

The Perfect Storm: A Developmental–Sociocultural Framework for the Role of Social Media in
Adolescent Girls' Body Image Concerns and Mental Health

Sophia Choukas-Bradley¹, Savannah R. Roberts¹, Anne J. Maheux¹, & Jacqueline Nesi^{2,3}

¹University of Delaware, Department of Psychological and Brain Sciences

105 The Green, Newark DE 19716, United States

²Warren Alpert Medical School of Brown University, Department of Psychiatry and Human Behavior;

222 Richmond St., Providence, RI 02903, United States

³Rhode Island Hospital

1 Hoppin St., Suite 204, Providence, RI, 02903, United States

Note from the authors on March 18, 2021: This is a pre-print version of this paper, which has not been peer-reviewed. You are welcome to cite this pre-print in your work.

Correspondence regarding this paper should be addressed to Sophia Choukas-Bradley, University of Delaware, Department of Psychological and Brain Sciences, 105 The Green, Newark DE 19716. Email: scb@udel.edu. Phone (Department of Psychological and Brain Sciences Main Office): 302-831-2271. Fax number: N/A.

Acknowledgements: We thank Brianna A. Ladd for her assistance with manuscript preparation.

This material is based upon work supported by the National Science Foundation Graduate Research Fellowship under Grant No. 1940700 awarded to Anne J. Maheux. Jacqueline Nesi is supported by a grant from the National Institute of Mental Health (K23-MH122669). Any opinion, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of NSF or NIMH, and these organizations had no role in the study design, collection, analysis or interpretation of the data, writing the manuscript, or the decision to submit the paper for publication.

Declarations of interest: none.

Abstract

In this theoretical review paper, we provide a developmental–sociocultural framework for the role of social media (SM) in contributing to adolescent girls' body image concerns, and in turn, depressive symptoms and disordered eating. We propose that the features of SM (e.g., idealized images of peers, quantifiable feedback) intersect with adolescent developmental factors (e.g., salience of peer relationships) and sociocultural gender socialization processes (e.g., societal over-emphasis on girls' and women's physical appearance) to create the “perfect storm” for exacerbating girls' body image concerns. We argue that, ultimately, body image concerns may be a key mechanism underlying associations between adolescent girls' SM use and mental health. In the context of proposing this framework, we provide empirical evidence for how SM may increase adolescent girls' body image concerns through heightening their focus on: (1) other people's physical appearance (e.g., through exposure to idealized images of peers, celebrities, and SM influencers; quantifiable indicators of approval); and (2) their own appearance (e.g., through appearance-related SM consciousness; exposure to one's own image; encouraging over-valuing of appearance; and peer approval of photos/videos). Our framework highlights new avenues for future research on adolescent girls' SM use and mental health, which recognize the central role of body image.

Key words: Social media; body image; adolescence; gender; depression; disordered eating

Table of Contents

1. Introduction.....4

2. Adolescent Girls’ Body Image Concerns, Depressive Symptoms, & Disordered Eating7

3. Theoretical Perspectives on Body Image Concerns Among Adolescent Girls8

 3.a. Theories Regarding Gender-Related Sociocultural Appearance Pressures8

 3.b. Theories Regarding Features of Adolescence as a Developmental Period.....10

 3.c. Theories Regarding the Features of Social Media.....11

 3.d. Summary.....12

4. Theoretical Argument and Empirical Evidence for Body Image Concerns as a Key Mechanism Linking Social Media Use with Mental Health.....12

 4a. Social Media and the Physical Appearance of Others12

 4.a.i. Exposure to Idealized Images of Peers13

 4.a.ii. Exposure to Images of Celebrities and Influencers16

 4.a.iii. Quantifiable Indicators of Approval18

 4.b. Social Media and One’s Own Physical Appearance18

 4.b.i. Appearance-Related Social Media Consciousness.....19

 4.b.ii. Exposure to One’s Own Image.....21

 4.b.iii. Over-valuing One’s Own Appearance and Sexual Appeal22

 4.b.iv. Peer Approval of One’s Own Images23

 4.c. Summary25

5. Limitations and Future Directions.....26

 5.a. The Body Positive Movement.....26

 5.b. Individual Differences in Adolescents’ Social Media Use27

 5.c. Developmental Stage28

 5.d. Gender Identity.....28

 5.e. Race, Ethnicity, and Intersectionality29

 5.f. Need for a Broader Range of Methodologies31

6. Clinical and Research Implications31

7. Conclusions.....32

References.....33

Table 1. Theoretical Overview of How Social Media Features May Exacerbate Adolescent Girls’ Body Image Concerns, Adapted from the Transformation Framework.....51

Table 2. Theorized Processes Through Which Social Media May Increase Adolescents’ Body Image Concerns.....52

Figure 1. Developmental–Sociocultural Model of Adolescent Girls’ Social Media Use, Body Image Concerns, and Mental Health53

The Perfect Storm: A Developmental–Sociocultural Framework for the Role of Social Media in
Adolescent Girls' Body Image Concerns and Mental Health

1. Introduction

Smart phones and social media are central to adolescents' lives. In 2018, 95% of U.S. teens reported having access to a smartphone, with smartphone ownership nearly universal across gender, race, ethnicity, and socioeconomic background (Anderson & Jiang, 2018). According to Common Sense Media, 70% of teenagers report engaging with social media (SM) multiple times per day (Rideout & Robb, 2018). In the context of rising rates of mental health symptoms among adolescents in recent years, particularly among girls, high-profile and controversial public debates have emerged regarding the role of SM use in contributing to adolescent mental health. Despite conflicting findings in this area, a consensus is emerging that adolescent girls and boys have different experiences with SM. Notably, highly visual SM—such as Instagram, Snapchat, Tumblr, Tik Tok, and Facebook—are especially common among adolescent girls (Anderson & Jiang, 2018). An emerging body of work has documented associations between adolescents' use of SM and heightened body image concerns (e.g., de Vries et al., 2016; Fardouly et al., 2020; Marengo et al., 2018; Rodgers et al., 2020), and has found higher levels of SM-related appearance and body image concerns among girls compared to boys (e.g., Choukas-Bradley et al., 2020; Fardouly et al., 2020; Nesi et al., in press; Rodgers et al., 2020; Zimmer-Gembeck et al., 2021). Yet this work is often strikingly absent from prevailing atheoretical and oversimplified “screen time” debates (see Granic et al., 2020). Thus, the field has lacked a unifying theoretical framework for understanding the exacerbation of body image concerns as a potential mechanism underlying associations between adolescent girls' SM use and mental health. The development of such a framework is vital to the future of research on adolescent SM use.

In this theoretical review paper, we provide an organizing framework for research on the role of SM in promoting girls' body image concerns, and in turn, their depressive symptoms and disordered eating. We integrate theoretical perspectives and empirical findings from developmental, clinical, and social psychology, as well as gender studies and media and communication studies. We propose that the features of SM (e.g., idealized images of peers, quantifiable feedback) intersect with broader developmental and social processes in adolescence (e.g., salience of peer feedback and social status, imaginary audience) and sociocultural gender socialization processes (e.g., emphasis on girls' and women's physical appearance) to create the "perfect storm" for exacerbating girls' body image concerns, and subsequently, their mental health. We focus on depressive symptoms and disordered eating as mental health outcomes for two reasons. First, decades of research prior to the advent of SM documented that depressive symptoms and disordered eating increase at the transition from childhood to adolescence and are higher among adolescent girls than boys (e.g., Maughan et al., 2013; Neumark-Sztainer et al., 2011). Second, these outcomes have received extensive research attention in the context of adolescent girls' and young women's SM use (e.g., Choukas-Bradley et al., 2020; Saunders & Eaton, 2018; Twenge & Farley, 2020; Wilksch et al., 2020), although rarely while examining the mechanistic role of body image concerns. Notably, there may be important ways in which SM use *positively* influences adolescent girls' body image and mental health (see, for example, Granic et al., 2020; Rideout & Robb, 2018). Our goal in this paper is not to argue that the effects of SM on mental health are exclusively negative. Rather, our focus is on highlighting body image concerns, in the context of larger developmental and sociocultural processes, as a mechanism that could help explain girls' SM-related mental health challenges when they do emerge. We highlight body image concerns as a construct of key relevance to adolescent girls that has often been neglected in prevailing SM "screen time" debates.

Figure 1 shows our full developmental–sociocultural theoretical model: a framework for understanding how and why SM may exacerbate adolescent girls' body image concerns and, in turn,

mental health problems. In this paper, we outline each component of this theoretical model. First, we provide an overview of depression and disordered eating among adolescent girls. Next, we discuss relevant theoretical perspectives on adolescent girls' body image concerns, including theories regarding gender-specific sociocultural appearance pressures, features of adolescence as a developmental period, and features of SM. Next, we provide theoretical perspectives and empirical evidence for how these factors may intersect and compound one another to increase body image concerns in adolescent girls. We divide this section into two related components: First, we discuss how body image concerns may arise in relation to adolescent girls' exposure to *other people's* appearance on SM; second, we discuss these processes in relation to girls' exposure to *their own* appearance on SM. Throughout the paper, we highlight how these processes contribute to body image concerns and, in turn, depression and disordered eating.

