strong among women and demonstrably arises early in life

(Fallon & Rozin, 1985). Girls ages three to five are more likely to assign positive characteristics

to thin targets over average sized ones and are more likely to choose a thin body game piece in a

game piece selection task (Harriger, Calogero, Witherington, & Smith, 2010). Over half of girls

ages 5 to 7 years express a desire to become thinner by selecting a thin figure to represent their

ideal body and a heavier one to represent their current body (Ambrosi-Randic, 2000). A recent

study of 767 adolescent girls found evidence that this drive for thinness is relatively common

(Cruz-Sáez, Pascual, Salaberria, Etxebarria, & Echeburúa, 2015).

The intense pressure to meet cultural standards of thinness can impair women's

psychological well-being. Body image and weight concerns are increasingly and particularly

common among women; researchers have even coined the term "normative discontent" to

describe the widespread body dissatisfaction facing the female population (Rodin, Silberstein, &

Striegel-Moore, 1984). For instance, 34% of the teenage girls in Cruz-Sáez and colleagues'

(2015) large-scale study reported engaging in abnormal eating behaviors during the previous

year, including dieting and binge eating. This same group experienced higher levels of drive for

thinness and body dissatisfaction as well as increased control over eating, importance of weight

and body shape for acceptance by others, and negative self-beliefs. Increasing cultural pressures

to be thin have real-world consequences for women and girls' physical and psychological health.

Mass media and body dissatisfaction. Media is one of the primary sources perpetuating

the thin ideal. Traditional mass media platforms (e.g. magazines, television, and films) have the

power to promote curated images to a wide audience and in doing so have historically

overrepresented thin models as figures of the ideal body type. The women presented in media are

typically 15% below the average female weight (Hawkins et al., 2004), conveying the

sociocultural ideals of a thin body (Groesz, Levine, & Murnen, 2002; Tiggemann & McGill, 2004). This trend toward a thin ideal appears to have amplified over time. For example, Wiesman, Gray, Mosimann, and Ahrens (1992) found a continuous decrease in the weight of Playboy centerfold models and Miss America contestants to 13-19% below the expected weight for women of that age category as well as an increase in dieting and exercise articles promoting weight loss in six women's magazines from 1959 to 1988.

These images clearly have detrimental effects on the women who view them. A great deal of research has demonstrated the negative impact of traditional mass media exposure on body image and other psychological outcomes. Exposure to thin-ideal media images has continuously been associated with internalization of the thin ideal, negative mood, heightened depression levels, lower self-esteem, and increased guilt, shame, and body-focused anxiety (Dittmar & Howard, 2004; Bessenoff, 2006). This exposure also has connections to bulimic symptomatology and other disordered eating behaviors (Grabe et al., 2008; Stice & Shaw, 1994).

Park (2005) found that beauty and fashion magazines directly and indirectly influence readers' desire to be thin. Female college students who read these magazines perceived that thin-ideal images were prevalent in mass media and believed that others who were influenced by this prevalent image preferred the thin-ideal body type. This consequently increased both pressure to conform to the norm and desire for thinness. In an experiment by Hawkins et al. (2004), women who were exposed to thin-ideal advertisements in three major women's magazines for 30 minutes experienced greater body dissatisfaction; increased negative mood states such as anxiety, depression, anger, and confusion; and lower self-esteem than women in a control condition. Further, magazine advertisements promoting thin-ideal images of women were found

to increase female readers' state self-objectification, weight-related anxiety, negative mood and body dissatisfaction (Harper & Tiggemann, 2008). In this experiment, women who were randomly assigned to view a set of thin-ideal advertisements from beauty and fashion magazines demonstrated higher levels of these psychological consequences than individuals who viewed a control set of images which did not feature any people. In another experiment, Hargreaves and Tiggemann (2003) found that viewing commercials with thin-ideal images of women increased body dissatisfaction for adolescent girls. Participants were randomly assigned to view 20 minutes of either "appearance" commercials containing women epitomizing cultural ideals of thinness or "non-appearance" commercials which did not contain thin-ideal images. Those who viewed the appearance-related commercials reported greater dissatisfaction with their weight and overall appearance than those in the control condition. Taken together, experimental investigations of this sort provide compelling evidence of a causal link between thin-ideal media exposure and negative psychological consequences.

Individual Differences

Past work reveals the link between exposure to the thin ideal via mass media and a host of negative outcomes for women, including body dissatisfaction. However, it is important to note that not all women are impacted by mass media exposure in the same way or to the same extent. In particular, individual differences in thin-ideal internalization, body comparison tendencies, and body consciousness have been shown to give rise to differential effects on body dissatisfaction and other psychological indicators.

Thin-ideal internalization. Each time women are exposed to mass media, the disparity between realistic body sizes of actual women and unrealistically thin body sizes of edited models is emphasized. Constant exposure to these idealized images leads women to internalize them as

appropriate standards of attractiveness. Socialization agents, including mass media, parents, and

peers, reinforce and perpetuate the thin ideal by communicating benefits of thinness such as

social acceptance and by glorifying thin models while criticizing others' weight and encouraging

dieting (Thompson & Stice, 2001).

Individual differences exist in the degree to which women internalize the thin ideal as

well as the intensity with which they experience downstream psychological consequences when

they are unable to turn that ideal into their own reality (Thompson & Heinberg, 1999).

Individuals who are more strongly affected by thin-ideal images often adopt dysfunctional

behaviors in an effort to match these models of beauty. Numerous studies have identified thin-

ideal internalization, dieting and negative affect as risk factors for body image disturbance and

anxiety (Thompson & Stice, 2001; Dittmar & Howard, 2004). Further, perceived pressure to be

thin and internalization of the thin ideal were found to increase risk for bulimic and depressive

symptoms as well as body dissatisfaction (Boone, Soenens, & Braet, 2011; Stice & Bearman,

2001). Those with high internalization levels are also more likely to experience negative body

image and state mood following exposure to thin media images (Yamamiya, Cash, Melnyk,

Posavac & Posavac, 2005).

Rodgers et al. (2015) found that a reciprocal relationship exists between thin-ideal

internalization and body dissatisfaction: Internalization not only predicts but is also predicted by

body dissatisfaction. Thus, dissatisfaction levels might produce a stronger desire to match the

thin ideal for some women than for others and consequently increase these women's efforts to

attain a thinner body. Results from a 2-week ecological momentary assessment study revealed

that individuals with higher levels of trait thin-ideal internalization experienced more momentary

body dissatisfaction (Fitzsimmons-Craft et al., 2016). Interestingly, there was also variability in

momentary thin-ideal importance, which was associated with momentary body dissatisfaction. This finding suggests that thin-ideal internalization might not be as static as once understood and instead may be experienced more strongly for particular individuals and under certain conditions.

      Body comparison. Because the majority of advertisements found in mass media present a female body type that is significantly thinner than average, exposure to these idealized images tends to elicit comparisons between the self and the ideal that are bound to fail (Bessenoff, 2006). According to Rodgers et al. (2015), individuals come to adopt the media's portrayal of the thin ideal as a personal standard for attractiveness and strive to bring themselves closer to the ideal. They will continue to make social comparisons with peers to evaluate their efforts to reach the thin ideal. Because girls and women are most likely to engage in upward social comparisons (i.e., comparisons to those who are "better" than themselves), internalization of the thin ideal often results in disappointing comparisons, ultimately leading to body dissatisfaction (Leahey, Crowther, & Mickelson, 2007).

