

# Psychology of Popular Media Culture

## Camera-Ready: Young Women's Appearance-Related Social Media Consciousness

Sophia Choukas-Bradley, Jacqueline Nesi, Laura Widman, and M. K. Higgins

Online First Publication, October 8, 2018. <http://dx.doi.org/10.1037/ppm0000196>

### CITATION

Choukas-Bradley, S., Nesi, J., Widman, L., & Higgins, M. K. (2018, October 8). Camera-Ready: Young Women's Appearance-Related Social Media Consciousness. *Psychology of Popular Media Culture*. Advance online publication. <http://dx.doi.org/10.1037/ppm0000196>

# Camera-Ready: Young Women's Appearance-Related Social Media Consciousness

Sophia Choukas-Bradley  
University of Pittsburgh

Jacqueline Nesi  
University of North Carolina at Chapel Hill  
and Brown University

Laura Widman  
North Carolina State University

M. K. Higgins  
University of North Carolina at Chapel Hill

Social media use is now ubiquitous among young women in the United States. The current study examines a new construct related to young women's experiences with social media: *appearance-related social media consciousness* (ASMC), the tendency for a woman's thoughts and behaviors to reflect an ongoing awareness of whether she might look attractive to an online audience. College women ( $N = 339$ ;  $M_{\text{age}} = 18.35$ ) self-reported their frequency of ASMC experiences. They also reported their overall time spent on social media, as well as their levels of self-objectification (i.e., body surveillance), body comparison, body esteem, and depressive symptoms. Women endorsed high rates of ASMC; for example, roughly three-quarters reported frequent ASMC experiences. In addition, results of 2 path analyses indicated that higher ASMC was significantly associated with (a) higher body surveillance, higher body comparison, and lower body esteem, controlling for time spent on social media; and (b) higher levels of depressive symptoms, controlling for body surveillance and time spent on social media. The results of this preliminary investigation indicate that ASMC may reflect a common set of experiences among young women and that higher levels may be maladaptive for psychological adjustment. This study also highlights the importance of understanding the broad and complex ways in which social media may affect young women's mental health and well-being.

## Public Policy Relevance Statement

The current study examines a set of thoughts and behaviors related to young women's experiences with social media: *appearance-related social media consciousness* (ASMC). ASMC is the tendency for a woman's thoughts and behaviors to reflect an ongoing awareness of whether she might look attractive to an online audience. College women reported high frequencies of ASMC experiences, and women with more frequent ASMC also reported more body image concerns and depressive symptoms. This study highlights the importance of understanding the broad and complex ways in which social media may affect young women's mental health and well-being.

**Keywords:** social media, body image, objectification, social comparison, depression

Photo-based social media sites are now ubiquitous among young adults in the United States. "Social media" broadly refers to any websites or apps that allow users to generate and post original content that can be viewed and commented on by others (Moreno & Kota, 2013). According to the Pew Research Center, the vast majority of young adults in the United States now use photo-based

social media sites and apps, with popular examples including Facebook, Snapchat, Instagram, and Pinterest (Greenwood, Perrin, & Duggan, 2016). In 2014, it was estimated that more than 1.8 billion photos were being shared on social media sites per day (Meeker, 2014). Furthermore, with 92% of young adults aged 18–29 owning a smartphone (Rainie & Perrin, 2017), most young

Sophia Choukas-Bradley, Department of Psychology, University of Pittsburgh; Jacqueline Nesi, Department of Psychology and Neuroscience, University of North Carolina at Chapel Hill, and Department of Psychiatry and Human Behavior, Warren Alpert Medical School, Brown University; Laura Widman, Department of Psychology, North Carolina State University; M. K. Higgins, Department of Psychology and Neuroscience, University of North Carolina at Chapel Hill.

This work was supported in part by funding from the National Science Foundation Graduate Research Fellowship (DGE-1144081) awarded to Jacqueline Nesi. Any opinions, findings, and conclusions are those of the authors and do not necessarily reflect the views of the National Science Foundation.

Correspondence concerning this article should be addressed to Sophia Choukas-Bradley, Department of Psychology, University of Pittsburgh, 3413 Sennott Square, 210 South Bouquet Street, Pittsburgh, PA 15206. E-mail: scb.1@pitt.edu

people now have access to social media 24 hr per day, allowing social media to be present in their everyday experiences more than ever before.

Physical appearance is a central focus of photo-based social media sites (Deighton-Smith & Bell, 2017). This may have important implications for the mental health and well-being of young women in particular, given the importance assigned to women's bodies in U.S. culture (Perloff, 2014). With access to these sites comes the potential for one's images to be displayed for a large audience (Marwick & Boyd, 2011; Nesi, Choukas-Bradley, & Prinstein, 2018a), and this audience may carry over offline as well. The current study introduces a construct we refer to as *appearance-related social media consciousness* (ASMC). We define ASMC as the extent to which a woman's thoughts and behaviors reflect an ongoing awareness of whether she might look attractive to a social media audience. We examine the frequency and correlates of ASMC, with an emphasis on associations with body image concerns and depressive symptoms.

*Objectification theory* (Fredrickson & Roberts, 1997) provides a useful framework for conceptualizing women's experiences of self-presentation for the online audience. This theory states that in a culture that sexually objectifies female bodies, girls and women are socialized to believe that their physical appearance is of critical importance and, simultaneously, that their appearance does not measure up to the societal ideal (Fredrickson & Roberts, 1997). In turn, women learn to adopt an observer's perspective on their bodies (i.e., *self-objectification*) and to engage in *body surveillance*, in which they perpetually monitor their physical selves (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996). Objectification theory was originally developed to address the impact of mass media images on women's psychological experiences, but it may be highly relevant to social media. For instance, objectification theory focuses on the impact of a hypothetical audience on women's psychological experiences, and social media turns this hypothetical audience into a reality. Young women know that at any moment, a photo may be taken of them, posted online, and viewed by a broad audience of peers. As a result, even during her offline moments, a woman may find herself processing a social event through the lens of whether she will look attractive in resulting social media photos. This may lead young women to engage in heightened monitoring and surveillance of their bodies to "prepare" for the possibility that photos will be taken and posted.