The primary aim of our paper is to propose an integrated theoretical framework for the role of SM in adolescent girls' body image concerns and mental health. Thus, a systematic literature review is beyond the scope of this theoretical paper; however, we highlight relevant empirical studies and reviews where applicable. Additional boundaries of this review are as follows: First, we focus on cisgender girls, although we address the need for more research on SM use and body image concerns of adolescents of other genders. Second, our focus is on adolescents, rather than adult women, and we focus primarily on the developmental periods of early and middle adolescence (roughly ages 11–17). However, given that far more studies have included late adolescent and emerging adult women (roughly ages 18–25), we at times incorporate empirical findings from this literature. Third, we emphasize highly visual SM (e.g., Instagram, Snapchat, TikTok) rather than other types of SM (e.g., primarily text-based sites; multiplayer video gaming). Highly visual SM are the types of SM that adolescent girls use most frequently (Rideout & Robb, 2018) and which have been most consistently linked to body image concerns (Saiphoo & Vahedi, 2019).

2. Adolescent Girls' Body Image Concerns, Depressive Symptoms, and Disordered Eating

Although body image concerns begin in childhood for girls, they spike at the transition to adolescence (Rodgers et al., 2014). Adolescence is a critical period for body image development, and current research posits that, in the absence of intervention, body dissatisfaction beginning during adolescence is likely to be maintained throughout adolescence and into adulthood (Bucchianeri et al., 2013; Wang et al., 2019). U.S. estimates suggest that approximately 81% of adolescent girls and 55-67% of adolescent boys experience at least some dissatisfaction with their bodies (Lawler & Nixon, 2011; Neumark-Sztainer et al., 2006). The increase in body dissatisfaction in adolescence is likely caused by numerous developmental transitions, including biological, social, and psychological changes. Physical maturation, such as pubertal development, drastically alters the body and these changes bring girls farther away from sociocultural body ideals (Markey, 2010). Social forces, such as appearance pressures from parents and peers, as well as normative adolescent identity exploration that involves contending with changes to one's physical appearance self-concept, also play major roles in the increase in body dissatisfaction during this period (Markey, 2010).

Depressive symptoms increase markedly during adolescence, especially among girls (Maughan et al., 2013). Rates of depression in adolescents aged 12 to 17 nearly doubled between 2007 and 2017, and in 2017, one in five teenage girls reported a major depressive episode in the past year (Geiger & Davis, 2019). Disordered eating is also prevalent among adolescent girls, with higher rates of unhealthy weight control practices reported by adolescent girls than younger children or adolescent boys (Holm-Denoma et al., 2014). Estimates of disordered eating behaviors vary widely depending on the specific behavior measured, but population-based studies of adolescents estimate that approximately half of girls engage in disordered eating behaviors, compared to approximately a quarter to a third of boys, and that these gender differences remain across adolescence (Neumark-Sztainer et al., 2011). Concerningly, longitudinal research has demonstrated that individuals who display unhealthy weight control behaviors

early in adolescence are at increased risk for continuing these behaviors 10 years later (Neumark-Sztainer et al., 2011).

Body image concerns are a key risk factor for depressive symptoms and disordered eating. The perceived discrepancy between the ideal body and one's own body—which results from peer, parental, and media influences—has been associated with early and mid-adolescents' increased depressive symptoms (Solomon-Krakus et al., 2017) and disordered eating behaviors (Halliwell & Harvey, 2006; Shroff & Thompson, 2006), with findings particularly robust for adolescent girls. Body dissatisfaction has also been cited as the most powerful predictor for the onset of eating disorders, with adolescent girls in the upper quartile of body dissatisfaction showing four times greater incidence of eating disorder onset compared to girls with lower body dissatisfaction (Stice et al., 2011). Longitudinal studies with adolescents have also provided robust empirical support for the link between body dissatisfaction and subsequent disordered eating and depressive symptoms (see Lewis-Smith et al., 2020; Stice et al., 2000, 2011), particularly among adolescent girls.

3. Theoretical Perspectives on Body Image Concerns Among Adolescent Girls

In this section, we provide a brief theoretical overview of three sets of factors that may intersect to increase girls' body image concerns: (1) gender-specific sociocultural appearance pressures; (2) features of adolescence as a developmental period; and (3) features of SM.

3.a. Theories Regarding Gender-Related Sociocultural Appearance Pressures

Several theories, proposed before the advent of SM, address how gender-related sociocultural pressures may socialize girls to over-emphasize their physical appearance. First, the tripartite influence model proposes that three societal influences—peers, parents, and the media—influence girls' and women's body image through two primary mechanisms: (1) encouraging internalization of the thin ideal, and (2) fostering appearance comparisons (Thompson et al., 1999). Internalization of the thin ideal refers to the extent to which an individual internalizes culturally defined standards of beauty (Thompson

et al., 1999); for women and girls in Western societies, this standard is unattainably thin yet curvy (Deighton-Smith & Bell, 2018). Since its proposal in 1999, the tripartite influence model has received widespread empirical support and is used as a guiding framework for eating disorder prevention with adolescents (Pennesi & Wade, 2016).

Second, objectification theory provides a framework for understanding the effects of sexual objectification of women in society (Fredrickson & Roberts, 1997). Objectification theory proposes that in a culture that objectifies female bodies, girls and women learn to adopt an observer's perspective of their bodies, a process known as *self-objectification*. This process can lead girls and women to prioritize their appearance over other attributes, leading to habitual body monitoring, body shame, and anxiety. This theory argues that self-objectification is a shared psychological experience of girls and women, and that these processes contribute to mental health concerns that disproportionately affect women, such as depression and disordered eating (Fredrickson & Roberts, 1997). Contemporaneously, McKinley and Hyde (1996) proposed the related construct of *objectified body consciousness*, which describes women's tendencies to view their bodies as others see them (termed *body surveillance*), to internalize cultural beauty standards, and to experience *body shame* when appearance ideals are not achieved. In the decades since these theories were first proposed, dozens of studies with adolescent girls have provided empirical support for their theoretical tenets (see Daniels et al., 2020). For example, multiple longitudinal studies find support for self-objectification as a prospective predictor of adolescent girls' depressive symptoms and disordered eating (e.g., Impett et al., 2011; Slater & Tiggemann, 2012).

Third, Festinger's (1954) social comparison theory proposes that individuals engage in social comparison in order to estimate their own social status relative to others. Empirical work highlights the role of social comparison in body dissatisfaction. For example, in a study of U.S. middle and high school students, engaging in social comparison with same-sex peers, regardless of whether the comparison targets were perceived to be more or less attractive, was associated with body dissatisfaction

in boys and girls, with especially robust findings for girls (Jones, 2001). Appearance comparisons with peers have also been linked with adolescent girls' increased depressive symptoms (Fardouly et al., 2020) and disordered eating behaviors (Carey et al., 2013).

3.b. Theories Regarding Features of Adolescence as a Developmental Period

The processes discussed above may be relevant to girls and women of various ages, but perhaps especially during adolescence—a developmental period characterized by complex biopsychosocial changes that promote identity exploration, the initiation of romantic and sexual relationships, sensation- and reward-seeking, and increased self-consciousness (see Dahl et al., 2018). As noted previously, during pubertal development, a number of biological changes lead to alterations in body weight and shape, which bring girls farther from sociocultural body ideals (Markey, 2010). Additionally, during adolescence, individuals experience *imaginary audience* ideation, a cognitive experience involving heightened self-consciousness in which adolescents believe they are the focus of others' attention (Elkind, 1967). Furthermore, the adolescent developmental period is marked by an increased influence of peers, higher frequency of peer interactions, and increased salience of peer feedback for an individual's self-evaluation and identity development (Brechwald & Prinstein, 2011; Brown & Larson, 2009). Positive feedback from peers (Sherman et al., 2016), or even the mere presence of peers (Chein et al., 2011), activates neural responses associated with reward. Sensitivity to social reward is especially high during adolescence (Kilford et al., 2016). In the context of these complex biological, cognitive, and interpersonal changes, an *appearance culture* develops during adolescence, in which peers frequently discuss physical attractiveness and how to improve it, which exacerbates body dissatisfaction and encourages social comparison (Jones et al., 2004). During adolescence, physical attractiveness becomes important for social status, especially among girls (Mayeux & Kleiser, 2020). Given that adolescent girls are socialized to prioritize physical appearance, and are highly attuned to peer influence, social comparisons may be particularly impactful during this developmental stage. These features of

adolescence make it a developmental period of especially high risk for body dissatisfaction and associated mental health concerns.

3.c. Theories Regarding the Features of Social Media

In the decades since these theories above were introduced, SM has become a primary source through which young women receive and transmit information about beauty standards and engage in self-objectification and social comparison. Theoretical perspectives on SM have increasingly moved away from considerations of specific sites or platforms, and instead have emphasized an “affordances” approach—i.e., considering specific facets of SM that impact individuals’ experiences (boyd, 2010; Granic et al., 2020; Moreno & Uhls, 2019). The idea that the features of online environments shape individuals’ experiences and behaviors has a long tradition in computer-mediated communication (CMC) theories, which rely on the assumption that individual communication patterns are “mediated” by the technological context in which they occur (see Walther, 2011). Building on these principles, psychology and media effects scholars have argued that SM sites are made up of unique features that impact, or even transform, adolescents’ social experiences (boyd, 2010; Nesi et al., 2018a) and developmental tasks (Subrahmanyam & Šmahel, 2011; Valkenburg & Peter, 2011).