      Consistent with these patterns, a recent meta-analysis of 156 studies found that making social comparisons based on appearance was significantly associated with body dissatisfaction (Myers & Crowther, 2009). Women experienced this comparison process more strongly than men, an unsurprising finding given women's constant exposure to and pressure to meet the thin ideal. This relationship is bidirectional: Body dissatisfied women were found to engage in more appearance-focused social comparisons and especially more upward comparisons than body-satisfied women, which were in turn associated with greater daily negative affect, weight-related thoughts, and body dissatisfaction (Leahey et al., 2007). Another study found an association between negative appearance-based commentary (i.e., number of times an individual has been the recipient of negative comments about his or her appearance) and higher occurrence of

upward comparisons. Further, upward comparisons were the strongest predictor of body

dissatisfaction and eating disturbance, more so than downward comparisons and appearance-

contingent self-esteem (Bailey & Ricciardelli, 2009). Bessenoff (2006) found that women high in

body image self-discrepancy are more likely to make social comparisons when exposed to thin-

ideal images and are thus more likely to experience negative affective consequences such as

body dissatisfaction than those low in self-discrepancy. Taken together, these studies provide

compelling evidence for the link between social comparison tendencies and body dissatisfaction

in light of the thin ideal.

     Body consciousness. Individual differences in body consciousness have also consistently

been linked to body dissatisfaction and other negative psychological outcomes. Objectified body

consciousness occurs as women take on the perspective of outside observers when examining

and critiquing themselves and is comprised of body surveillance, body shame, and appearance

control beliefs. Knauss, Paxton, and Alsaker (2008) found that adolescent girls experienced

significantly more body surveillance and body shame than adolescent boys and that for them,

objectified body consciousness significantly predicted body dissatisfaction. Work by Miner-

Rubino, Twenge, and Fredrickson (2002) revealed that self-objectification (a primary feature of

objectified body consciousness) was significantly positively correlated with body shame,

depression, and neuroticism. A study examining the relationship between objectified body

consciousness and well-being found that higher scores on the body surveillance and body shame

subscales and lower scores on the appearance control belief subscale were associated with lower

scores of wellness (Sinclair & Myers, 2004). Further, the impact of body consciousness was

found to be related to body mass index, such that participants in the normal and overweight

categories experienced more body shame than those in the underweight category, suggesting a protective effect for underweight women.

Social Media

The majority of prior research on the media exposure-body dissatisfaction link has focused on mass media platforms. The recent proliferation of social media platforms such as Facebook, Instagram, and Snapchat raises important questions about the ways in which women encounter and are affected by idealized images. Social media platforms differ from traditional mass media in many ways. First, mass media platforms such as television and magazines are one-directional: The audience simply consumes the content it is presented. However, social media is multi-directional, as there is opportunity for consumers of content to become producers themselves (Perloff, 2014). Social media allows for increased interactivity, giving users platforms to react to and publicly respond to the content they view. Also, the widespread and omnipresent nature of these platforms suggests that the frequency with which users consume and generate content is increased.

Social media permits users to create carefully crafted profiles in which they present only an edited selection of their best moments. On these platforms, users are able to constantly compare their lives to others, leadings to negative consequences when they make comparisons of their own realities to others' "highlight reels". Steers, Wickham, and Acitelli (2014) found that social comparison tendencies mediate the relationship between time spent on Facebook and symptoms of depression, potentially due to the positive self-presentations displayed on social media triggering consistent users to feel alone in their negative emotions. Further, more time spent on Facebook was found to be associated with more upward comparisons than downward,

suggesting that individuals may be using the platform to compare themselves to others in a way that makes them feel inferior.

Body image and social media. To date, there has been some, albeit relatively limited, research regarding the impact of these new, more interactive social media platforms on body satisfaction. One comprehensive study found that social media impacts body image through social comparisons, transportation and peer-normative processes (Perloff, 2014). In keeping with findings from the mass media literature, users of social media often make negative social comparisons with peers on the platforms, resulting in lowered body satisfaction. Social media also produces a sense of transportation to the digital world; the narratives presented on social media cause users to become immersed in the platforms and therefore more open to the world-views presented and more likely to adopt those beliefs and attitudes. In addition, peer normative processes occur as social media users have access to and try to fit in with like-minded others on the platforms. Further, the study found that some individuals are more likely than others to satisfy gratifications through social media or to use the medium as an escape (Perloff, 2014).

A meta-analysis of research in this field reveals that social media usage is consistently correlated with body image concerns, and this relationship has demonstrated lasting effects in several longitudinal studies (Fardouly & Vartanian, 2016). A study of 300 students clarified which specific concerns can result from social media use, identifying pressure to lose weight, to look more attractive, and to change one's appearance (Pepin & Endresz, 2015). It also revealed correlations between Instagram use and body image and surveillance concerns, between Pinterest use and body shame and appearance control beliefs, and between Facebook and Pinterest use and perceived pressure to meet body ideals, suggesting a probable connection between use of these platforms and objectified body consciousness.

Several studies have focused on the popular platform Facebook. Fardouly, Diedrichs, Vartanian, and Halliwell (2015) found that Facebook serves as a platform for engaging in appearance-related social comparisons and that women who are more susceptible to making such comparisons experience a stronger desire to change themselves after using the site. Facebook users also scored significantly higher on measures of internalization, body surveillance, and drive for thinness than non-users (Tiggemann & Slater, 2013). A subsequent study by Tiggemann and Slater (2014) revealed that the effects of the internet on body-related issues are significantly mediated by thin-ideal internalization and are even larger than the effects of traditional mass media platforms. Work by Cohen and Blaszcynski (2015) re-affirmed this finding, reporting that appearance-based comparison predicts body dissatisfaction for individuals exposed to thin-ideal images on Facebook but not conventional media platforms. Yet another study revealed slightly different findings: Time spent on Facebook was not related to body image concerns. Instead, social grooming behaviors such as checking and commenting on others' profiles were associated with drive for thinness, with appearance-based comparison mediating this relationship (Kim & Chock, 2015). The limited number of studies like these offer an fascinating introduction into the study of social media and body dissatisfaction yet demand more research to better understand how these patterns and processes occur.

Current Study

In reviewing the relevant literature, there is strong evidence that exposure to idealized images in traditional mass media leads to lowered body satisfaction and numerous negative psychological consequences such as negative mood, symptoms of depression and lowered self-esteem (e.g., Bessenoff, 2006). Researchers have also uncovered several individual differences that have been consistently associated with body dissatisfaction, including thin-ideal

internalization, body consciousness, and social comparison (Boone et al., 2011; Knauss et al.,

2008, Myers & Crowther, 2009). To date, however, there has been comparatively little work

examining how these factors are related to *social* media usage. Given the fact that this is

relatively uncharted terrority in psychological research, new studies are needed to clarify the

relationship between image exposure via social media and negative psychological outcomes.

Though relatively sparse, empirical work to date suggests that these newer, more

interactive media platforms may affect individuals' body satisfaction differently and/or via

different processes than traditional media does (e.g., Perloff, 2014). Given the uniquely

immersive nature of social media, as well as its prevalence, it is important to more deeply

investigate its potential to impact young women's body satisfaction and psychological well-

being. The current study sought to determine whether the patterns found within mass media

studies held true with respect to social media.