Decades of research indicate that women who engage in higher levels of body surveillance tend to show lower body esteem, greater depressive symptoms, and a host of other maladaptive outcomes (Calogero, Tantleff-Dunn, & Thompson, 2011). Several studies have examined associations between levels of social media use and body surveillance, finding positive associations among college women (Fardouly, Diedrichs, Vartanian, & Halliwell, 2015; Manago, Ward, Lemm, Reed, & Seabrook, 2015) and adolescent girls (Meier & Gray, 2014; Slater & Tiggemann, 2015; Vandenbosch & Eggermont, 2012). No studies, however, have examined whether young women's *offline* thoughts about the social media audience are associated with body surveillance.

Another set of theories relevant to understanding women's experiences of ASMC are those concerning body-related social comparisons (Fitzsimmons-Craft, Bardone-Cone, & Harney, 2012). As young women's lives become increasingly centered on

preparing for photos that may be posted online, body comparisons with peers may provide women with a "standard" toward which to strive. Indeed, previous research suggests that social media may create a compelling context for online body-related social comparison among young women (Nesi, Choukas-Bradley, & Prinstein, 2018b). Social media sites provide unprecedented access to public images of peers and allow users to provide "quantifiable" feedback (e.g., "likes" and "comments") on each other's photos; these social interactions likely draw attention to physical appearance and encourage social comparison processes based on appearance (Manago et al., 2015). A recent study using ecological momentary assessment found that young women engaged in social comparison processes via social media more frequently than through any type of traditional media (Fardouly, Pinkus, & Vartanian, 2017). Furthermore, most of these comparisons were upward appearance-based comparisons, in which the women compared themselves with others whom they believed "look better" than themselves (Fardouly et al., 2017). These processes are likely exacerbated by young women's tendencies to edit their social media photos, such that girls and women are comparing themselves with enhanced or manipulated images of peers (Fox & Vendemia, 2016; Kleemans, Daalman, Carbaat, & Anschütz, 2018; McLean, Paxton, Wertheim, & Masters, 2015). Social comparison via social media has been linked with both lower body satisfaction (Fardouly et al., 2017; Hendrickse, Arpan, Clayton, & Ridgway, 2017), lower self-esteem (Vogel, Rose, Roberts, & Eckles, 2014), and higher depressive symptoms (Feinstein et al., 2013; Nesi & Prinstein, 2015) among adolescents and young adults. Crucially, this heightened consciousness of one's appearance and anticipation of evaluation may extend beyond the periods when women are directly interacting with social media sites and bleed into their broader phenomenological experiences.

In addition to the specific constructs of body comparison and body surveillance, it is likely that ASMC has broader implications for women's overall body esteem. Social media use has been linked to body esteem and related constructs (Holland & Tiggemann, 2016; Mingoia, Hutchinson, Wilson, & Gleaves, 2017). However, recent research emphasizes that specific photo-related online behaviors and attitudes may be more important for body esteem than overall time spent online. More specifically, body image concerns have been linked to young women's regular sharing of "selfies," manipulation of photos, higher investment in those photos, and greater overall emotional attachment to social media sites (Cohen, Newton-John, & Slater, 2017, 2018; Kim & Chock, 2015; McLean et al., 2015; Rutledge, Gillmor, & Gillen, 2013). Furthermore, in a separate line of research, lower levels of body esteem have been linked to greater offline body surveillance (Tiggemann, 2011) and offline body comparison (Fitzsimmons-Craft et al., 2012).

Finally, given how important physical appearance concerns can be for young women's psychological well-being (Fredrickson & Roberts, 1997), ASMC may have relevance for women's adjustment beyond body image concerns. Specifically, previous research concerning offline appearance-related behaviors, and preliminary work specific to social media, highlights the potential for young women's ASMC to contribute to depressive symptoms. With regard to research on offline processes, women's body surveillance has been linked to depressive symptoms (Tiggemann, 2011). In addition, young women's body dissatisfaction and eating distur-

bance have been found to longitudinally predict major depression (Stice, Hayward, Cameron, Killen, & Taylor, 2000). Insofar as women's ASMC reflects greater investment in and concern about the way one's body appears to others, it is likely that these experiences will similarly be associated with greater depressive symptoms. In terms of associations between social media use and depression, previous research has suggested that one's subjective experiences of social media may contribute to depressive symptoms. One study found that "Facebook intrusion" (i.e., excessive and interfering attachment to Facebook) was associated with depressive symptoms among Polish individuals aged 15–75 (Błażnio, Przepiórka, & Pantic, 2015). Similarly, in a recent study using a nationally representative sample of U.S. young adults, problematic social media use was associated with depressive symptoms (Shensa et al., 2017).

In this preliminary investigation, we build on this previous literature to examine how a young woman's awareness of the social media audience may intrude into her offline experiences in the form of thoughts about how physically attractive she may look in social media photos. The first aim of the study was to examine how frequently young women engage in ASMC. Given previous work examining young women's appearance concerns and social media behaviors, we expected ASMC experiences to be common. Next, in a path analysis model, we examined associations between ASMC and several body image-related constructs. We hypothesized that—after controlling for time spent on social media—higher ASMC would be associated with body image concerns, including higher levels of body-related social comparison and body surveillance (i.e., self-objectification), and lower body esteem. Finally, in a second path analysis model, we examined the link between ASMC and depressive symptoms. We expected that ASMC would be uniquely associated with young women's depressive symptoms, controlling for time spent on social media and offline body surveillance.

## Method

### Participants and Procedure

Participants were 339 college women ( $M_{\text{age}} = 18.35$ ) enrolled in psychology courses at a large university in the southeastern United States. The ethnic composition of the sample included 67.3% White/Caucasian, 10.9% African American/Black, 4.7% Hispanic/Latina, 10.0% Asian, 5.3% mixed race, and 1.8% other race/ethnicity. After obtaining informed consent, data were collected via laptop computers. Participants aged 18–19 completed a 45-min survey as part of a larger study of young women's communication and health (Choukas-Bradley, Nesi, Widman, & Noar, 2018; Garrett, Widman, Nesi, & Noar, 2018) and were compensated with partial course credit for taking part in the study. All procedures were approved by the university institutional review board.