For example, Nesi, Choukas-Bradley, and Prinstein (2018a, 2018b) proposed the *transformation framework*, a theoretical framework for how the specific features of SM may intersect with developmental characteristics of adolescence to transform interpersonal relationships. These features are also relevant for understanding how SM may exacerbate adolescent girls’ body image concerns. Synthesizing and building on affordances identified in prior CMC, media effects, and psychology literatures, the features include: *visualness*, *quantifiability*, *availability*, *publicness*, *permanence*, *asynchronicity*, and *cue absence* (Nesi et al., 2018a, 2018b). Table 1 provides a definition of each feature, along with examples of how each feature is relevant for adolescent girls’ body image. For example, the *visualness* of SM encourages a focus on one’s own and one’s peers’ physical appearance,

while its *quantifiability* encourages peer feedback (often based on adolescents' appearance in photos/videos). Additionally, SM's *availability*, *publicness*, and *permanence* create an unprecedented social context, in which individuals can view images of themselves and peers at any time and place, as well as the feedback each photo has received; these images and feedback can be viewed, disseminated, and accessed indefinitely by a broad audience of peers (Nesi et al., 2018a, 2018b).

3.d. Summary

Integrating the tenets of these multidisciplinary theoretical frameworks is critical to understanding the ways in which SM use may contribute to body image and mental health concerns among adolescent girls. Theories related to gender-specific sociocultural appearance pressures, adolescent development, and SM are particularly relevant. These factors likely interact with one another to collectively exacerbate body-related processes—including self-objectification, internalization of the thin ideal, body-related social comparisons, body shame, and body dissatisfaction—and, in turn, mental health concerns. In the next section, we outline the ways in which this may occur.

4. Theoretical Argument and Empirical Evidence for Body Image Concerns as a Key Mechanism

Linking Social Media Use with Mental Health

In this section, we provide theoretical perspectives and empirical evidence for how SM may increase adolescents' body image concerns, and in turn, mental health concerns. We first describe how the features of SM may exacerbate girls' body image concerns in relation to exposure to the physical appearance of *other people* (peers and other social reference groups). Second, we describe how this may occur in relation to the physical appearance of one's own *self*. Table 2 provides an overview of definitions and examples of the theorized processes discussed in detail below.

4.a. Social Media and the Physical Appearance of Others

With its combination of peer and media cultures, and its 24/7 presentation of curated and edited images, SM likely increases adolescent girls' focus on other people's physical appearance. SM likely

also magnifies social comparisons and exacerbates adolescent “peer appearance culture,” originally articulated prior to the advent of modern SM (Jones et al., 2004). Moreover, SM has become a primary source through which girls receive information about beauty standards, with unprecedented access to advertisements and posts from peers, celebrities, and SM influencers (Perloff, 2014). In research on mass media exposure, investigators have found that even brief exposure to beauty-focused magazines leads to increases in women’s body dissatisfaction (Harper & Tiggemann, 2008). In the era of SM, girls are exposed to higher frequencies of beauty-focused content, which is likely more insidious than that of traditional media—as advertisers can personally target users based on prior behavior, and can even deliver content that appears to be generated by peers (Knoll, 2016). SM may also increase adolescents’ exposure to content posted by beauty icons (e.g., celebrities, SM influencers), as discussed below.

A growing body of work suggests that an increased focus on other people’s photos or videos may worsen body image. For example, in a longitudinal study of adolescents in Norway, higher levels of other-focused SM use (e.g., liking and commenting on others’ posts) were found to predict worse appearance self-esteem across ages 10 to 14 for girls but not boys (Steinsbekk et al., 2021). Furthermore, several studies have highlighted that focusing on other people’s photos, more so than overall time on SM, is associated with adolescent girls’ and young women’s body dissatisfaction, and in turn, depression and disordered eating (e.g., Cohen et al., 2018; Meier & Gray, 2014). In this section, we discuss several themes and emerging empirical evidence regarding how social comparison processes on SM may increase adolescent girls’ focus on others’ appearance and affect body image: (1) exposure to idealized images of peers, (2) exposure to images of celebrities and influencers, and (3) quantifiable indicators of approval on others’ images.

4.a.i. Exposure to Idealized Images of Peers

Peer photos posted on SM are often carefully curated and edited via filters, blemish-correctors, and reshaping/resizing tools (Chua & Chang, 2016). By engaging in social comparison with these

idealized images of peers, adolescent girls may increase the perceived discrepancy between their ideal and actual appearance, resulting in body dissatisfaction. According to social comparison theory (Festinger, 1954), individuals are more likely to compare themselves to similar others. Comparisons to peers – the most similar targets – could enhance the potential detrimental effects of SM on adolescent girls' body image by providing highly-edited images that still depict an unattainable standard of beauty. Social comparison theory also states that individuals are motivated to compare themselves to others in self-relevant domains (Festinger, 1954). Given the sociocultural importance placed on girls' and women's appearance, which encourages girls and women to conceptualize physical appearance as a highly relevant domain for one's overall sense of self (Fredrickson & Roberts, 1997), adolescent girls may be particularly motivated to evaluate their SM appearance relative to their peers'.

Overall, adolescent girls' appearance-related social comparisons on SM are likely to be *upward social comparisons*—comparisons with images believed to be more attractive than oneself. Upward social comparisons may be associated with worse body image and negative affect, as suggested by results from recent studies with adolescents and adults in several nations. An emerging body of work has focused on adolescents' appearance comparisons on SM. For example, appearance comparisons were found to mediate the association between selfie behaviors and body esteem among adolescent girls in Singapore, regardless of whether the social comparisons were downward, lateral, or upward (Chang et al., 2019). Among adolescent girls in Ireland, social comparison with one's friend group on SM mediated the association between SM use and body dissatisfaction, particularly when girls perceived themselves to be less attractive than their friend group (Scully et al., 2020). Additionally, among adolescents in Australia, social comparison mediated the association between higher social media engagement and lower body dissatisfaction and wellbeing (Jarman et al., 2021). These findings echo those from a larger body of work with adults. For example, in a nationally representative U.S. sample of adults aged 18-40, women were more likely than men to feel worse after making upward social

comparisons through SM, and these effects were mediated by body image and body comparison tendencies (Fox & Vendemia, 2016). Another study of emerging adult undergraduate women in Australia using ecological momentary assessment (EMA) found that upward appearance comparisons occurred more frequently on SM than in traditional media, and were associated with decreased appearance satisfaction and worsened mood, due in part to the idealized presentation of peers (Fardouly et al., 2017).

While most studies examining social comparison on SM have used self-report methods, several experimental studies have demonstrated the power of even brief exposure to SM images. For example, in an experimental study with British emerging adult women aged 17-25, women were assigned to spend ten minutes browsing their own Facebook account, a fashion magazine website, or an appearance-neutral control website (Fardouly et al., 2015). Young women assigned to the Facebook condition reported significantly worse mood following this exposure, and for women high in social comparison tendencies, exposure to the Facebook condition predicted greater dissatisfaction with their own face, hair, and skin (Fardouly et al., 2015). Another recent experimental study with adolescent girls aged 14-18 in the Netherlands demonstrates the effects of exposure to and comparison with idealized peer images that have been “photoshopped” – specifically, through editing involving retouching and reshaping (Kleemans et al., 2018). Those who were exposed to edited Instagram photos reported lower body image, particularly if they showed higher social comparison tendencies, compared to those exposed to unedited photos. Importantly, girls in the edited photos condition described these photos as realistic, preferred them to those in the unedited condition, and had trouble detecting that the bodies in these photos were reshaped (Kleemans et al., 2018). These findings demonstrate that adolescent girls may engage in upward social comparisons without recognizing that their comparison targets are unrealistic (or simply unreal) portrayals of peers.

Finally, recent reviews shed further light on the mental health implications of social comparison related to SM use. A recent meta-analytic review of 63 independent samples of adolescents and adults found that the relationship between SM and body image disturbance is particularly strong for appearance-focused SM use, likely due to social comparisons (Saiphoo & Vahedi, 2019). Additionally, a systematic review of 20 studies, focused on the impact of SM on body image and disordered eating among adolescent and adult samples, concluded that social comparison mediates the association between SM use and worsened body image and eating concerns (Holland & Tiggemann, 2016).

4.a.ii. Exposure to Images of Celebrities and Influencers

A second relevant aspect of adolescents' SM use concerns the blurring of boundaries between peers and celebrities. Adolescents have always been attuned to the physical appearance of peers in their in-person social networks and to mass media celebrities such as models, musicians, and actresses (Jones, 2001; Jones et al., 2004). SM blends these two reference groups, by allowing individuals to scroll through "feeds" that showcase content from both peers and celebrities, all in one place. For example, a typical adolescent girl scrolling through her Instagram feed is likely to see a combination of posts from peers she knows "in real life" and celebrities whom she "follows" or who appear in her feed through paid advertisements (Johnson et al., 2019).

In the context of SM, traditional mass media celebrities (e.g., actors, models) may begin to feel like more realistic sources of social comparison, as they appear on adolescents' personal devices alongside photos/videos of their peers, often in ways that are more "natural" than posed entertainment content. Traditional celebrities—who may have seemed like distant, out-of-reach figures before the advent of SM—are often active on SM and post selfies of themselves in their daily lives. This may make them seem like closer, more familiar, and more relevant sources of influence to the adolescents who follow them (Bond, 2016). This may be especially relevant for adolescents who are motivated by fame and/or interested in celebrity culture.