Hypotheses

(1) It was hypothesized that women who experienced greater exposure to images via social

media would demonstrate greater body dissatisfaction than those who experienced less

exposure. Given the extensive literature highlighting the negative impact of mass media

on body satisfaction, along with the uniquely immersive qualities of social media

platforms, it was predicted that this new form of media would increase body

dissatisfaction in its users (Hawkins et al., 2004; Park, 2005; Harper & Tiggemann, 2008;

Hargreaves & Tiggemann, 2003).

(2) It was hypothesized that women who demonstrated greater thin-ideal internalization,

body comparison tendencies, and body consciousness would experience more body

dissatisfaction. Research has revealed that these variables are consistently associated with

body dissatisfaction and other negative psychological outcomes (Boone et al, 2001; Miner-Rubino, et al., 2002; Myers & Crowther, 2009). It was presumed that the current study would confirm prior findings of these relationships.

(3) It was hypothesized that social media image exposure would moderate the relationships between the individual difference variables (thin-ideal internalization, body comparison, and body consciousness) and body dissatisfaction. Specifically, it was predicted that the positive relationships between the individual difference variables and body dissatisfaction would be strongest for those who experienced the greatest exposure to images via social media. This prediction is based on evidence that some individuals experience the negative psychological consequences associated with these individual differences more intensely than others when exposed to thin-ideal images in media (e.g., Thompson & Heinberg, 1999).

Method

Participants

One hundred thirty-nine female Emory University undergraduate students enrolled in introductory Psychology courses were recruited to participate via the SONA system. In order to take part in the study, individuals had to be at least 18 years old and fluent in English. After eliminating responses from participants who only partially completed the questionnaires or who were missing data for key variables, the final sample for analyses was comprised of 131 women.

Descriptive information for the sample is provided in Table 1. In general, the sample was comprised of relatively young women who were early on in their college careers (over three quarters of participants were freshmen and sophomores) and were primarily White or Asian.

Measures of Key Variables

Image exposure. The 12-item Social Media Usage Questionnaire was created by the researcher to assess social media habits and preferences (see Appendix A). It includes questions regarding frequency of social media use, number of platforms used, motivations for using social media, ranking and estimations of time spent on various social media activities, type and frequency of images viewed, and general views on social media. Ultimately, the time that individuals spent looking at pictures and videos on social media was selected as the operationalization of image exposure for the current study.[1]

Body dissatisfaction. The Body Appreciation Scale is 13-item, 5-point scale assessing individuals' level of global body satisfaction, acceptance, and appreciation (Avalos, Tylka & Wood-Barcalow, 2005; see Appendix B). Participants read a series of statements including "On the whole, I am satisfied with my body," and "I do not allow unrealistically thin images of women presented in the media to affect my attitudes toward my body" and rated their agreement on a scale of 1 (Never) to 5 (Always). All thirteen items were averaged to generate a composite variable. This scale has been shown to have strong construct validity and unidimensionality (Avalos et al., 2005), and reliability scores in the current study ($\alpha = 0.95$) complement previous findings of internal consistency. For ease of interpretation, the composite variable was reversed such that higher scores on the Body Appreciation measure indicate more body dissatisfaction.

Thin-ideal internalization. The Internalization-General Subscale of the Sociocultural Attitudes Toward Appearance Questionnaire (Thompson, van den Berg, Roehrig, Guarda & Heinberg, 2004; see Appendix C) is a 38-item, 5-point assessment of individuals' feelings

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[1] This operationalization was selected based upon fit with the conceptualization of "image exposure" in previous work, as well as obtained correlations with the other variables of interest in the current study. Thus, this measure was used in all subsequent analyses. Other potential operationalizations are certainly possible and are considered in the Limitations section of the Discussion.

toward sociocultural body ideals including level of importance, pressures, internalization (of people on TV and in magazines, athletes, and comparisons to these individuals) and awareness of ideals. It includes items such as "I would like my body to look like the models who appear in magazines". Response options range from 1 (Definitely Disagree) to 5 (Definitely Agree), such that higher scores indicate greater internalization. A composite variable was created by averaging the items; it demonstrated strong internal consistency ($\alpha = 0.96$).

Body comparison. The Body Comparison Orientation Subscale from the Body, Eating and Exercise Comparison Orientation Measure is a 6-item, 7-point scale assessing general body comparison tendencies (Fitzsimmons-Craft, Bardone-Cone, & Harney, 2012; see Appendix D). Participants indicate how often they engage in particular body comparison behaviors on a scale from 1 (Never) to 7 (Always). Items include "In social situations, I think about how my figure 'matches up' to the figures of those around me". Higher scores indicate greater body comparison tendencies. The full measure has demonstrated both construct and incremental validity (Fitzsimmons-Craft et al., 2012). Scores on all items were averaged to generate a composite variable, which showed strong inter-item reliability ($\alpha = 0.96$).

Body consciousness. The Objectified Body Consciousness Scale is a 24-item, 7-point scale examining body surveillance, shame, and control (McKinley & Hyde, 1996; see Appendix E). It includes items such as "I often worry about whether the clothes I am wearing make me look good". Participants rate their responses on a scale from 1 (Strongly Disagree) to 7 (Strongly Agree); higher scores represent greater body consciousness. After reverse-scoring the necessary items, all items were averaged to create a composite variable, which demonstrated sufficient inter-item reliability ($\alpha = 0.70$), supporting previous findings of internal consistency reliability (Moradi & Varnes, 2017).

Neuroticism. The Neuroticism subscale of the Big Five Personality Inventory is an 8-item, 5-point scale assessing emotional stability (John & Srivastava, 1999; see Appendix F). It includes items such as "I see myself as a person who worries a lot". Participants rate their responses on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree); higher scores indicate greater neuroticism. Specified items were reverse-scored and a composite variable was created by averaging scores on the eight items. The composite variable showed high internal consistency ($\alpha = 0.81$).

Demographics. The Demographics Questionnaire (Appendix G) was created by the researcher and includes items assessing age, gender identity, race, religious affiliation, hometown, etc.

Procedure

The study employed an online survey design. Measures were completed by participants at their convenience in any physical location they chose (e.g., dorm room, public computer areas around campus, etc.). The study materials were administered via Survey Monkey, a commercial online survey platform. Participants clicked the link provided in the SONA system and were then redirected to a consent statement and the study materials in Survey Monkey. The order of the questionnaires was randomized to control for possible order effects. After completing all measures, participants were provided with a debriefing statement that explained the purpose of the study and provided researcher contact information. Participants received one SONA credit upon completion of the study.

Results

Descriptive Statistics

Descriptive statistics for the primary variables of interest are presented in Table 2. Before proceeding with additional analyses, it was necessary to ensure that the data met the assumption of normality. The item assessing image exposure was found to be moderately positively skewed (Skewness = 1.78, *SE* = 0.21). To correct for this, a log transformation was performed on the image exposure variable. Following transformation, the new variable demonstrated improved fit statistics (Skewness = -0.38, *SE* = 0.21), so subsequent analyses were conducted using this transformed variable. All other variables of interest met the assumption of normality, making it appropriate to run analyses with these data in their original form.