### Measures

After reporting their age and race/ethnicity, young women completed questionnaires in which they self-reported their time spent on social media, ASMC, body surveillance, body comparison,

body esteem, and depressive symptoms. All questionnaires were completed on laptop computers.

**Time spent on social media.** Participants were asked to indicate, in a free-response format, the average number of hours and minutes they spent using any social media on a typical day. Based on focus group input regarding commonly used sites during the study time period, "social media" was defined as "Facebook, Instagram, Snapchat, Twitter, or any other website/app that involves social interaction." Four participants reported daily time on social media exceeding 11 hr; data were winsorized at the next closest value (10 hr) to avoid outliers' data unduly influencing the results (Tabachnick & Fidell, 2006). Thus, final scores on this measure ranged from "0" to " $\geq 10$ " hr per day. Self-report measures have been widely used in studies assessing the frequency of technology use (Kim & Chock, 2015).

**Appearance-related social media consciousness.** Participants were asked to report how often they experience thoughts and behaviors related to ASMC, using four items developed for this study to examine this new construct. Participants responded to each item on a 7-point scale ranging from 1 (*never*) to 7 (*always*). An example item was "When I am at an event in which people are taking photos of me (for example, a party or other social event), I feel distracted by thoughts about how the photos will look on social media." All items are shown in Table 1. Ratings for these four items were averaged to form a single measure of ASMC ( $\alpha = .83$ ). A confirmatory factor analysis using maximum likelihood estimation was conducted to confirm that the scale was unidimensional and that all items loaded onto a single factor. Results revealed a single-factor solution with excellent fit to the data,  $\chi^2(2) = 7.076$ ,  $p = .03$ , confirmatory fit index = .99, Tucker–Lewis index = .97, standardized root mean square residual = .02. Standardized factor loadings ranged from 0.71 to 0.84.

**Body surveillance (self-objectification).** Self-objectification was assessed with the Body Surveillance subscale of the Objectified Body Consciousness Scale (McKinley & Hyde, 1996). The Body Surveillance subscale consists of eight items that measure the extent to which a woman monitors her body based on how it looks, rather than how it feels. Example items include "During the day, I think about how I look many times" and "I am more concerned with what my body can do than how it looks" (reverse coded). Body surveillance is considered the behavioral manifestation of self-objectification; it has been described as viewing one's body as others see it (McKinley & Hyde, 1996). Items are measured on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Scores were averaged, with higher scores reflecting higher levels of self-objectification. Scores derived from the Body Surveillance subscale have adequate reliability and validity in college samples (McKinley & Hyde, 1996; see also Moradi & Varnes, 2017) and are widely used as a measure of self-objectification (Calogero et al., 2011). Internal consistency of the subscale in the current sample was acceptable ( $\alpha = .82$ ).

**Body comparison.** Body comparison among same-sex peers was assessed with the six-item Body Comparison Orientation Scale of the Body, Eating, and Exercise Comparison Orientation Measure (Fitzsimmons-Craft et al., 2012). Sample items include "I compare my body shape to that of my peers" and "I pay attention to whether or not I am as thin as, or thinner, than my peers." Items were rated on a 7-point scale from 1 (*never*) to 7 (*always*), and scores were averaged; higher scores indicated more frequent body

Table 1  
Items and Descriptive Statistics for Appearance-Related Social Media Consciousness (ASMC) Items

| ASMC Item                                                                                                                                                                                    | <i>M</i> ( <i>SD</i> ) | Never<br>(%) | Almost<br>never (%) | Seldom<br>(%) | Sometimes<br>(%) | Often<br>(%) | Almost<br>always (%) | Always<br>(%) |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------|---------------------|---------------|------------------|--------------|----------------------|---------------|
| 1. When I am at an event in which people are taking photos of me (for example, a party or other social event), I feel distracted by thoughts about how the photos will look on social media. | 4.39 (1.45)            | 4.1          | 6.8                 | 12.1          | 29.2             | 25.1         | 16.2                 | 6.5           |
| 2. When I am getting ready to go to a social event where photos may be taken of me, I spend extra time trying to look nice so that good photos will be posted of me on social media.         | 4.43 (1.62)            | 5.9          | 7.1                 | 14.5          | 21.5             | 21.8         | 19.8                 | 9.4           |
| 3. When someone is taking a picture of me that they might post to social media, I find myself wondering whether I will look attractive in the photo.                                         | 4.94 (1.39)            | 1.8          | 3.5                 | 7.7           | 23.3             | 27.7         | 21.5                 | 14.5          |
| 4. I spend time thinking about and/or taking new photos for social media that will make me look attractive.                                                                                  | 3.74 (1.53)            | 7.7          | 14.2                | 21.8          | 27.1             | 14.7         | 10.6                 | 3.8           |

*Note.* The first column shows the mean and standard deviation for each ASMC item. The other columns show the specific frequencies for each item. Participants rated items on a 7-point scale: 1 = *never*, 2 = *almost never*, 3 = *seldom*, 4 = *sometimes*, 5 = *often*, 6 = *almost always*, and 7 = *always*.

comparisons. Body, Eating, and Exercise Comparison Orientation Measure scores have been shown to have strong reliability and validity in college samples (Fitzsimmons-Craft et al., 2012). The internal consistency in this sample was excellent ( $\alpha = .96$ ).

**Body esteem.** A subset of 14 items from the Body Esteem Scale for Adolescents and Adults (BESAA; Mendelson, Mendelson, & White, 2001) was used to capture how participants felt about their physical appearance. On a 5-point scale from 1 (*never*) to 5 (*always*), participants indicated how frequently in the past 6 months they agreed with a series of appearance- and weight-related items such as “I’m proud of my body” and “I’m pretty happy about the way I look.” Scores were averaged, with higher scores indicating more positive body esteem. Scores derived from the full scale have been shown to have strong reliability and validity in college samples (Jones & Buckingham, 2005), and there was excellent internal consistency in the current sample ( $\alpha = .93$ ).