Moreover, SM sites introduce an entirely novel type of reference group, one which is well-known among adolescents but rarely studied in the research literature: “influencers.” SM influencers are individuals who gather large followings based on their influential SM presence (De Veirman et al., 2019). Some are first “discovered” through non-SM channels, such as through participation in reality TV series. Others are “everyday” adolescents or young adults who become famous based solely on SM content (van Eldik et al., 2019). Among girls and young women, one of the most common routes to becoming a SM influencer is through physical attractiveness. For example, many teenage influencers become “Instagram famous,” “Youtube famous,” or “TikTok famous” through demonstrating how to apply makeup or simply because they are considered to be “hot” (Knorr, 2017; Leskin, 2019). In a qualitative marketing study conducted in England, young women aged 18-30 described influencers and other “non-traditional celebrities” as having more powerful influence than traditional celebrities because they seem more “credible and relevant” (Djafarova & Rushworth, 2017). While celebrities have always engendered appearance-focused social comparisons for adolescent girls, SM influencers may present a particularly potent source of upward social comparisons: influencers post highly idealized images of themselves, but their appearance may feel more attainable to adolescents. Emerging evidence suggests that exposure to influencer content focused on beauty or fitness is associated with increased negative mood, anxiety, and body dissatisfaction among young adults (Kohler et al., 2020; Lowe-Calverley & Grieve, 2021).

Furthermore, an online culture has developed around “thinspiration” and “fitspiration” content, often posted by SM influencers, with imagery meant to inspire viewers to be thin and physically fit, respectively (Boepple & Thompson, 2016). Girls may follow these accounts believing they will encourage healthy lifestyle habits. Rather, among young women, these accounts tend to result in unhelpful appearance comparisons that leave viewers feeling dissatisfied with their weight and shape, and with no ultimate impact on physical activity (Robinson et al., 2017). Recent experimental work with

emerging adult women examined whether captions change the impact of SM fitspiration images on affect and body esteem; fitness-focused captions increased women's negative affect, while body-positive captions increased body esteem and did not result in negative affect (Davies et al., 2020). In more extreme and rare cases, SM may be "pro-ana" or "pro-mia," developed specifically for the purpose of encouraging eating disorders such as anorexia nervosa or bulimia nervosa (Bardone-Cone & Cass, 2007).

4.a.iii. Quantifiable Indicators of Approval

Another key feature of SM that invites social comparison is its provision of quantifiable indicators of approval, such as the number of comments or "likes" on a post (Nesi et al., 2018a). Emerging evidence with adult women suggests that the number of "likes" on others' idealized photos does not directly lead to body image concerns (Lowe-Calverley & Grieve, 2021; Tiggemann et al., 2018), yet many adolescents interpret "likes" as indicators of the attractiveness of the photo (e.g., Mascheroni et al., 2015). A recent experimental study also found that exposure to positive appearance-focused comments on Instagram photos led to young adults' more positive appraisal of the attractiveness of the person in the photo (Kim, 2020). If adolescents witness peers, influencers, and celebrities receiving appearance-focused comments or high numbers of "likes" for photos that highlight their physical beauty, they may increasingly learn to associate physical attractiveness with receiving approval, validation, and status. Appearance-focused comments, "likes," and other quantifiable metrics of popularity may reinforce cultural and gendered norms and beauty ideals. Understanding the effects of other people's likes, captions, and comments on adolescent girls' body image is an important direction for future research.

4.b. Social Media and One's Own Physical Appearance

SM not only exposes adolescents to other people's images; it also increases the focus on one's own appearance, by providing a platform for adolescents to curate their online appearance for others and

critically revisit their own public images. According to self-presentation and impression management theories, individuals are motivated to use impression management strategies in order to present themselves in a positive light (Leary, 1996; Schlenker & Pontari, 2000). Young people are often especially motivated to engage in impression management strategies related to physical appearance (Leary, 1996). Adolescent girls have long been socialized to focus on their physical appearance through the broad cultural emphasis on girls' and women's bodies transmitted via mass media messages and peer conversations (see Daniels et al., 2020). Thus, for adolescent girls, SM offers an ideal opportunity to engage in self-presentation: necessitating that adolescents be "camera-ready" at all times, and providing opportunities to curate and edit one's photos and post them for an ever-present audience that can provide quantifiable feedback on one's appearance (Choukas-Bradley et al., 2019, 2020).

Much of this section focuses on how SM may exacerbate self-objectification, a set of processes in which girls and young women learn to internalize an observer's perspective on one's body, to over-value physical appearance, and to chronically monitor their bodies (Fredrickson & Roberts, 1997). Below, we discuss theoretical and empirical evidence for several themes regarding how SM may increase adolescent girls' focus on their own appearance and worsen body image: (1) appearance-related SM consciousness, (2) the effects of chronic exposure to one's own image, (3) how SM may encourage over-valuing of appearance and sex appeal, and (4) processes related to peer approval of one's own images.

4.b.i. Appearance-Related Social Media Consciousness

A key tenet of objectification theory is that, in a culture that objectifies female bodies, adolescent girls and adult women learn to internalize an observer's perspective on their physical selves (Fredrickson & Roberts, 1997). Furthermore, adolescence is the developmental period when individuals are most likely to experience the phenomenon of the "imaginary audience"—an egocentric preoccupation with how the self is perceived by others (Elkind, 1967). These sociocultural and

developmental phenomena are likely magnified by SM. In a sample of adolescent girls in China, imaginary audience ideation was found to moderate the association between selfie-posting and self-objectification, such that adolescents who posted high numbers of selfies and had high imaginary audience ideation were found to engage in more self-objectification (Zheng et al., 2019). In fact, in the era of SM, the “imaginary audience” may be no longer imaginary, as adolescents know that at any moment, their photo could be taken and posted for an audience of peers (Choukas-Bradley et al., 2020). As a result, even when offline, adolescents may monitor their bodies to prepare for the possibility of photos/videos being taken or posted (Choukas-Bradley et al., 2019, 2020). SM offers the ideal platform for adolescents to fastidiously monitor and evaluate their own attractiveness, engaging in self-presentation strategies with the purpose of increasing the likelihood that peers will provide positive appearance-based feedback in the form of “likes” and comments. This focus on receiving feedback from peers likely increases the risk for self-objectification by encouraging adolescents to anticipate and imagine their profiles’ reception. Although numerous studies have linked adolescents’ and young adults’ SM use to self-objectification (e.g., Manago et al., 2015; Salomon & Brown, 2020; Skowronski et al., 2020; Vandebosch & Eggermont, 2016), adolescents experience SM-specific appearance cognitions that may have unique effects on body image and mental health beyond those detailed in objectification theory.

Empirical work has begun to directly examine the extent to which individuals think about the “social media audience.” For example, recent work has examined adolescents’ *appearance-related SM consciousness*, defined as a set of thoughts and behaviors reflecting individuals’ ongoing awareness of whether they might look attractive to a SM audience (Choukas-Bradley et al., 2019, 2020). Appearance-related SM consciousness experiences include thinking about how attractive one’s SM photos look to others, imagining how one’s body would look in a SM picture even when alone, and zooming into one’s SM photos to examine specific body parts (Choukas-Bradley et al., 2020). Empirical work has begun to

examine appearance-related SM consciousness experiences in emerging adults (Choukas-Bradley et al., 2019) and in adolescents (Choukas-Bradley et al., 2020). For example, in two samples of high-school-aged U.S. adolescents, girls reported higher levels of appearance-related SM consciousness than boys (Choukas-Bradley et al., 2020). Importantly, controlling for time on SM, appearance-related SM consciousness was cross-sectionally associated with higher body surveillance, body shame, and body comparison, suggesting that the subjective experience of preoccupation with one's appearance on SM may indeed supersede the impact of "screen time" (Choukas-Bradley et al., 2020). Moreover, appearance-related SM consciousness was associated with depressive symptoms and disordered eating when controlling for body surveillance and time on SM, highlighting the unique role of SM-specific appearance cognitions in adolescents' mental health (Choukas-Bradley et al., 2020). Recent longitudinal work suggests that higher appearance-related SM consciousness predicts higher depressive symptoms among adolescents one year later (Maheux et al., 2020).

4.b.ii. Exposure to One's Own Image

Whether or not adolescents become preoccupied with their appearance on SM, the frequent taking, editing, and posting of images of the self (or "selfies") may directly impact girls' body image. Experimental work with young adult women has found that taking a selfie leads to greater anxiety, less confidence, lower feelings of physical attractiveness (Mills et al., 2018), greater self-objectification (Salomon & Brown, 2020), and greater negative mood and facial dissatisfaction (Tiggemann et al., 2020). Notably, these findings held whether or not the selfie was edited (Mills et al., 2018; Tiggemann et al., 2020) and whether or not the participant posted the selfie to Facebook (Salomon & Brown, 2020). Other evidence has found no associations between selfies, body image, and mental health outcomes, or even positive outcomes related to heightened self- and body-esteem (see McLean et al., 2019 for review). Thus, although evidence is mixed regarding the effects of the simple act of posting a selfie, several behaviors and cognitions associated with selfie-posting may influence body image outcomes.