Tests of Main Hypotheses

Hierarchical multiple regression analysis was used to examine both the main and interactive effects of image exposure and individual differences in thin-ideal internalization, body comparison, and body consciousness on body dissatisfaction. Also, neuroticism was included as a covariate, given both its conceptual relation to body dissatisfaction (MacNeill, Best, & Davis, 2017) and the significant obtained correlation with dissatisfaction in the current data ($r = .46$, $p < .001$). Direct effects of all four predictors on body dissatisfaction were assessed in Step 2. Two-way interactions between image exposure and each of the individual difference variables were entered in Step 3. In accordance with Aiken and West (1991), all predictor variables were centered to reduce collinearity.

Results of the hierarchical regression analysis are presented in Table 3. Neuroticism emerged as a significant covariate, accounting for nearly one quarter of the observed variability in body dissatisfaction scores. In terms of direct effects, image exposure was not significantly associated with body dissatisfaction scores. As expected, however, all three individual difference variables were significantly predictive of body dissatisfaction. Those with higher levels of thin-

ideal internalization, body comparison, and body consciousness also showed higher levels of body dissatisfaction. Finally, image exposure was found to moderate the relationships between these individual difference variables and body dissatisfaction scores. The interactions of image exposure with both thin-ideal internalization and body comparison were statistically significant. The interaction of image exposure and body consciousness was found to be marginally significant in the current study ($p = .08$).

Simple slopes analyses were conducted to decompose these two-way interactions. Specifically, the relationships between the individual difference variables and body dissatisfaction for individuals experiencing low and high levels of image exposure were examined using the SPSS PROCESS application (Hayes, 2013). The two-way interaction between image exposure and thin-ideal internalization is presented in Figure 1. Simple slopes analysis revealed that the positive relation between thin-ideal internalization and body dissatisfaction was significant under conditions of high image exposure ($\beta = .43$, $t(130) = 3.51$, $p < .001$) but was not significant at low levels of exposure ($\beta = .01$, $t(130) = .08$, $p = .93$). Thus, women high in thin-ideal internalization who encountered relatively more images via social media expressed the greatest body dissatisfaction.

The two-way interaction between image exposure and body comparison is represented graphically in Figure 2. As was the case with thin-ideal internalization, the positive relation between body comparison and body dissatisfaction was significant only under conditions of high image exposure ($\beta = .31$, $t(130) = 4.85$, $p < .001$). At low levels of image exposure, the comparison-dissatisfaction relation was not significant ($\beta = .09$, $t(130) = 1.50$, $p = .14$). The combination of high body comparison and greater image exposure was associated with the most body dissatisfaction.

Finally, Figure 3 displays the marginally significant two-way interaction between image exposure and body consciousness. The positive relation between body consciousness and body dissatisfaction was significantly more pronounced under conditions of high image exposure (β= .76, $t(130) = 5.17$, $p < .001$) than under conditions of low image exposure (β= .38, $t(130) = 2.33$, $p = .02$). In sum, individuals high in body consciousness who also experienced high image exposure were the most dissatisfied with their bodies.

Discussion

The present study is an extension of a sizeable body of literature related to traditional media and the many negative psychological outcomes that women experience when exposed to thin-ideal images, including body dissatisfaction. The purpose of the study was to determine whether the relationship between traditional media exposure and body dissatisfaction holds true with respect to social media. In addition, individual differences in thin-ideal internalization, body comparison, and body consciousness were investigated, as they have been consistently associated with body dissatisfaction in the literature (Boone et al., 2001; Miner-Rubino et al., 2002; Myers & Crowther, 2009). Ultimately, the current study sought to reveal if and how these associations vary when women experience different levels of exposure to images via social media.

The results of the present study offer some replication of past work (e.g., Thompson & Stice, 2001) and are in keeping with two of the three primary hypotheses. First, Hypothesis 2 was supported. Consistent with the literature, the individual difference variables of thin-ideal internalization, body comparison, and body consciousness were all directly related to body dissatisfaction, such that higher levels of these variables were associated with higher levels of body dissatisfaction (Boone et al., 2001; Miner-Rubino et al., 2002; Myers & Crowther, 2009).

Hypothesis 3 was also supported, as image exposure moderated the significant relationships with individual difference variables as predicted. Hierarchical regression analysis revealed significant interactions between image exposure and the three individual difference variables studied. Further analysis revealed that the relationship between body comparison and body dissatisfaction, as well as the relationship between thin-ideal internalization and body dissatisfaction, was only significant when individuals experienced high social media image exposure. Additionally, the relationship between body consciousness and body dissatisfaction was significantly stronger for individuals with high image exposure than those with low image exposure. Based on the findings, it appears that high levels of exposure to images via social media may be particularly problematic for certain women, namely those who were already prone to experience body dissatisfaction by virtue of their propensities to internalize the thin ideal, to make body-based comparisons, and/or to be highly body-conscious. Therefore, the relationship between image exposure via social media and women's body dissatisfaction may be more nuanced than previously described with respect to mass media.

Despite these confirmatory findings, there were some unexpected departures. Specifically, Hypothesis 1 was not supported, as image exposure did not have a direct association with body dissatisfaction. This finding was inconsistent with previous research on traditional media, which has demonstrated a causal link between media exposure and body dissatisfaction (Hawkins et al., 2004; Park, 2005; Harper & Tiggemann, 2008; Hargreaves & Tiggemann, 2003).

There are several ways to interpret the lack of a direct relationship between image exposure and body dissatisfaction. First, the operationalization of image exposure in this study did not differentiate between images that promote the thin ideal and those that do not. Given the

variability in the type of pictures and videos women are exposed to on social media, it is possible

that some participants who reported high degrees of image exposure were in fact not viewing

idealized images. Social media platforms allow users to have much more control over the types

of images they encounter based on their search patterns and the accounts they choose to follow.

It is possible that women are less exposed to thin-ideal images via social media than they were

via mass media or that the wide variety of images found on social media is lessening the

influence of the thin ideal.

   As suggested by the significant interactions found in the current study, it may also be the

case that image exposure does not lead to or exacerbate body dissatisfaction for all women but

rather only for some women (i.e., those who are more inclined to internalize and compare to the

thin ideal or who are already self-conscious about their bodies). Women who are susceptible to

body image concerns may view idealized social media images as aspirational and attainable body

ideals. For these women, more exposure only enhances the dissonance between the unrealistic

ideals of the edited models and their own body shapes, leading to higher body dissatisfaction.

However, for women who are not predisposed to negative body-based psychological outcomes,

more exposure does not seem to result in greater dissatisfaction. This suggests that image

exposure is not directly linked to body dissatisfaction for all women but instead only for women

who are prone to being strongly affected by the thin ideal. Additionally, because experiences

with social media are extremely individualized, as users maintain various motivations for using

the platforms, it may be that women are interpreting the images they encounter in different ways.

For example, women already high in thin-ideal internalization, comparison tendencies, and body

consciousness may turn to social media to make upward social comparisons in an effort to

confirm their existing negative beliefs about their bodies. In contrast, some women might be

using social media to educate themselves on health and fitness or to connect with others and hear their empowering messages. In this way, individual motivations might impact the way that women interpret the images they see and the psychological outcomes they experience. It seems that more exposure to social media images is not necessarily detrimental and could even lead to increased psychological well-being for some women.