**Depressive symptoms.** The 13-item Short Mood and Feelings Questionnaire (Angold, Costello, Messer, & Pickles, 1995) was used to assess depressive symptoms over the past 2 weeks. Items such as “I felt miserable or unhappy” and “I didn’t enjoy anything at all” were rated on a 3-point scale (0 = *not true*, 1 = *sometimes true*, and 2 = *mostly true*). Scores were averaged, with higher scores reflecting higher depressive symptoms. The Short Mood and Feelings Questionnaire has good psychometric properties (Sharp, Goodyer, & Croudace, 2006) and has been shown to be valid for use in late adolescent samples (Turner, Joinson, Peters, Wiles, & Lewis, 2014). The internal consistency in this sample was adequate ( $\alpha = .88$ ).

## Results

### Frequency of ASMC

Table 1 shows descriptive statistics for each individual ASMC item. As expected, ASMC experiences were common. For each individual item, at least 92% of the sample endorsed the experience as occurring more frequently than “never,” and many participants endorsed these items as occurring “often,” “almost always,” or even “always.”

To provide a clearer picture of young women’s ASMC frequency, participants were then coded based on whether they had endorsed at least one ASMC item at each level of frequency. Table 2 shows the cumulative percentage based on frequency. For example, of the 339 young women who participated in the study, only one participant (0.3% of the sample) responded with “never” to all four ASMC items. Furthermore, 93.5% reported ASMC occurring “sometimes” or more frequently, more than three-quarters reported ASMC experiences “often” or more frequently, and nearly half the sample reported at least one experience as occurring “almost always” or “always.”

### Bivariate Correlations Among Study Variables

Table 3 shows the means and bivariate correlations among all study variables. ASMC was significantly correlated with all other study variables. Fewer associations were revealed between time spent on social media and other study variables. Note that all correlations among study variables were positive, except for cor-

Table 2  
Cumulative Percentage of Sample Endorsing Appearance-Related Social Media Consciousness (ASMC) Items

| Endorsement of ASMC items             | <i>n</i> | % of sample |
|---------------------------------------|----------|-------------|
| Provided ASMC data                    | 339      | 100         |
| Greater than <i>never</i>             | 338      | 99.7        |
| At least <i>seldom</i>                | 333      | 98.2        |
| At least <i>sometimes</i>             | 317      | 93.5        |
| At least <i>often</i>                 | 258      | 76.1        |
| <i>Almost always</i> or <i>always</i> | 164      | 48.4        |
| <i>Always</i>                         | 66       | 19.5        |

*Note.* This table provides a descriptive picture of how frequently ASMC items were endorsed. Each of the four ASMC items was endorsed on the following scales: *never*, *seldom*, *sometimes*, *often*, *almost always*, and *always*. For each category shown here, a participant was coded as “yes” if she endorsed at least one ASMC item at that frequency level or higher. For example, 93.5% of the participants endorsed at least one ASMC item as *sometimes*, *often*, *almost always*, or *always*.

relations involving body esteem, which, as expected, were negative (e.g., higher body surveillance was associated with lower body esteem).

### Path Analyses

Two path analyses were conducted within a structural equation modeling framework (Bollen, 1989) in *Mplus* 7.4 (Muthén & Muthén, 1998–2012) to examine associations among the constructs of interest. Given that each model was fully saturated, no fit indices are provided (Bollen, 1989). Note that each path model was rerun while including race as an exogenous (i.e., predictor) variable, and the pattern of significant findings discussed later did not change, nor was race a significant predictor of any of the endogenous (i.e., outcome) variables. Thus, race was excluded from the final models for parsimony. In each path model, overall time spent on social media was also included as an exogenous variable to identify whether participants’ ASMC was uniquely associated with the outcome variables, controlling for general tendency to use social media.

**ASMC and body-related constructs.** The first path analysis examined associations between ASMC and the body-related constructs of body esteem, body surveillance, and body comparison, while controlling for time spent on social media. Results (Figure 1) indicated significant path coefficients between ASMC and all outcome variables ( $ps < .001$ ), controlling for time on social

media and simultaneously accounting for associations among all endogenous variables. Specifically, consistent with hypotheses, significant associations were revealed between higher levels of ASMC and higher body comparison, higher body surveillance, and lower body esteem. Furthermore, controlling for ASMC, time on social media was not significantly associated with any of the endogenous variables ( $ps > .10$ ).

**ASMC and depressive symptoms.** The second path analysis (Figure 2) examined the associations between ASMC and depressive symptoms, while controlling for associations with time spent on social media and body surveillance. Consistent with hypotheses, controlling for time spent on social media and body surveillance, ASMC significantly and positively predicted depressive symptoms ( $p = .02$ ). Also, higher time spent on social media and lower body esteem each significantly predicted depressive symptoms.

### Discussion

The vast majority of young women in the United States use photo-based social media sites (Perrin, 2015). This study introduces a new construct, ASMC, capturing the tendency for a young woman’s thoughts and behaviors to reflect an ongoing awareness of whether she might look attractive to a social media audience. Results suggest the importance of this construct for young women’s psychological experiences: ASMC was common in this sample, and higher levels were associated with maladaptive correlates. Specifically, young women who reported higher ASMC were more likely to report lower levels of body esteem and higher levels of body comparison and body surveillance (i.e., self-objectification), controlling for time spent on social media and associations among these outcome variables. Furthermore, when controlling for time spent on social media and a measure of offline body surveillance, ASMC was significantly associated with depressive symptoms.