For some adolescents, the act of editing one's photo may encourage individuals to focus on the ways in which they do not fit cultural appearance ideals. We previously emphasized that adolescent girls are exposed to peers' "best selves" on SM: carefully selected, curated, and edited images that may encourage upward social comparisons. But what about when the upward comparison is with idealized images of *oneself*? It is possible that exposure to one's own edited images not only increases self-objectification and body dissatisfaction, but also leads to a desire to change one's physical appearance "in real life." Indeed, eye-tracking research with young women suggests that SM users focus on the parts of their bodies and faces that they dislike when exposed to their own image (Couture Bue, 2020). SM apps such as Snapchat and Instagram encourage adolescents to identify and alter the parts of their appearance they dislike through easy, instant photo-editing software, resulting in an unrealistic and unattainable standard of beauty. Adolescents may incorrectly believe their edited images present a reference for an attainable standard of beauty, as many filters and editing techniques provide subtle and nuanced techniques for changing one's appearance. A longitudinal study of Dutch adolescents found that more frequent SM use predicted increases in appearance investment among adolescents, which, in turn, was associated with an increased desire for cosmetic surgery (de Vries et al., 2014). Another longitudinal study of Chinese adolescents found that selfie editing, mediated by facial dissatisfaction, predicted cosmetic surgery consideration six months later (Wang et al., 2021). Given the complexities of selfie-posting behaviors and beliefs, more research is needed to disentangle potential negative effects of exposure to one's own idealized images.

4.b.iii. Over-valuing One's Own Appearance and Sexual Appeal

Objectification theory posits that girls and women learn to value their appearance and sexual appeal over other abilities and attributes, due in part to the bombardment of sexually-objectifying media (Fredrickson & Roberts, 1997). Relative to adolescent boys, girls are more likely to believe their self-worth is contingent upon their appearance (e.g., Burwell & Shirk, 2009; Li & Mustillo, 2020).

Longitudinal evidence suggests that adolescents' exposure to sexualized Instagram images precedes valuing of their appearance over competence, which in turn is associated with heightened self-objectification (Skowronski et al., 2020). Beginning in childhood, girls engage in self-sexualization, or attempts to appear more sexually appealing, which is associated with greater self-objectification (Starr & Zurbriggen, 2019). SM provides adolescents with new routes to engage in sexy self-presentation, primarily by posting photos or videos in which one's dress and/or pose is sexually suggestive (Daniels & Zurbriggen, 2016b; Kapidzic & Herring, 2015). Among both adolescent boys and girls, sexy self-presentation on SM is associated with appearance conversations on SM, wanting attention on SM, and actually receiving more attention in the form of likes and followers/friends (Trekels et al., 2018). However, adolescent girls are more likely than boys to engage in sexy online self-presentation (e.g., Trekel et al., 2018), and a gendered sexual double standard means girls are more likely to experience relational costs associated with posting such images (Daniels & Zurbriggen, 2016a, 2016b). For example, qualitative work highlights how adolescent girls contend with the contradiction that they must appear sexy and sexually confident online to gain peer approval, yet must also avoid appearing too sexually available to risk being called "desperate," "slutty," or a "whore" (e.g., Daniels & Zurbriggen, 2016b; Mascheroni et al., 2015).

4.b.iv. Peer Approval of One's Own Images

As discussed above, peer rewards and indicators of social status are extremely reinforcing during adolescence. On SM, indicators such as "likes" and numbers of friends/followers provide peer feedback that is not only quantifiable, but is also available immediately, "24/7," and to a wide audience of peers (Nesi et al., 2018a). Importantly, adolescents may interpret this feedback as their peers' evaluation of their physical appearance. A recent narrative review of studies examining adolescents' selfie practices found that adolescents' body image and feelings of self-worth were associated with how many "likes" they received on a photo (McLean et al., 2019). Although it did not focus on physical appearance

specifically, an fMRI study provided evidence that receiving likes is associated with social reward: adolescents showed heightened activity in the NAcc (a hub for reward circuitry) when viewing their own photos that had received high numbers of “likes” (Sherman et al., 2016).

Adolescents who are especially concerned about their SM images' reception may be vulnerable to body dissatisfaction and disordered eating. For example, recent research found that Australian adolescents with greater photo investment (e.g., concern over how many “likes” their photo will receive) are more likely to meet criteria for eating disorders such as anorexia nervosa and bulimia nervosa (Lonergan et al., 2020), and, among girls in the U.S., experience poorer body esteem (Nesi et al., in press). Further, recent cross-cultural research has demonstrated that among adolescent girls in Austria, Belgium, Spain, and South Korea, concern over peer approval is associated with worse body esteem (Prieler et al., 2021). In one recent experimental study, U.S. adolescents who received fewer “likes” on profiles created for the study reported more negative affect and thoughts about themselves; furthermore, adolescents who experienced more negative reactions to receiving fewer “likes” then showed greater depressive symptoms over time (Lee et al., 2020). A post's number of comments may also provide a numeric indicator of popularity, though the language within the comments could be positive or negative in nature. For example, in a qualitative study conducted with adolescents in Sweden, girls reported that receiving comments attacking their weight or appearance was particularly harmful (Berne et al., 2014). Positive comments may also be associated with increased self-objectification, as shown in a study of Australian adolescent girls (Slater & Tiggemann, 2015).

Adolescents may even begin to think of themselves as a “brand,” in an attempt to mirror what they see in profiles of SM influencers. For example, in a qualitative focus group study of U.S. adolescents aged 12–18, girls reported a variety of strategies for making sure they appeared maximally attractive, including tracking numbers of “likes” in order to maximize posting during high-traffic times, asking friends for likes, and creating multiple accounts (Yau & Reich, 2019). In a recent longitudinal

study of young adult Instagram users aged 18-29, the majority of participants reported engaging in deceptive like-seeking behaviors to receive more likes on their SM profiles, including purchasing likes or promising “likes for likes” (Dumas et al., 2020). Deceptive like-seeking behaviors predicted subsequent decreases in feelings of peer belonging, suggesting that these behaviors may be counterproductive for increasing peer approval or for improving social relationships (Dumas et al., 2020). For adolescent girls, the aim to improve one’s brand often focuses on physical appearance. For example, in a qualitative study of adolescent girls in Singapore, focus group participants described “meticulous backstage planning,” including studying beauty norms and determining the types of photos that would earn the most “likes,” along with extensive photo-editing and asking peers for feedback before posting (Chua & Chang, 2016, p. 193). Thus, the availability, publicness, and quantifiability of SM may increase girls’ desire to enhance their SM persona and its metrics, especially with regard to physical appearance.

4.c. Summary of Theoretical and Empirical Evidence for Body Image Concerns as a Mechanism Linking Social Media Use with Mental Health

In summary, theory and empirical research suggest that SM may provide the “perfect storm” for exacerbating body image concerns. This, in turn, may serve as a key mechanism by which SM use influences adolescent girls’ mental health. SM likely exacerbates the emphasis on peers’ physical appearance and invites social comparisons through its presentation of idealized and edited images, with quantifiable indicators of approval, of both known peers and glamorous celebrities and influencers. Furthermore, SM may increase adolescent girls’ focus on their own appearance, by heightening their appearance-related SM and exposure to one’s own image, magnifying the perceived value of physical appearance, and increasing the focus on receiving quantifiable indicators of approval. SM’s availability 24/7 presents unprecedented access to one’s own and other people’s images—and the feedback those images receive—potentially creating an ever-present appearance culture.

5. Limitations and Future Directions

Thus far, we have outlined the components of our developmental–sociocultural framework for the role of SM in adolescents' body image and subsequent mental health concerns. This framework provides a critical first step toward better understanding these processes. However, the framework does not explicitly address all of the conceptual and empirical complexities inherent to understanding SM's influence on body image, depression, and disordered eating. For example, there are likely to be numerous benefits of SM for adolescent girls' mental health—including opportunities for social connection, creative expression, and identity exploration (Granic et al., 2020; Rideout & Robb, 2018). Research has also documented a range of online experiences not addressed in this theoretical framework that influence adolescents' mental health with potentially greater impacts among girls relative to boys, including interpersonal stressors (e.g., cybervictimization, “FoMO,” online “drama,” digital stress; Nesi, 2020; Steele et al., 2020), interference with sleep (van der Schuur et al., 2019), and displacement of other activities that promote mental health (Twenge, 2020). A discussion of these important areas is beyond the scope of this theoretical paper. Below, we briefly address key areas of consideration for future scholarship to extend and refine our body image-focused framework, specifically (1) the role of body positive SM content; (2) nuanced considerations of the roles of individual differences, developmental stage, gender identity, and race/ethnicity; and (3) the need for future methodological advancements.

5.a. The Body Positive Movement

One emerging line of research, which we have not examined here, focuses on understanding the potentially *positive* aspects of exposure to other people's photos/videos on SM. Much of this research highlights the “body positive movement,” which is intended to increase body acceptance by broadly defining beauty and depicting diverse bodies and appearances on SM (e.g., Lazuka et al., 2020). Content analyses suggest that body positive posts do indeed present and promote diverse constructions of beauty

(Lazuka et al., 2020). Some experimental studies with young women find evidence that exposure to body positive images is associated with improvements in mood, body satisfaction, and body appreciation relative to viewing thin-ideal images (Cohen et al., 2019; Williamson & Karazsia, 2018). Other experimental work finds that body positive captions may increase young women's body esteem and protect against negative affect (Davies et al., 2020). However, critics of the movement argue that body positive messages reassert the importance of physical appearance and may increase shame for individuals who struggle with body acceptance (see Cohen et al., 2020). Indeed, experimental evidence finds that exposure to body positive content is associated with increased self-objectification and salience of physical appearance (e.g., describing the self in terms of physical appearance characteristics rather than other attributes; Betz & Ramsey, 2017; Cohen et al., 2019). Given the negative consequences associated with self-objectification (Fredrickson & Roberts, 1997), it is possible that body positive SM content may have long-term negative impacts that are yet unknown. Longitudinal work is required to understand long-term outcomes associated with exposure to body positive content, particularly among adolescent girls.