The increase of transparency on social media (i.e., greater awareness of the editing and curation that goes into the creation of social media images), as well as broader movements focused on body positivity, may also be making users more cognizant of the unrealistic ideals they are bound to encounter on social media platforms. Women may be more informed consumers of social media content today than they were of mass media in the past. In response to the burgeoining issue of body dissatisfaction facing women, influential social media users have begun to demonstrate how proper lighting, camera angles, and body positioning can completely transform women's body shape in photos. Others have spread messages of body positivity through posting photos that do not reflect the thin ideal, inspiring women to accept and celebrate their bodies, no matter their size. Numerous studies have indicated the positive impact of self-compassion, a practice in which individuals nurture themselves and embrace their imperfections. Self-compassion has been found to weaken the negative impacts of social comparison and appearance-based self-worth on body appreciation (Homan & Tylka, 2015). The incorporation of self-compassion in the form of body-positive social media posts has the power to improve womens' body image and appreciation. Finally, it is possible that the greater variety of body types presented on social media have rendered the thin ideal and related negative psychological processes less prevelant. Perhaps there is more acceptance of body shapes that stray from the hyper-thin models women have long viewed in mass media, and thus social media use does not

directly or necessarily lead to more thin-ideal exposure and consequently to greater body dissatisfaction.

Finally, the discrepancy between findings in the current study and past work related to mass media exposure may be due in part to the treatment of neuroticism as a covariate in the current study. The decision to control for neuroticism was prompted by both its conceptual relation to body dissatisfaction (MacNeill et al., 2017) and its significant correlation with dissatisfaction in the current data. That said, past work examining the impact of mass media exposure on body dissatisfaction has not controlled for the effects of neuroticism. This difference in the handling of neuroticism may at least partially account for the divergent result patterns.

Strengths

The goal of the current study was to determine whether the relationship between traditional media exposure and body dissatisfaction holds true with respect to social media. The sample was relatively representative of the Emory undergraduate community, making the generalization of the current study's results to the wider population of female college students appropriate. The questionnaires used tapped into many psychological outcomes which have been associated with body dissatisfaction in the past, namely thin-ideal internalization, body comparison, and body consciousness. Participants were allowed to complete the survey in any location and at any time and were informed that their responses would remain anonymous. These conditions allowed participants to take their time (the average survey completion time was 36 minutes) and likely encouraged them to accurately report their responses. Findings from the current study represent an important step into the relatively unexplored area of social media's impact on women's satisfaction with their bodies.

Limitations

Despite its strengths, the current study was also limited in certain ways. Of primary concern were the measures used to operationalize the key variables of "exposure" and "body dissatisfaction." Additionally, the relatively small sample size and somewhat sensitive nature of the primary outcome variable may have limited the current study's findings and generalizability.

Defining exposure. Due to the all-consuming nature of social media platforms, it was difficult to find a perfect operationalization for exposure. In addition, to the researcher's knowledge, no commonly used or validated measure currently exists to examine social media use, habits, and preferences, particularly as they relate to image exposure. Therefore, it was necessary to create and utilize a new measure that assessed various aspects of exposure (e.g., frequency of social media use, number of platforms used, time spent viewing images on picture-heavy platforms, etc). The operationalization of image exposure as "time spent looking at pictures and videos on social media" seemed to have a strong conceptual fit with the primary research questions, as the current study focused on whether or not individuals experience negative psychological outcomes when exposed to typical images in social media. In addition, this operationalization correlated most signficantly with the other key variables in the current study. That said, there are certainly other ways of defining and measuring social media exposure, which could lead to different result patterns.

Defining body dissatisfaction. There was also a question of how to operationalize body dissatisfaction, given that several scales exist to measure this variable. Ultimately the reverse-coded version of the Body Appreciation Scale was selected for use in this study, based on its global assessment of overall body satisfaction and positivity. Other dissatisfaction measures that were considered are highly focused on specific evaluations of individual body parts. While this is certainly one way of thinking about dissatisfaction, the researcher was most interested in the

potential effects of exposure and individual differences on women's more general sense of

satisfaction with their bodies. It is also possible that women could be dissatisfied with particular

body parts while maintaining an overall positive evaluation of their bodies. For these reasons,

the Body Appreciation scale was considered to be the best fit for a measure of global body

satisfaction.

Other concerns. Considering the somewhat sensitive nature of body dissatisfaction as a

topic of study, social desirability concerns may have led participants to respond in ways that

made them appear more positively adjusted (i.e., less dissatisfied) than they actually are. The title

of the survey could have also prompted a nonresponse bias, whereby individuals who experience

more severe body dissatisfaction might have felt uncomfortable with the topic and were therefore

unwilling to participate in the study. Finally, the sample in the current study was small ($n = 131$)

relative to the number and nature of conceptual questions posed and survey items included. The

resulting low power likely limited the researcher's ability to find significant effects (e.g., direct

relation between image exposure and body satisfaction) and to explore more nuanced conceptual

questions (e.g., mediation).

Implications and Future Directions

This research was novel in its exploration of the relationship between social media

exposure and body dissatisfaction, particularly in its treatment of image exposure as a moderator

for the associations between relevant individual difference variables and body dissatisfaction. To

date, the existing literature on social media and body image has been relatively limited and has

not explored associations with individual characteristics to the same extent as in the mass media

literature. The results of the current study suggest that the impact of thin-ideal internalization,

body comparison, and body consciousness on body dissatisfaction is greater under certain

conditions than others. Specifically, these relationships were found to be stronger (and in some cases, only significant) for women who experience high levels of exposure to images on social media.

Future research could address some of the current study's limitations. It would be helpful to replicate the current study with a larger, even more diverse sample, potentially outside of the university community. As mentioned previously, it would also be important for future researchers to examine other operationalizations of key variables. Empirical investigations in this area would benefit from the development and validation of a measure of social media exposure. In addition, the use of different measures of body dissatisfaction, and perhaps direct comparisons with the Body Appreciation Scale, would shed light on the varied ways in which women's evaluations of their bodies are impacted by exposure to thin-ideal images via social media.

Future work could also explore other individual differences which have been linked with body dissatisfaction, such as self-esteem. Tissot and Crowther (2008) identified self-esteem as a significant predictor of thin-ideal internalization, and Fuller-Tyszkiewicz, et al., (2015) found cross-sectional associations between both trait and state self-esteem levels and body satisfaction. Cahill and Mussap (2007) explored how emotional reactions to idealized body images were associated with unhealthy body change attitudes and behaviors and found that low trait self-esteem mediated the relationship between increased state depression and increases in drive for thinness and bulimic symptomatology. Additionally, given that neuroticism emerged as a significant covariate in the current study, future research could examine the direct and interactive effects of neuroticism on body dissatisfaction in the context of social media exposure.

Finally, the current study's findings suggest that interventions aimed at reducing image exposure or creating more informed social media users could decrease the negative influence of

these factors on women's body satisfaction. Researchers have already begun to explore promising avenues for mitigating or reducing these negative outcomes. For instance, work by Posavac, Posavac, and Wiegel (2001) suggests that reducing social comparison when viewing media images has the potential to reduce overall body disturbance. Specifically, the researchers found that implementing an intervention that led participants to view models as dissimilar and inappropriate comparison points reduced the negative effect of idealized image exposure on body satisfaction. Thompson and Heinberg (1999) suggest protesting media that promotes unhealthy messages and encouraging the internalization of healthy body norms. Media-literacy education has been shown to prevent the adverse effect of thin-ideal images on state body image for individuals with high internalization levels (Yamamiya, Cash, Melnyk, Posavac, & Posavac, 2005). Additionally, participation in a dissonance-based prevention program aimed at reducing thin-ideal internalization resulted in decreased body dissatisfaction, dieting, and negative affect (Stice, Mazotti, Weibel, & Agras, 2000). Interventions can continue to build on this work moving forward, taking into account some of the unique features and impacts of the social media environment that may make some women particularly susceptible to negative psychological outcomes.