The first aim of this study was to describe the frequency with which young women reported experiences of ASMC. As expected, we found that such ASMC experiences were common in this sample. In fact, only one participant reported that she never experienced any form of ASMC. With 99.7% of the sample reporting some degree of ASMC, and with more than half of women endorsing these experiences as occurring “almost always” or “always,” this preliminary study underscores the importance of continuing to investigate young women’s ASMC experiences. Indeed, ASMC may now be a normative part of young women’s phenomenological experiences. However, this preliminary investigation also suggests that—although common—higher frequencies of

Table 3  
Univariate Statistics and Bivariate Correlations Between Primary Variables

| Variable                                                | <i>M</i> ( <i>SD</i> ) | 1       | 2     | 3       | 4       | 5       |
|---------------------------------------------------------|------------------------|---------|-------|---------|---------|---------|
| 1. Appearance-related social media consciousness (ASMC) | 4.38 (1.22)            | —       |       |         |         |         |
| 2. Time spent on social media                           | 2.15 (1.94)            | .20***  | —     |         |         |         |
| 3. Body surveillance                                    | 4.78 (.99)             | .56***  | .18** | —       |         |         |
| 4. Body comparison                                      | 4.80 (1.38)            | .55***  | .04   | .59***  | —       |         |
| 5. Body esteem                                          | 3.13 (.71)             | -.33*** | -.08  | -.51*** | -.57*** | —       |
| 6. Depressive symptoms                                  | 1.47 (.38)             | .25***  | .17** | .25***  | .24***  | -.35*** |

\*\*  $p < .005$ . \*\*\*  $p < .001$ .

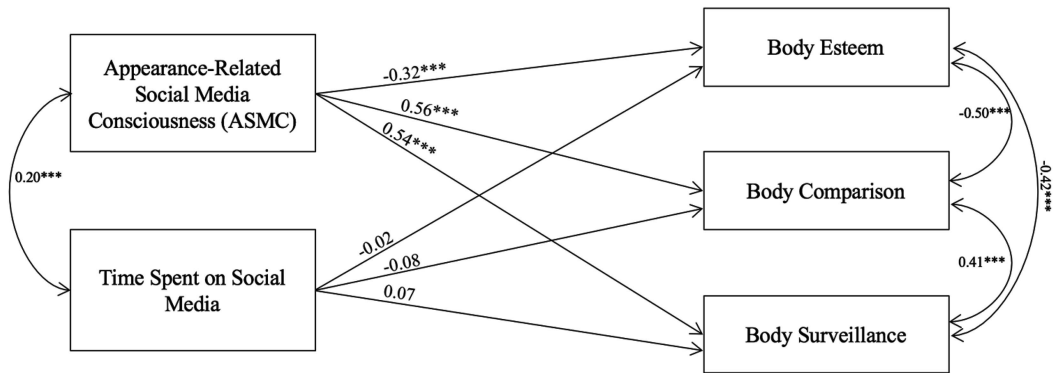


Figure 1. Path analysis model examining associations between appearance-related social media consciousness (ASMC) and body-related constructs. Path analysis shows associations between ASMC and endogenous variables (body esteem, body comparison, and body surveillance), controlling for time spent on social media. Coefficients presented are standardized linear regression coefficients. \*\*\*  $p < .001$ .

such ASMC experiences may confer risk for poor body image and depressive symptoms.

This study contributes to a growing body of literature suggesting that young women's subjective experiences related to social media use, rather than overall amount of time spent on social media, may be more predictive of psychological and behavioral outcomes. In fact, in the first path analysis model, after controlling for ASMC, time spent on social media was not significantly associated with any of the body image-related variables. This set of findings is consistent with previous work that has shown stronger associations between specific subjective social media experiences and young women's body image concerns, relative to general social media usage (Cohen et al., 2017, 2018; Kim & Chock, 2015; Meier & Gray, 2014). This growing body of work highlights a fundamental shift in the field of social media research. At a time when the vast majority of young adults use social media (Greenwood et al., 2016), research questions that focus solely on overall use may miss

the mark. The current study advances this body of work by focusing on subjective offline experiences related to the online audience, rather than specific behaviors that occur when women are online (e.g., manipulating photos; Fox & Vendemia, 2016). To develop a more accurate and nuanced view of social media's impact on young women's mental health, it is critical to investigate women's specific, internal experiences of the social media audience in their everyday lives.

The current study focused on a set of psychological experiences that are especially salient among young women: physical appearance concerns (Perloff, 2014). These findings may reflect young women's engagement in self-presentational and identity management processes aimed at making favorable impressions on others, as has been articulated in theories related to online identity management (Gerhart & Sidorova, 2017). Given the importance assigned to young women's physical appearance in U.S. society (Fredrickson & Roberts, 1997), and the focus on physical appear-

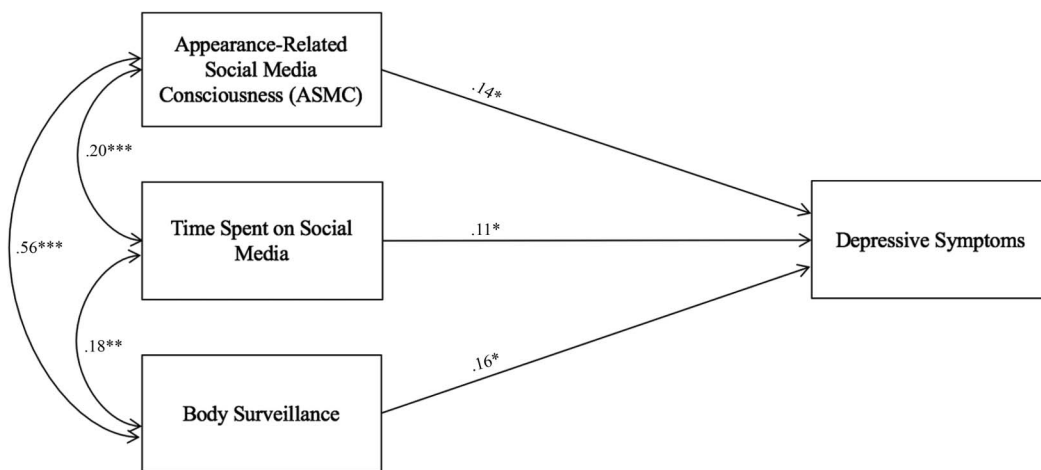


Figure 2. Path analysis model examining associations between appearance-related social media consciousness (ASMC) and depressive symptoms. Path analysis shows associations between ASMC and the endogenous variable of depressive symptoms, controlling for time spent on social media and body surveillance. Coefficients presented are standardized linear regression coefficients. \*\*\*  $p < .001$ . \*\*  $p < .01$ . \*  $p < .05$ .

ance of many social media sites (Deighton-Smith & Bell, 2017), social media may provide a context through which young women feel motivated to present idealized portraits of their physical selves.