5.b. Individual Differences in Adolescents' Social Media Use

Both media effects theories (i.e., differential susceptibility model; Valkenburg & Peter, 2013) and theories of developmental psychopathology (i.e., neurobiological sensitivity to context theories; Ellis et al., 2011) emphasize that youth may differ considerably in the degree to which environmental factors (e.g., SM) influence them. Furthermore, co-construction models of SM use (Subrahmanyam et al., 2006) highlight the fact that youth are not merely passive consumers of SM, but rather are actively involved in constructing their online environments. Thus, individual differences in the ways that youth use and experience SM, partially based on demographic and identity factors, likely have profound implications for their body image and subsequent mental health, and more research is needed to better understand these differences. For example, research suggests that sexual minority adolescents use SM in

different ways and experience unique challenges compared to heterosexual youth (e.g., identity development and management in online communities; McConnell et al., 2017), but research has yet to examine how SM use may impact sexual minority adolescents' body image. Below, we discuss the need to consider developmental stages, gender identities, and racial and ethnic identities in future research on SM use and body image concerns.

5.c. Developmental Stage

The majority of work on SM use, body image, and mental health has been with adolescents and emerging adults. Limited research has examined the role of SM in the body image concerns and mental health outcomes of children or middle and older adults. Some work with preadolescents as young as 10 has found associations between SM use and appearance comparisons (Fardouly et al., 2018), body dissatisfaction, and eating pathology (Fardouly et al., 2020). More work is needed with preadolescents and younger children, especially given the increasing SM presence among pre- and early adolescents (Odgers & Robb, 2020; Rideout & Robb, 2018). Further, while most older adults report less appearance concern generally, body dissatisfaction in this age group is associated with concern about aging, likely exacerbated by Western cultural ideals equating beauty with youth (Peat et al., 2008). One study found that people over 50 experience negative body image related to Facebook use, though less so than young adults (Hayes et al., 2015). More work addressing this topic across life course development is necessary.

5.d. Gender Identity

While the majority of theoretical and empirical work on SM and body image focuses on adolescent girls and highlights girls' unique vulnerabilities to body image and mental health problems associated with SM use, adolescents of other genders are also vulnerable to these outcomes. Recent work is increasingly addressing the pervasiveness of presentations of male lean and muscular appearance ideals on SM (Gültzow et al., 2020). In one study, emerging adult men's exposure to the muscular ideal on SM was associated with more internalization of the muscular ideal and higher

appearance comparison tendency, which led to greater body dissatisfaction (Fatt et al., 2019), and in another study, SM use and investment was associated with body surveillance, social appearance anxiety, and drive for muscularity attitudes (Seekis et al., 2021). Future work should explore the role of exposure to the muscular ideal on SM in adolescent boys' body image and mental health problems. Additionally, although the association between SM use and appearance concerns may be similar for adolescent boys and girls (Holland & Tiggemann, 2016), the majority of studies do find that girls report higher appearance investment and concerns generally (e.g., Choukas-Bradley et al., 2020; Fardouly et al., 2020) and higher depressive symptoms related to SM use (e.g., McCrae et al., 2017; Simoncic et al., 2014; Twenge et al., 2018), highlighting the role of other gender differences, such as in earlier gender socialization, that may predispose girls to both. Notably, to our knowledge, no work to date has examined the role of SM use in body image concerns among gender minority youth, although research has begun to more broadly explore gender minority adolescents' unique body image concerns (e.g., Romito et al., 2021). Future work must examine how gender minority adolescents experience appearance-related SM use, including how representation of other gender minority people on SM may alleviate mental health challenges, and how gendered appearance ideals may differentially affect binary and non-binary identifying adolescents.

5.e. Race, Ethnicity, and Intersectionality

An important step for the field of research on SM use and body image is to more deeply consider the role of racial and ethnic identity. We have focused on “adolescent girls” throughout this paper, yet it is important to note that the vast majority of studies we cite have included predominantly White samples and have not explored questions about intersectionality—i.e., the ways in which multiple social identities (e.g., race, class, gender) intersect to yield unique experiences related to power, privilege, and oppression, which cannot be understood through “additive” identity models (Crenshaw, 1989). While the lack of focus on racial/ethnic identity is not unique to research on SM use and body image, but rather

represents a widespread issue in psychological science (Roberts et al., 2020), researchers from the body image and disordered eating literatures have recently called for an intersectional perspective and a clearer focus on the experiences of people of color (e.g., Beccia et al., 2019; Burke et al., 2020; McEntee et al., 2020; Watson et al., 2019). Beauty ideals within a society are culturally constructed, and the dominant cultural beauty ideal for women represented in Western mainstream mass media is thin, able-bodied, and White. Research suggests that in the U.S., Black and Latinx adolescents are less preoccupied with thinness than their White peers, desiring a curvier appearance or being more tolerant of a higher weight status (Jones et al., 2007; Schooler & Daniels, 2014).

Critically important questions remain to be answered about how SM may affect the transmission and internalization of beauty ideals among adolescent girls of color. Because SM allows users to generate their own content and to seek out content from others, it is possible that adolescent girls of color are exposed to more culturally-relevant beauty ideals via SM, compared to traditional media. For example, through SM, Black adolescent girls may be exposed to a higher number of images of Black women than are available in mainstream mass media, and these images may depict a broader range of beauty ideals (e.g., related to body size and shape, hair, skin tone). If this is the case, exposure to culturally-relevant and representative content may promote more positive body image. On the other hand, it is possible that for some adolescent girls of color, SM could worsen body image by presenting beauty standards that are still unattainable despite the content being more culturally relevant. Notably, adolescents are able to cultivate their SM feeds to display the content most relevant to their interests or identity, and racial and ethnic minority individuals may use SM for racial and ethnic identity exploration (Harlow & Benbrook, 2019; Williams & Gonlin, 2017). It is unclear if photo-based activity that enhances one's identity characteristics could alternatively help or harm adolescents' mental health and body image. Future work should examine unique risk and protective factors within racial/ethnic groups that may influence associations among SM use, body image, and other mental health concerns.

5.f. Need for a Broader Range of Methodologies

The use of a broader range of methodologies will advance our understanding of the ways in which body dissatisfaction underlies associations between SM use and mental health in adolescent girls. It is important for future research to incorporate multi-method approaches, including measurement of SM use and body image at multiple levels of analysis and time points. For example, neuroimaging and psychophysiological methods could illuminate the biological underpinnings of SM-related body dissatisfaction, whereas eye-tracking, pupillometry, and facial affect recognition may serve as objective measures of behavioral and cognitive responses to SM during experimental tasks. Furthermore, the use of temporally-sensitive measures, such as EMA methods, can be used to assess short-term, dynamic associations among constructs of interest, while longitudinal studies across multiple years can assess trait-level indices of SM use, body image concerns, and mental health. Finally, qualitative methods remain a critically important component of multi-method work in this field, especially given their potential to elucidate the lived experiences of understudied groups of adolescents, such as those with intersecting minoritized identities.

6. Clinical and Research Implications

It is well-established that body image concerns play a significant role in the development, maintenance, and exacerbation of adolescents' mental health symptoms, particularly disordered eating and depressive symptoms. While an increasing number of studies have explored associations between SM use and adolescent girls' mental health, the role of body image concerns has often been neglected in the adolescent literature. In order to gain a full picture of the ways that SM impacts adolescent mental health, an interdisciplinary approach is required. Complementary perspectives from the fields of gender studies, clinical psychology, developmental psychology, social psychology, and media effects should be incorporated to advance research on this topic and support adolescent girls' healthy development.

Assessing and intervening to promote healthy body image remains an important, transdiagnostic component of healthy development among adolescent girls. As SM becomes an increasingly prominent influence on girls' body image, it is essential for mental health professionals to consider its role in patients' presenting concerns. Furthermore, school and community-based preventive interventions may provide a means of educating girls regarding the potential risk for appearance-related concerns in the context of SM use by increasing media skepticism, awareness of advertisers' motives, and rejection of unrealistic appearance ideals (McLean et al., 2016). For example, a recent school-based SM literacy intervention aims to teach adolescents to "think critically about social media messages, which involves analyzing, synthesizing, and evaluating media that they view and create through social media" (Gordon et al., 2020; p. 31). This intervention has shown promise in pilot trials in relation to body image, disordered eating, and realism skepticism (McLean et al., 2017), and is currently being tested in a randomized controlled trial (Gordon et al., 2020).

7. Conclusions

A discussion of body image concerns is often missing from debates about whether and how SM use affects adolescent mental health. Our developmental–sociocultural framework integrates theoretical perspectives from across psychological science and other disciplines, exploring how adolescent girls' developmental, sociocultural, and SM-specific factors influence body image and subsequent mental health. We identify and elaborate on both these broad theoretical factors, as well as more specific SM experiences related to physical appearance. The framework emphasizes a focus on examining body image concerns as a mechanism explaining the connection between SM use and adolescent girls' mental health concerns. In doing so, we highlight a new avenue for future research on adolescent girls' social media use and mental health, which recognizes the central role of body image.