Conclusion

While the present study serves as an important contribution to the broader literature, given the ubiquity of social media in today's culture, there is still much work to be done. Findings from the current study expand upon the large body of literature on the media exposure-body dissatisfaction connection and offer unique insight as to which social media users might be most susceptible to experiencing negative psychological outcomes. The information gained from the present study serves as a strong starting point for this field. Future research should build upon

the current work, with the ultimate goal of developing effective strategies to help women

mitigate the risk of body dissatisfaction following exposure to social media. Studies like this are

crucial as social media evolves and becomes an increasingly significant part of our daily lives.

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Table 1

Sample Characteristics

Characteristic	*M (SD)*	*Frequency (%)*
Age	19 (0.99)	
Year in School		
Freshman		53 (38.1)
Sophomore		55 (39.6)
Junior		18 (12.9)
Senior		6 (4.3)
No response provided		7 (5.0)
Ethnicity		
White/Caucasian		57 (41.0)
Asian		40 (28.8)
Hispanic/Latino		17 (12.2)
African-American/Black		10 (7.2)
Native American		1 (0.7)
Other		8 (5.8)
No response provided		6 (4.3)

Table 2

Descriptive Statistics for Primary Variables of Interest

Variable	*M (SD)*	*Min*	*Max*	*Skewness*	*SE$_{Sk}$*
Image Exposure	60.77 (53.81)	0.00	270	1.78	0.21
Body Dissatisfaction	3.39 (0.87)	1.00	5.00	-0.46	0.21
Thin-Ideal Internalization	3.23 (0.77)	1.00	4.92	-0.61	0.21
Body Comparison	4.28 (1.38)	1.00	7.00	-0.15	0.21
Body Consciousness	4.24 (0.54)	3.04	5.71	0.40	0.21
Neuroticism	3.29 (0.75)	1.00	5.00	-0.04	0.21

Table 3

Hierarchical Multiple Regression Analyses Predicting Body Dissatisfaction from Image Exposure, Thin-Ideal Internalization, Body Comparison, and Body Consciousness

Variable	β	t	ΔR^2
Step 1			
Neuroticism	0.48	6.23	0.23**
Step 2			0.18**
Image Exposure	-0.10	-1.37	
Thin-Ideal Internalization	0.22	2.77*	
Body Comparison	0.20	4.57**	
Body Consciousness	0.57	5.18**	
Step 3			0.08*
Internalization X Exposure	0.55	2.72*	
Comparison X Exposure	0.29	2.55*	
Body Consc. X Exposure	0.49	1.72+	

$+ p < .10$ $* p < .05$ $** p < .01$

Figure Captions

Figure 1. Mean body dissatisfaction as a function of image exposure and thin-ideal

internalization at one standard deviation above and below the mean.

Figure 2. Mean body dissatisfaction as a function of image exposure and body comparison at one

standard deviation above and below the mean.

Figure 3. Mean body dissatisfaction as a function of image exposure and body consciousness at