The observed links among ASMC, body image-related concerns, and depressive symptoms can also be interpreted through the lens of objectification theory, which was proposed before the advent of social media (Fredrickson & Roberts, 1997). This theory states that women are socialized to believe that their physical attractiveness is of central importance, to feel that their appearance does not measure up to the societal ideal, and to adopt an observer's perspective on their physical selves (Fredrickson & Roberts, 1997). In its original articulation, objectification theory focused on the impact of a hypothetical audience on women's psychological experiences, based on the objectification of female bodies in mass media. As social media becomes embedded in everyday experiences, young women may adopt an outsider's perspective on their physical appearance with an eye toward potential social media photos—perpetually “camera-ready” for the social media audience. Specifically, young women in this sample reported frequently imagining how photos of themselves will look on social media, feeling distracted by thoughts about how photos may appear on social media, and engaging in offline behaviors to prepare for attractive social media photos. It is unsurprising that women who experienced higher frequencies of such ASMC experiences also reported higher levels of a traditional measure of body surveillance, the behavioral manifestation of self-objectification. Results provide an important extension of previous work that examined associations between young women's general levels of social media use and body surveillance (Fardouly et al., 2015; Manago et al., 2015; Meier & Gray, 2014; Slater & Tiggemann, 2015; Vandenberg & Eggermont, 2012). In addition, decades of work have documented links among offline body surveillance, physical appearance concerns, and depressive symptoms (Tiggemann, 2011). As social media becomes an increasingly central aspect of women's lives, understanding the ways in which it may intersect with traditional objectification experiences is essential.

### Limitations and Future Directions

The current results highlight the importance of continuing to examine the correlates and outcomes of ASMC in future work, while addressing the limitations of this study. First, because the study used a single time point and correlational design, it cannot be concluded that ASMC caused or temporally preceded outcome variables. A critical next step for future work will be to examine longitudinal associations among ASMC, physical appearance concerns, and depressive symptoms.

In addition, this study aimed to provide an initial investigation of one particular way in which young women are affected by the awareness of how they may appear to a social media audience, using a brief set of four items. Although these four items showed acceptable internal consistency ( $\alpha = .83$ ), as well as evidence of construct validity via their associations with theoretically related constructs, future work should use formal scale development processes to examine a broader range of constructs regarding social media appearance concerns.

Furthermore, a subset of items from the validated BESAA (Mendelson et al., 2001) was used to assess body esteem, and

future work should expand on the current investigation by assessing the association between ASMC and the full BESAA. It should be noted, however, that this abbreviated measure had excellent internal consistency and was significantly correlated with other study variables as expected.

The current sample was homogenous, consisting of young women from a single college in the southeastern United States who were predominantly (67%) White. The pattern of results remained the same when controlling for race, but further work will be needed to understand racial differences in young women's experiences of ASMC. In addition, results may not generalize to other young female social media users, and the findings from this preliminary examination of ASMC will need to be replicated in larger, more heterogeneous samples of women and adolescent girls.

Finally, the current study focused on women, given the profound societal emphasis on women's physical appearance (Perloff, 2014). It is interesting to consider the possibility, however, that social media may “tip the playing field” for young men and women with regard to the focus on and awareness of one's physical self (Manago et al., 2015, p. 10). Whereas women's bodies have historically been objectified via mass media at dramatically higher rates, men's bodies are now being photographed and posted on social media sites with high frequency, which may have important implications for ASMC among young men—a possibility that will need to be investigated in future work.

Finally, this preliminary study focused on body image-related concerns and depressive symptoms as correlates of ASMC. Future research should examine a much broader range of correlates and outcomes, including disordered eating, risky behaviors, flow and mindfulness, and other important constructs long known to be associated with physical appearance concerns (Calogero et al., 2011).

### Implications and Conclusion

The findings from this study have numerous practical implications for work with young women across educational, community, and therapeutic settings. First, past work has demonstrated the efficacy of mass media literacy programs in mitigating the harmful effects of media on women's physical appearance concerns (for a review, see Jeong, Cho, & Hwang, 2012), and similar programs might be beneficial in teaching social media literacy, as has been shown in a recent pilot evaluation (McLean, Wertheim, Masters, & Paxton, 2017). In addition, therapists and other practitioners working with young women may consider the possible influence of ASMC on body image concerns and depression. For example, practitioners might discuss with clients their experiences of becoming distracted by thoughts about how their bodies may appear to a social media audience.

In summary, the current study provides an initial investigation into the construct of ASMC, offering evidence for its high prevalence among college women and its potential implications for body image concerns and depressive symptoms. To our knowledge, this study is the first to investigate the extent to which thoughts about one's physical appearance on social media intrude into young women's offline experiences. Although this study's conclusions should be considered preliminary until replicated and expanded, they highlight the importance of continuing to under-

stand the myriad complex ways in which social media affects young women's mental health and well-being.