References

- Anderson, M., & Jiang, J. (2018, May 31). Teens, social media & technology 2018. *Pew Research Center*. <https://www.pewresearch.org/internet/2018/05/31/teens-social-media-technology-2018/>
- Bardone-Cone, A. M., & Cass, K. M. (2007). What does viewing a pro-anorexia website do? An experimental examination of website exposure and moderating effects. *International Journal of Eating Disorders*, *40*(6), 537–548. <https://doi.org/10.1002/eat.20396>
- Beccia, A. L., Baek, J., Jesdale, W. M., Austin, S. B., Forrester, S., Curtin, C., & Lapane, K. L. (2019). Risk of disordered eating at the intersection of gender and racial/ethnic identity among US high school students. *Eating Behaviors*, *34*, 101299. <https://doi.org/10.1016/j.eatbeh.2019.05.002>
- Berne, S., Frisé, A., & Kling, J. (2014). Appearance-related cyberbullying: A qualitative investigation of characteristics, content, reasons, and effects. *Body Image*, *11*(4), 527–533. <https://doi.org/10.1016/j.bodyim.2014.08.006>
- Betz, D. E., & Ramsey, L. R. (2017). Should women be “All About That Bass?”: Diverse body-ideal messages and women’s body image. *Body Image*, *22*, 18–31. <https://doi.org/10.1016/j.bodyim.2017.04.004>
- Boepple, L., & Thompson, J. K. (2016). A content analytic comparison of fitspiration and thinspiration websites. *International Journal of Eating Disorders*, *49*(1), 98–101. <http://dx.doi.org/10.1002/eat.22403>
- Bond, B. J. (2016). Following your “friend”: Social media and the strength of adolescents’ parasocial relationships with media personae. *Cyberpsychology, Behavior, and Social Networking*, *19*(11), 656–660. <https://doi.org/10.1089/cyber.2016.0355>
- boyd, danah. (2010). Social network sites as networked publics: Affordances, dynamics, and implications. In Z. Papacharissi (Ed.), *A Networked Self* (pp. 47–66). Routledge.
- Brechwald, W. A., & Prinstein, M. J. (2011). Beyond homophily: A decade of advances in understanding peer influence processes. *Journal of Research on Adolescence*, *21*(1), 166–179. <https://doi.org/10.1111/j.1532-7795.2010.00721.x>

- Brown, B. B., & Larson, J. (2009). Peer relationships in adolescence. In *Handbook of Adolescent Psychology: Contextual Influences on Adolescent Development* (3rd ed., Vol. 2, pp. 74–103). John Wiley & Sons, Inc. <https://doi.org/10.1002/9780470479193.adlpsy002004>
- Bucchianeri, M. M., Arikian, A. J., Hannan, P. J., Eisenberg, M. E., & Neumark-Sztainer, D. (2013). Body dissatisfaction from adolescence to young adulthood: Findings from a 10-year longitudinal study. *Body Image, 10*(1), 1–7. <http://dx.doi.org/10.1016/j.bodyim.2012.09.001>
- Burke, N. L., Schaefer, L. M., Hazzard, V. M., & Rodgers, R. F. (2020). Where identities converge: The importance of intersectionality in eating disorders research. *International Journal of Eating Disorders, 53*(10), 1605–1609. <https://doi.org/10.1002/eat.23371>
- Burwell, R. A., & Shirk, S. R. (2009). Contingent self-worth and gender differences in adolescent depression: A commentary. *Sex Roles, 61*(11–12), 769–777. <http://dx.doi.org/10.1007/s11199-009-9694-5>
- Carey, R. N., Donaghue, N., & Broderick, P. (2013). Peer culture and body image concern among Australian adolescent girls: A hierarchical linear modelling analysis. *Sex Roles, 69*(5–6), 250–263. <https://doi.org/10.1007/s11199-013-0305-0>
- Chang, L., Li, P., Loh, R. S. M., & Chua, T. H. H. (2019). A study of Singapore adolescent girls' selfie practices, peer appearance comparisons, and body esteem on Instagram. *Body Image, 29*, 90–99. <https://doi.org/10.1016/j.bodyim.2019.03.005>
- Chein, J., Albert, D., O'Brien, L., Uckert, K., & Steinberg, L. (2011). Peers increase adolescent risk taking by enhancing activity in the brain's reward circuitry. *Developmental Science, 14*(2), F1–F10. <https://doi.org/10.1111/j.1467-7687.2010.01035.x>
- Choukas-Bradley, S. & Nesi, J. (2020). Applying developmental theory to adolescent peer influence processes in the social media context. In N. van Zalk & C. Monks (Eds.), *Online Peer Engagement in Adolescence: Positive and Negative Aspects of Online Social Interaction*. Abingdon, UK: Routledge. <https://doi.org/10.4324/9780429468360>

- Choukas-Bradley, S., Nesi, J., Widman, L., & Galla, B. M. (2020). The Appearance-Related Social Media Consciousness Scale: Development and validation with adolescents. *Body Image, 33*, 164–174. <https://doi.org/10.1016/j.bodyim.2020.02.017>
- Choukas-Bradley, S., Nesi, J., Widman, L., & Higgins, M. K. (2019). Camera-ready: Young women's appearance-related social media consciousness. *Psychology of Popular Media Culture, 8*(4), 473–481. <https://doi.org/10.1037/ppm0000196>
- Chua, T. H. H., & Chang, L. (2016). Follow me and like my beautiful selfies: Singapore teenage girls' engagement in self-presentation and peer comparison on social media. *Computers in Human Behavior, 55*(Part A), 190–197. <http://dx.doi.org/10.1016/j.chb.2015.09.011>
- Cohen, R., Fardouly, J., Newton-John, T., & Slater, A. (2019). #BoPo on Instagram: An experimental investigation of the effects of viewing body positive content on young women's mood and body image. *New Media & Society, 21*(7), 1546–1564. <https://doi.org/10.1177/1461444819826530>
- 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. <https://doi.org/10.1016/j.chb.2017.10.027>
- Cohen, R., Newton-John, T., & Slater, A. (2020). The case for body positivity on social media: Perspectives on current advances and future directions. *Journal of Health Psychology, 1359105320912450*. <https://doi.org/10.1177/1359105320912450>
- Couture Bue, A. C. (2020). The looking glass selfie: Instagram use frequency predicts visual attention to high-anxiety body regions in young women. *Computers in Human Behavior, 108*, 106329. <https://doi.org/10.1016/j.chb.2020.106329>
- Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: A Black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *University of Chicago Legal Forum, 1989*(1), Article 8.
- Dahl, R. E., Allen, N. B., Wilbrecht, L., & Suleiman, A. B. (2018). Importance of investing in adolescence from a developmental science perspective. *Nature, 554*(7693), 441–450. <https://doi.org/10.1038/nature25770>

- Daniels, E. A., & Zurbriggen, E. L. (2016a). The price of sexy: Viewers' perceptions of a sexualized versus nonsexualized Facebook profile photograph. *Psychology of Popular Media Culture*, 5(1), 2–14. <https://doi.org/10.1037/ppm0000048>
- Daniels, E. A., & Zurbriggen, E. L. (2016b). "It's not the right way to do stuff on Facebook:" An investigation of adolescent girls' and young women's attitudes toward sexualized photos on social media. *Sexuality & Culture*, 20(4), 936–964. <https://doi.org/10.1007/s12119-016-9367-9>
- Daniels, E. A., Zurbriggen, E. L., & Ward, L. M. (2020). Becoming an object: A review of self-objectification in girls. *Body Image*, 33, 278–299. <https://doi.org/10.1016/j.bodyim.2020.02.016>
- Davies, B., Turner, M., & Udell, J. (2020). Add a comment ... how fitspiration and body positive captions attached to social media images influence the mood and body esteem of young female Instagram users. *Body Image*, 34: 233-241. <https://doi.org/10.1016/j.bodyim.2020.02.009>
- De Veirman, M., Hudders, L., & Nelson, M. R. (2019). What is influencer marketing and how does it target children? A review and direction for future research. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.02685>
- de Vries, D. A., Peter, J., de Graaf, H., & Nikken, P. (2016). Adolescents' social network site use, peer appearance-related feedback, and body dissatisfaction: Testing a mediation model. *Journal of Youth and Adolescence*, 45(1), 211–224. <https://doi.org/10.1007/s10964-015-0266-4>
- de Vries, D. A., Peter, J., Nikken, P., & de Graaf, H. (2014). The effect of social network site use on appearance investment and desire for cosmetic surgery among adolescent boys and girls. *Sex Roles*, 71(9–10), 283–295. <https://doi.org/10.1007/s11199-014-0412-6>
- Deighton-Smith, N., & Bell, B. T. (2018). Objectifying fitness: A content and thematic analysis of #fitspiration images on social media. *Psychology of Popular Media Culture*, 7(4), 467–483. <https://doi.org/10.1037/ppm0000143>
- Djafarova, E., & Rushworth, C. (2017). Exploring the credibility of online celebrities' Instagram profiles in influencing the purchase decisions of young female users. *Computers in Human Behavior*, 68, 1–7. <http://dx.doi.org/10.1016/j.chb.2016.11.009>