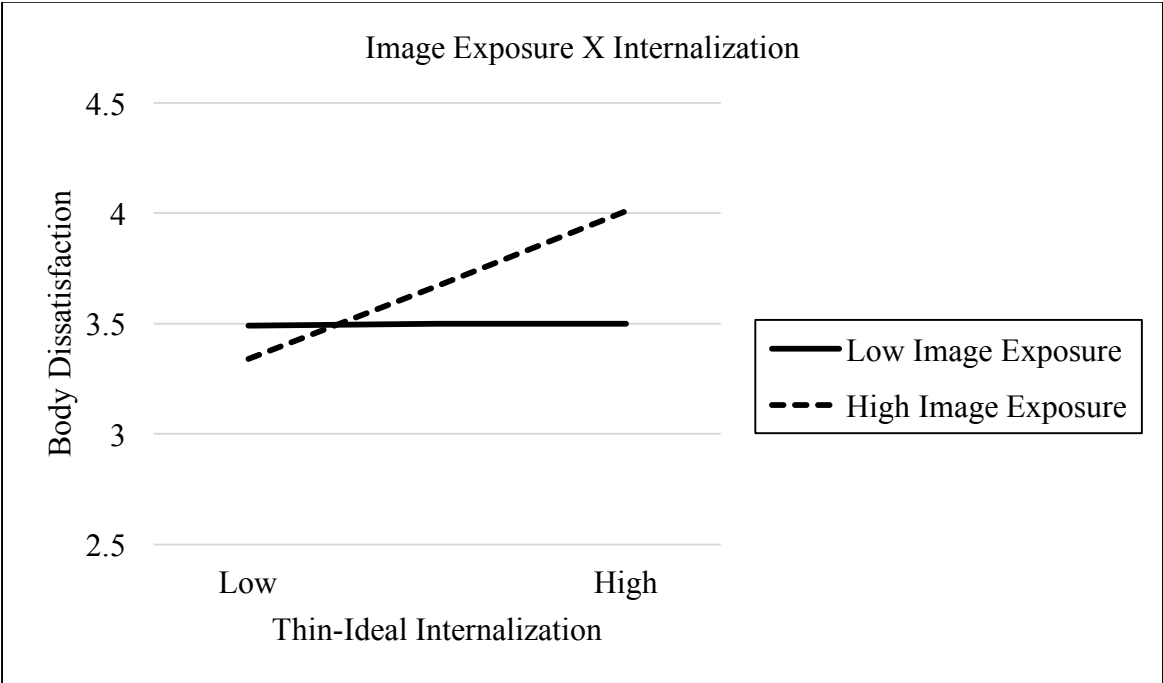one standard deviation above and below the mean.
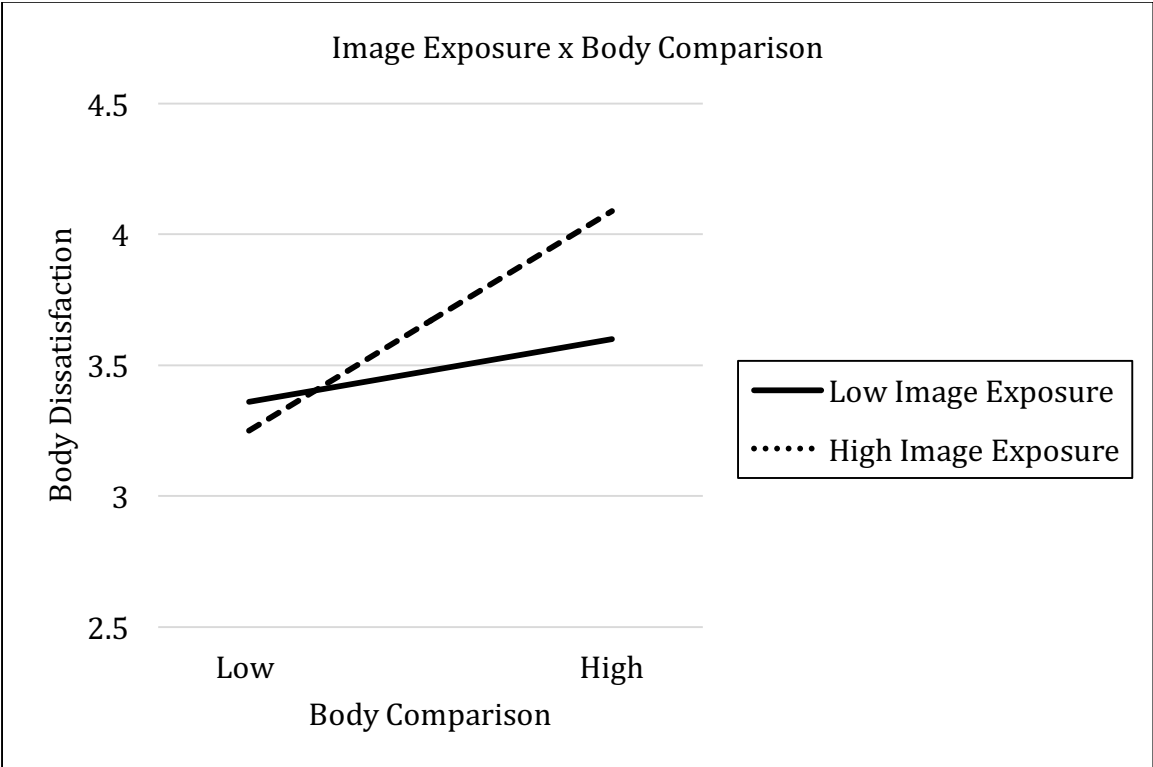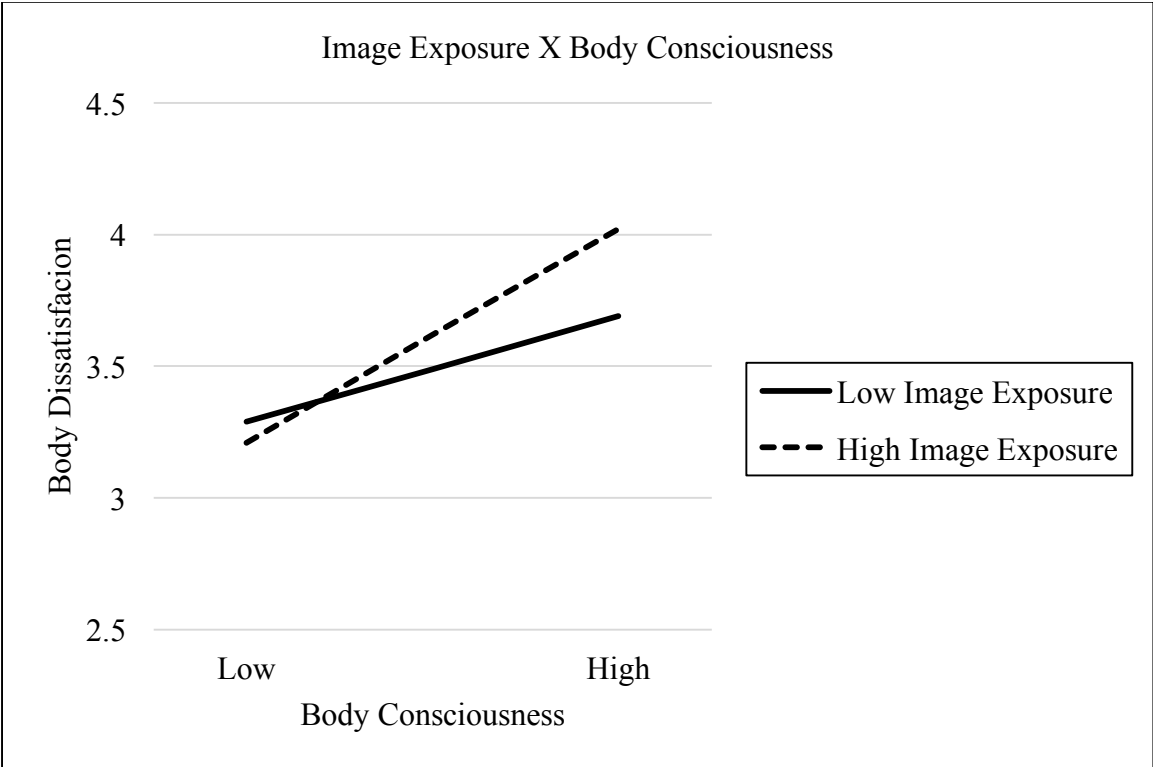
Figure 1

Image Exposure X Internalization

Figure 2

Image Exposure x Body Comparison

Figure 3

Image Exposure X Body Consciousness

Appendix A: Social Media Usage Questionnaire

How often do you use social media?

_____ Less than 1 hour per day
_____ 1-2 hours per day
_____ 2-4 hours per day
_____ 4-6 hours per day
_____ 6-8 hours per day
_____ 8-10 hours per day
_____ 10+ hours per day

Select all social platforms you use or have used:

_____ Facebook
_____ Instagram
_____ Snapchat
_____ Twitter
_____ Pinterest
_____ Tumblr
_____ Reddit
_____ LinkedIn
_____ YouTube
_____ Other (please list):

Why do you use social media? Select all that apply.

_____ To find information
_____ To keep in touch with family and friends
_____ To make new friends
_____ To get opinions
_____ To share opinions
_____ To look at pictures/videos of others
_____ To share pictures/videos
_____ To share your experiences
_____ Other: _____

Of the activities you selected, rank them in order of time spent doing that activity. For example 1
= Most Time Spent, 2 = 2nd Most Time Spent….

_____ To find information
_____ To keep in touch with family and friends
_____ To make new friends
_____ To get opinions
_____ To share opinions

_____ To look at pictures/videos of others
_____ To share pictures/videos
_____ To share your experiences
_____ Other: _____

Of the activities you selected, estimate the amount of time (in minutes) per day you spend engaging in that activity:

_____ To find information _____
_____ To keep in touch with family and friends_____
_____ To make new friends_____
_____ To get opinions_____
_____ To share opinions _____
_____ To look at pictures/videos of others_____
_____ To share pictures/videos _____
_____ To share your experiences_____
_____ Other: _____

What type of images do you encounter on social media?

_____ Food
_____ Bodies/Fitness
_____ Fashion
_____ Travel
_____ Friends/Family
_____ Animals/Pets
_____ Activities
_____ Other: _____

Of the images you selected, rank them in order of frequency of viewing. For example 1 = Most Frequently Viewed, 2 = 2nd Most Frequently Viewed….

_____ Food
_____ Bodies/Fitness
_____ Fashion[J2]
_____ Travel
_____ Friends/Family
_____ Animals/Pets
_____ Activities
_____ Other: _____

What prompts you to use social media? Select all that apply.

_____ Boredom

_____ To escape from daily life and stressors
_____ To feel better about myself
_____ To compare my life to others
_____ To get inspiration
_____ To connect with others
_____ Other: _____

Please respond to the statements using the following scale:

1 = Strongly Agree, 2 = Agree, 3 = Neither Agree Nor Disagree, 4 = Disagree, 5 = Strongly

Disagree

_____ Social media networks are important.

_____ I like using social media.

_____ I feel better after using social media (i.e. my mood is improved).

_____ I feel immersed in the social media world when I'm using a platform (i.e. I forget about
the physical space I'm in and become absorbed in what is happening on social media).