## References

- Angold, A., Costello, E. J., Messer, S. C., & Pickles, A. (1995). Development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. *International Journal of Methods in Psychiatric Research*, 5, 237–249. Retrieved from <https://search-proquest-com>
- Blachnio, A., Przepiórka, A., & Pantic, I. (2015). Internet use, Facebook intrusion, and depression: Results of a cross-sectional study. *European Psychiatry*, 30, 681–684. <http://dx.doi.org/10.1016/j.eurpsy.2015.04.002>
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York, NY: Wiley. <http://dx.doi.org/10.1002/9781118619179>
- Calogero, R. M., Tantleff-Dunn, S., & Thompson, J. K. (2011). *Self-objectification in women: Causes, consequences, and counteractions* (1st ed.). Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/12304-000>
- Choukas-Bradley, S., Nesi, J., Widman, L., & Noar, S. M. (2018). Examining the role of self-objectification and appearance expectations in young women's indoor tanning behavior. *Sex Roles*. Advance online publication. <http://dx.doi.org/10.1007/s11199-018-0913-9>
- Cohen, R., Newton-John, T., & Slater, A. (2017). The relationship between Facebook and Instagram appearance-focused activities and body image concerns in young women. *Body Image*, 23, 183–187. <http://dx.doi.org/10.1016/j.bodyim.2017.10.002>
- Cohen, R., Newton-John, T., & Slater, A. (2018). "Selfie"-objectification: The role of selfies in self-objectification and disordered eating in young women. *Computers in Human Behavior*, 79, 68–74. <http://dx.doi.org/10.1016/j.chb.2017.10.027>
- Deighton-Smith, N., & Bell, B. T. (2017). Objectifying fitness: A content and thematic analysis of #Fitspiration images on social media. *Psychology of Popular Media Culture*. Advance online publication. <http://dx.doi.org/10.1037/ppm0000143>
- Fardouly, J., Diedrichs, P. C., Vartanian, L. R., & Halliwell, E. (2015). The mediating role of appearance comparisons in the relationship between media usage and self-objectification in young women. *Psychology of Women Quarterly*, 39, 447–457. <http://dx.doi.org/10.1177/0361684315581841>
- Fardouly, J., Pinkus, R. T., & Vartanian, L. R. (2017). The impact of appearance comparisons made through social media, traditional media, and in person in women's everyday lives. *Body Image*, 20, 31–39. <http://dx.doi.org/10.1016/j.bodyim.2016.11.002>
- Feinstein, B. A., Hershenberg, R., Bhatia, V., Latack, J. A., Meuwly, N., & Davila, J. (2013). Negative social comparison on Facebook and depressive symptoms: Rumination as a mechanism. *Psychology of Popular Media Culture*, 2, 161–170. <http://dx.doi.org/10.1037/a0033111>
- Fitzsimmons-Craft, E. E., Bardone-Cone, A. M., & Harney, M. B. (2012). Development and validation of the Body, Eating, and Exercise Comparison Orientation Measure (BEECOM) among college women. *Body Image*, 9, 476–487. <http://dx.doi.org/10.1016/j.bodyim.2012.07.007>
- Fox, J., & Vendemia, M. A. (2016). Selective self-presentation and social comparison through photographs on social networking sites. *Cyberpsychology, Behavior, and Social Networking*, 19, 593–600. <http://dx.doi.org/10.1089/cyber.2016.0248>
- Fredrickson, B. L., & Roberts, T. A. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly*, 21, 173–206. <http://dx.doi.org/10.1111/j.1471-6402.1997.tb00108.x>
- Garrett, K. P., Widman, L., Nesi, J., & Noar, S. M. (2018). Intentions to use emergency contraception: The role of accurate knowledge and information source credibility. *American Journal of Health Education*.
- Gerhart, N., & Sidorova, A. (2017). The effect of network characteristics on online identity management practices. *Journal of Computer Information Systems*, 57, 229–237. <http://dx.doi.org/10.1080/08874417.2016.1184007>
- Greenwood, S., Perrin, A., & Duggan, M. (2016). Social media update 2016. *Pew Research Center*. Retrieved from <http://www.pewinternet.org/2016/11/11/social-media-update-2016/>
- Hendrickse, J., Arpan, L. M., Clayton, R. B., & Ridgway, J. L. (2017). Instagram and college women's body image: Investigating the roles of appearance-related comparisons and intrasexual competition. *Computers in Human Behavior*, 74, 92–100. <http://dx.doi.org/10.1016/j.chb.2017.04.027>
- Holland, G., & Tiggemann, M. (2016). A systematic review of the impact of the use of social networking sites on body image and disordered eating outcomes. *Body Image*, 17, 100–110. <http://dx.doi.org/10.1016/j.bodyim.2016.02.008>
- Jeong, S. H., Cho, H., & Hwang, Y. (2012). Media literacy interventions: A meta-analytic review. *Journal of Communication*, 62, 454–472. <http://dx.doi.org/10.1111/j.1460-2466.2012.01643.x>
- Jones, A. M., & Buckingham, J. T. (2005). Self-esteem as a moderator of the effect of social comparison on women's body image. *Journal of Social and Clinical Psychology*, 24, 1164–1187. <http://dx.doi.org/10.1521/jscp.2005.24.8.1164>
- Kim, J. W., & Chock, T. M. (2015). Body image 2.0: Associations between social grooming on Facebook and body image concerns. *Computers in Human Behavior*, 48, 331–339. <http://dx.doi.org/10.1016/j.chb.2015.01.009>
- Kleemans, M., Daalman, S., Carbaat, I., & Anschutz, D. (2018). Picture perfect: The direct effect of manipulated Instagram photos on body image in adolescent girls. *Media Psychology*, 21, 93–110. <http://dx.doi.org/10.1080/15213269.2016.1257392>
- Manago, A. M., Ward, L. M., Lemm, K. M., Reed, L., & Seabrook, R. (2015). Facebook involvement, objectified body consciousness, body shame, and sexual assertiveness in college women and men. *Sex Roles*, 72, 1–14. <http://dx.doi.org/10.1007/s11199-014-0441-1>
- Marwick, A. E., & Boyd, D. (2011). I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience. *New Media and Society*, 13, 114–133. <http://dx.doi.org/10.1177/1461444810365313>
- McKinley, N. M., & Hyde, J. S. (1996). The Objectified Body Consciousness Scale: Development and validation. *Psychology of Women Quarterly*, 20, 181–215. <http://dx.doi.org/10.1111/j.1471-6402.1996.tb00467.x>
- McLean, S. A. P., Paxton, S. J., Wertheim, E. H., & Masters, J. (2015). Photoshopping the selfie: Self photo editing and photo investment are associated with body dissatisfaction in adolescent girls. *International Journal of Eating Disorders*, 48, 1132–1140. <http://dx.doi.org/10.1002/eat.22449>
- McLean, S. A., Wertheim, E. H., Masters, J., & Paxton, S. J. (2017). A pilot evaluation of a social media literacy intervention to reduce risk factors for eating disorders. *International Journal of Eating Disorders*, 50, 847–851. <http://dx.doi.org/10.1002/eat.22708>
- Meeker, M. (2014). *Internet Trends*. Retrieved from [kpcb.com/internet-trends](http://kpcb.com/internet-trends)
- Meier, E. P., & Gray, J. (2014). Facebook photo activity associated with body image disturbance in adolescent girls. *Cyberpsychology, Behavior, and Social Networking*, 17, 199–206. <http://dx.doi.org/10.1089/cyber.2013.0305>
- Mendelson, B. K., Mendelson, M. J., & White, D. R. (2001). Body-Esteem Scale for Adolescents and Adults. *Journal of Personality Assessment*, 76, 90–106. [http://dx.doi.org/10.1207/S15327752JPA7601\\_6](http://dx.doi.org/10.1207/S15327752JPA7601_6)
- Mingoia, J., Hutchinson, A. D., Wilson, C., & Gleaves, D. H. (2017). The relationship between social networking site use and the internalization of a thin ideal in females: A meta-analytic review. *Frontiers in Psychology*, 8, 1351. <http://dx.doi.org/10.3389/fpsyg.2017.01351>

- Moradi, B., & Varnes, J. R. (2017). Structure of the Objectified Body Consciousness Scale: Reevaluated 20 years later. *Sex Roles*, 77, 325–337. <http://dx.doi.org/10.1007/s11199-016-0731-x>
- Moreno, M., & Kota, R. (2013). Social media. In V. C. Strasburger, B. J. Wilson, & A. B. Jordan (Eds.), *Children, adolescents, and the media* (3rd ed., pp. 435–456). Thousand Oaks, CA: Sage.
- Muthén, L. K., & Muthén, B. O. (1998–2012). *Mplus user's guide*. Los Angeles, CA: Author.
- Nesi, J., Choukas-Bradley, S., & Prinstein, M. J. (2018a). Transformation of adolescent peer relations in the social media context: Pt. 1—A theoretical review and application to dyadic peer relationships. *Clinical Child and Family Psychology Review*. Advance online publication. <http://dx.doi.org/10.1007/s10567-018-0261-x>
- Nesi, J., Choukas-Bradley, S., & Prinstein, M. J. (2018b). Transformation of adolescent peer relations in the social media context: Pt. 2—Application to peer group processes and future directions for research. *Clinical Child and Family Psychology Review*. Advance online publication. <http://dx.doi.org/10.1007/s10567-018-0262-9>
- Nesi, J., & Prinstein, M. J. (2015). Using social media for social comparison and feedback-seeking: Gender and popularity moderate associations with depressive symptoms. *Journal of Abnormal Child Psychology*, 43, 1427–1438. <http://dx.doi.org/10.1007/s10802-015-0020-0>
- Perloff, R. M. (2014). Social media effects on young women's body image concerns: Theoretical perspectives and an agenda for research. *Sex Roles*, 71, 363–377. <http://dx.doi.org/10.1007/s11199-014-0384-6>
- Perrin, A. (2015). Social media usage: 2005–2015. *Pew Research Center*. Retrieved from <http://www.pewinternet.org/2015/10/08/2015/Social-Networking-Usage-2005-2015/>
- Rainie, L., & Perrin, A. (2017). *10 facts about smartphones as the iPhone turns 10*. Retrieved from <http://www.pewresearch.org/fact-tank/2017/06/28/10-facts-about-smartphones/#>
- Rutledge, C. M., Gillmor, K. L., & Gillen, M. M. (2013). Does this profile picture make me look fat? Facebook and body image in college students. *Psychology of Popular Media Culture*, 2, 251–258. <http://dx.doi.org/10.1037/ppm0000011>
- Sharp, C., Goodyer, I. M., & Croudace, T. J. (2006). The Short Mood and Feelings Questionnaire (SMFQ): A unidimensional item response theory and categorical data factor analysis of self-report ratings from a community sample of 7-through 11-year-old children. *Journal of Abnormal Child Psychology*, 34, 365–377. <http://dx.doi.org/10.1007/s10802-006-9027-x>
- Shensa, A., Escobar-Viera, C. G., Sidani, J. E., Bowman, N. D., Marshal, M. P., & Primack, B. A. (2017). Problematic social media use and depressive symptoms among U.S. young adults: A nationally-representative study. *Social Science and Medicine*, 182, 150–157. <http://dx.doi.org/10.1016/j.socscimed.2017.03.061>
- Slater, A., & Tiggemann, M. (2015). Media exposure, extracurricular activities, and appearance-related comments as predictors of female adolescents' self-objectification. *Psychology of Women Quarterly*, 39, 375–389. <http://dx.doi.org/10.1177/0361684314554606>
- Stice, E., Hayward, C., Cameron, R. P., Killen, J. D., & Taylor, C. B. (2000). Body-image and eating disturbances predict onset of depression among female adolescents: A longitudinal study. *Journal of Abnormal Psychology*, 109, 438–444. <http://dx.doi.org/10.1037/0021-843X.109.3.438>
- Tabachnick, B. G., & Fidell, L. S. (2006). *Using multivariate statistics* (5th ed.). Boston, MA: Allyn & Bacon.
- Tiggemann, M. (2011). Mental health risks of self-objectification: A review of the empirical evidence for disordered eating, depressed mood, and sexual dysfunction. In R. M. Calogero, S. Tantleff-Dunn, & J. K. Thompson (Eds.), *Self-objectification in women: Causes, consequences, and counteractions* (pp. 139–159). Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/12304-007>
- Turner, N., Joinson, C., Peters, T. J., Wiles, N., & Lewis, G. (2014). Validity of the Short Mood and Feelings Questionnaire in late adolescence. *Psychological Assessment*, 26, 752–762. <http://dx.doi.org/10.1037/a0036572>
- Vandenbosch, L., & Eggermont, S. (2012). Understanding sexual objectification: A comprehensive approach toward media exposure and girls' internalization of beauty ideals, self-objectification, and body surveillance. *Journal of Communication*, 62, 869–887. <http://dx.doi.org/10.1111/j.1460-2466.2012.01667.x>
- Vogel, E. A., Rose, J. P., Roberts, L. R., & Eckles, K. (2014). Social comparison, social media, and self-esteem. *Psychology of Popular Media Culture*, 3, 206–222. <http://dx.doi.org/10.1037/ppm0000047>

Received March 10, 2018

Revision received April 20, 2018

Accepted April 24, 2018 ■