Appendix B: Body Appreciation Scale

Please respond to the statements using the following scale:
1 = Never, 2 = Seldom, 3 = Sometimes, 4 = Often, 5 = Always

1. I respect my body

2. I feel good about my body

3. On the whole, I am satisfied with my body

4. Despite its flaws, I accept my body for what it is

5. I feel that my body has at least some good qualities

6. I take a positive attitude toward my body

7. I am attentive to my body's needs

8. My self-worth is independent of my body shape or weight

9. I do not focus a lot of energy being concerned with my body shape or weight

10. My feelings toward my body are positive, for the most part

11. I engage in healthy behaviors to take care of my body

12. I do not allow unrealistically thin images of women presented in the media to affect my attitudes toward my body

13. Despite its imperfections I still like my body

Appendix C: Internalization-General Subscale of the Sociocultural Attitudes Toward Appearance Questionnaire

Please respond to the statements using the following scale:

1 = Definitely Disagree, 2 = Somewhat Disagree, 3 = Neither Disagree Nor Agree, 4 = Somewhat Agree, 5 = Definitely Agree

Importance

1. TV programs are an important source of information about fashion and "being attractive"

2. TV commercials are an important source of information about fashion and "being attractive"

3. Music videos on TV are an important source of information about fashion and "being attractive"

4. Magazine articles are an important source of information about fashion and "being attractive"

5. Magazine advertisements are an important source of information about fashion and "being attractive"

6. Pictures in magazines are an important source of information about fashion and "being attractive"

7. Movies are an important source of information about fashion and "being attractive"

8. Movie stars are an important source of information about fashion and "being attractive"

9. Famous people are an important source of information about fashion and "being attractive"

Pressures

1. I've felt pressure from TV or magazines to lose weight

2. I've felt pressure from TV or magazines to look pretty

3. I've felt pressure from TV or magazines to be thin

4. I've felt pressure from TV or magazines to have a perfect body

5. I've felt pressure from TV or magazines to diet

6. I've felt pressure from TV or magazines to exercise

7. I've felt pressure from TV or magazines to change my appearance

Internalization-TV/Mag

1. I would like my body to look like the people who are on TV

2. I would like my body to look like the models who appear in magazines

3. I would like my body to look like the people who are in movies

4. I wish I looked like the models in music videos

5. I try to look like the people on TV

6. I try to look like the people in music videos

Internalization-Athlete

1. I wish I looked as athletic as the people in magazines

2. I wish I looked as athletic as sports stars

3. I try to look like sports athletes

Internalization-Comparison

1. I compare my body to the bodies of TV and movie stars

2. I compare my appearance to the appearance of TV and movie stars

3. I compare my body to the bodies of people who appear in magazines

4. I compare my appearance to the appearance of people in magazines

Awareness

1. Clothes look better on people who are attractive

2. Clothes look better on people who are thin

3. Clothes look better on people who have an athletic body

4. Attractive people are better liked than unattractive people

5. People who are thin are better looking than people who are overweight

6. People who have an athletic body are better looking

7. Physically fit people are more attractive

8. Good looking people are more successful

9. Attractive people are happier

Appendix D: Body Comparison Orientation Subscale from the Body, Eating and Exercise Comparison Orientation Measure

Please respond to the statements using the following scale:

1 = Never, 2 = Almost Never, 3 = Seldom, 4 = Sometimes, 5 = Often, 6 = Almost Always, 7 = Always

1. I pay attention to whether or not I am as thin as, or thinner, than my peers
2. In social situations, I think about how my figure "matches up" to the figures of those around me
3. I notice how I compare with my peers in terms of specific parts of the body (e.g. stomach, hips, breast, etc.)
4. I compare my body shape to that of my peers
5. When I see a peer who is wearing revealing clothing, I have thoughts of how my own body compares
6. I pay attention to whether or not I am as toned as my peers

Appendix E: Objectified Body Consciousness Scale

Please respond to the statements using the following scale:

1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Neither Agree Nor Disagree, 5 = Somewhat Agree, 6 = Agree, 7 = Strongly Agree

Surveillance Subscale

1. I rarely think about how I look*

2. I think it is more important that my clothes are comfortable than whether they look good on me*

3. I think more about how my body feels than how my body looks*

4. I rarely compare how I look with how other people look*

5. During the day, I think about how I look many times

6. I often worry about whether the clothes I am wearing make me look good

7. I rarely worry about how I look to other people*

8. I am more concerned with what my body can do than how it looks*

Body Shame Subscale

9. When I can't control my weight, I feel like something must be wrong with me

10. I feel ashamed of myself when I haven't made the effort to look my best

11. I feel like I must be a bad person when I don't look as good as I could

12. I would be ashamed for people to know what I really weigh

13. I never worry that something is wrong with me when I am not exercising as much as I should*

14. When I'm not exercising enough, I question whether I am a good enough person

15. Even when I can't control my weight, I think I'm an okay person*

16. When I'm not the size I think I should be, I feel ashamed

Control Scale

17. I think a person is pretty much stuck with the looks they are born with*

18. A large part of being in shape is having that kind of body in the first place

19. I think a person can look pretty much how they want to if they are willing to work at it

20. I really don't think I have much control over how my body looks*

21. I think a person's weight is mostly determined by the genes they are born with*

22. It doesn't matter how hard I try to change my weight, it's probably always going to be about the same*

23. I can weight what I'm supposed to when I try hard enough

24. The shape you are in depends mostly on your genes*

*Reverse Score Item

Appendix F: Big Five Personality Inventory, Neuroticism Subscale

Please rank the degree to which you agree or disagree with each statement using the following scale:

1 = Strongly Disagree, 2 = Disagree a Little, 3 = Neither Agree Nor Disagree, 4 = Agree a Little, 5 = Agree Strongly

I see myself as someone who…

1. Is depressed, blue
2. Is relaxed, handles stress well*
3. Can be tense
4. Worries a lot
5. Is emotionally stable, not easily upset*
6. Can be moody
7. Remains calm in tense situations*
8. Gets nervous easily

*Reverse Score Item

Appendix G: Demographics Questionnaire

Age: _____

Sexual Orientation (check one):

_____ Heterosexual
_____ Homosexual
_____ Other (please specify): _____
_____ Prefer not to respond

Ethnicity (check one):

_____ White/Caucasian
_____ Hispanic/Latino(a)
_____ African-American/Black
_____ Asian
_____ Native American
_____ Other (please list): _____

Religious affiliation (check one):

_____ Christian – Protestant
_____ Christian – Catholic
_____ Jewish
_____ Muslim
_____ Hindu
_____ Buddhist
_____ Atheist
_____ Agnostic
_____ Not religious
_____ Other (please list): _____

Year in School (check one):
_____ 1st Year (Freshman)
_____ 2nd Year (Sophomore)
_____ 3rd Year (Junior)
_____ 4th Year (Senior)
_____ Other (please specify): _____

Major (if you have not yet declared a major, please list intended major/area of academic interest): _____

How would you characterize your hometown? (check one)

_____ Rural (unincorporated)
_____ Small town (village or town)

_____ Suburban (metropolitan area of a large city)
_____ Small city (population < 30,000)
_____ Medium-sized city (population 30,000 – 100,000)
_____ Large city (population > 100,000)
_____ Other: _____

Family Style

_____ 2 Parent Household
_____ Single Parent Household
_____ Step Family
_____ Extended Family
_____ Other: _____

Height (in feet/inches): _____

Weight (in pounds): _____