- Dumas, T. M., Maxwell-Smith, M. A., Tremblay, P. F., Litt, D. M., & Ellis, W. (2020). Gaining likes, but at what cost? Longitudinal relations between young adults' deceptive like-seeking on Instagram, peer belonging and self-esteem. *Computers in Human Behavior, 112*, 106467. <https://doi.org/10.1016/j.chb.2020.106467>
- Elkind, D. (1967). Egocentrism in adolescence. *Child Development, 38*(4), 1025–1034. <https://doi.org/10.2307/1127100>
- Ellis, B. J., Boyce, W. T., Belsky, J., Bakermans-Kranenburg, M. J., & Van IJzendoorn, M. H. (2011). Differential susceptibility to the environment: An evolutionary–neurodevelopmental theory. *Development and Psychopathology, 23*(1), 7–28. <https://doi.org/10.1017/S0954579410000611>
- Fardouly, J., Diedrichs, P. C., Vartanian, L. R., & Halliwell, E. (2015). Social comparisons on social media: The impact of Facebook on young women's body image concerns and mood. *Body Image, 13*, 38–45). <https://doi.org/10.1016/j.bodyim.2014.12.002>
- Fardouly, J., Magson, N. R., Johnco, C. J., Oar, E. L., & Rapee, R. M. (2018). Parental control of the time preadolescents spend on social media: Links with preadolescents' social media appearance comparisons and mental health. *Journal of Youth and Adolescence, 47*(7), 1456–1468. <https://doi.org/10.1007/s10964-018-0870-1>
- Fardouly, J., Magson, N. R., Rapee, R. M., Johnco, C. J., & Oar, E. L. (2020). The use of social media by Australian preadolescents and its links with mental health. *Journal of Clinical Psychology, 76*(7), 1304–1326. <https://doi.org/10.1002/jclp.22936>
- 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>
- Fatt, S. J., Fardouly, J., & Rapee, R. M. (2019). #Malefitspo: Links between viewing fitspiration posts, muscular-ideal internalisation, appearance comparisons, body satisfaction, and exercise motivation in men. *New Media & Society, 21*(6), 1311–1325. <https://doi.org/10.1177/1461444818821064>

- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2), 117–140.
<https://doi.org/10.1177/001872675400700202>
- Fox, J., & Vendemia, M. A. (2016). Selective self-presentation and social comparison through photographs on social networking sites. *Cyberpsychology, Behavior, and Social Networking*, 19(10), 593–600. <http://dx.doi.org/10.1089/cyber.2016.0248>
- Fredrickson, B. L., & Roberts, T. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly*, 21, 173–206.
<https://doi.org/10.1111/j.1471-6402.1997.tb00108.x>
- Geiger, A. W., & Davis, L. (2019, July 12). A growing number of American teenagers – particularly girls – are facing depression. *Pew Research Center*. <https://www.pewresearch.org/fact-tank/2019/07/12/>
- Gordon, C. S., Rodgers, R. F., Slater, A. E., McLean, S. A., Jarman, H. K., & Paxton, S. J. (2020). A cluster randomized controlled trial of the SoMe social media literacy body image and wellbeing program for adolescent boys and girls: Study protocol. *Body Image*, 33, 27–37.
<https://doi.org/10.1016/j.bodyim.2020.02.003>
- Granic, I., Morita, H., & Scholten, H. (2020). Beyond screen time: Identity development in the digital age. *Psychological Inquiry*, 31(3), 195–223. <https://doi.org/10.1080/1047840X.2020.1820214>
- Gültzow, T., Guidry, J. P. D., Schneider, F., & Hoving, C. (2020). Male body image portrayals on Instagram. *Cyberpsychology, Behavior, and Social Networking*, 23(5), 281–289.
<https://doi.org/10.1089/cyber.2019.0368>
- Halliwell, E., & Harvey, M. (2006). Examination of a sociocultural model of disordered eating among male and female adolescents. *British Journal of Health Psychology*, 11(2), 235–248.
<https://doi.org/10.1348/135910705X39214>
- Harlow, S., & Benbrook, A. (2019). How #Blacklivesmatter: Exploring the role of hip-hop celebrities in constructing racial identity on Black Twitter. *Information, Communication & Society*, 22(3), 352–368. <https://doi.org/10.1080/1369118X.2017.1386705>

- Harper, B., & Tiggemann, M. (2008). The effect of thin ideal media images on women's self-objectification, mood, and body image. *Sex Roles, 58*(9–10), 649–657.
<http://dx.doi.org/10.1007/s11199-007-9379-x>
- Hayes, M., van Stolk-Cooke, K., & Muench, F. (2015). Understanding Facebook use and the psychological affects of use across generations. *Computers in Human Behavior, 49*, 507–511.
<http://dx.doi.org/10.1016/j.chb.2015.03.040>
- 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.
<https://doi.org/10.1016/j.bodyim.2016.02.008>
- Holm-Denoma, J. M., Hankin, B. L., & Young, J. F. (2014). Developmental trends of eating disorder symptoms and comorbid internalizing symptoms in children and adolescents. *Eating Behaviors, 15*(2), 275–279. <https://doi.org/10.1016/j.eatbeh.2014.03.015>
- Impett, E. A., Henson, J. M., Breines, J. G., Schooler, D., & Tolman, D. L. (2011). Embodiment feels better: Girls' body objectification and well-being across adolescence. *Psychology of Women Quarterly, 35*(1), 46–58. <https://doi.org/10.1177/0361684310391641>
- Jarman, H. K., Marques, M. D., McLean, S. A., Slater, A., & Paxton, S. J. (2021). Social media, body satisfaction and well-being among adolescents: A mediation model of appearance-ideal internalization and comparison. *Body Image, 36*: 139-148
<https://doi.org/10.1016/j.bodyim.2020.11.005>
- Johnson, B. K., Potocki, B., & Veldhuis, J. (2019). Is that my friend or an advert? The effectiveness of Instagram native advertisements posing as social posts. *Journal of Computer-Mediated Communication, 24*(3), 108–125. <https://doi.org/10.1093/jcmc/zmz003>
- Jones, D. C. (2001). Social comparison and body image: Attractiveness comparisons to models and peers among adolescent girls and boys. *Sex Roles, 45*(9), 645–664.
<https://doi.org/10.1023/A:1014815725852>
- Jones, D. C., Vigfusdottir, T. H., & Lee, Y. (2004). Body image and the appearance culture among adolescent girls and boys: An examination of friend conversations, peer criticism, appearance

- magazines, and the internalization of appearance ideals. *Journal of Adolescent Research*, *19*(3), 323–339. <https://doi.org/10.1177/0743558403258847>
- Jones, L. R., Fries, E., & Danish, S. J. (2007). Gender and ethnic differences in body image and opposite sex figure preferences of rural adolescents. *Body Image*, *4*(1), 103–108. <https://doi.org/10.1016/j.bodyim.2006.11.005>
- Kapidzic, S., & Herring, S. C. (2015). Race, gender, and self-presentation in teen profile photographs. *New Media & Society*, *17*(6), 958–976. <http://dx.doi.org/10.1177/1461444813520301>
- Kilford, E. J., Garrett, E., & Blakemore, S.-J. (2016). The development of social cognition in adolescence: An integrated perspective. *Neuroscience & Biobehavioral Reviews*, *70*, 106–120. <https://doi.org/10.1016/j.neubiorev.2016.08.016>
- Kim, H. M. (2020). What do others' reactions to body posting on Instagram tell us? The effects of social media comments on viewers' body image perception. *New Media & Society*, 146144482095636. <https://doi.org/10.1177/1461444820956368>
- Kleemans, M., Daalmans, S., Carbaat, I., & Anschütz, D. (2018). Picture perfect: The direct effect of manipulated Instagram photos on body image in adolescent girls. *Media Psychology*, *21*(1), 93–110. <http://dx.doi.org/10.1080/15213269.2016.1257392>
- Knoll, J. (2016). Advertising in social media: A review of empirical evidence. *International Journal of Advertising*, *35*(2), 266–300. <https://doi.org/10.1080/02650487.2015.1021898>
- Knorr, C. (2017, January 23). Most popular beauty vloggers on YouTube. *Common Sense Media*. <https://www.commonsensemedia.org/blog/most-popular-beauty-vloggers-on-youtube>
- Kohler, M. T., Turner, I. N., & Webster, G. D. (2020). Social comparison and state–trait dynamics: Viewing image-conscious Instagram accounts affects college students' mood and anxiety. *Psychology of Popular Media*. <https://doi.org/10.1037/ppm0000310>
- Lawler, M., & Nixon, E. (2011). Body dissatisfaction among adolescent boys and girls: The effects of body mass, peer appearance culture and internalization of appearance ideals. *Journal of Youth and Adolescence*, *40*(1), 59–71. <https://doi.org/10.1007/s10964-009-9500-2>

- Lazuka, R. F., Wick, M. R., Keel, P. K., & Harriger, J. A. (2020). Are we there yet? Progress in depicting diverse images of beauty in Instagram's body positivity movement. *Body Image, 34*, 85–93. <https://doi.org/10.1016/j.bodyim.2020.05.001>
- Leary, M. R. (1996). *Self-presentation: Impression management and interpersonal behavior* (1st ed.). Routledge. <https://doi.org/10.4324/9780429497384>
- Lee, H. Y., Jamieson, J. P., Reis, H. T., Beevers, C. G., Josephs, R. A., Mullarkey, M. C., O'Brien, J. M., & Yeager, D. S. (2020). Getting fewer “Likes” than others on social media elicits emotional distress among victimized adolescents. *Child Development, 91*(6), 2141–2159. <https://doi.org/10.1111/cdev.13422>
- Leskin, P. (2019, October 8). From David Dobrik to The Rock, these are teens' favorite people to follow on YouTube, Instagram, and Twitter. *Insider*. <https://www.businessinsider.com/teens-favorite-influencers-celebrities-david-dobrik-kylie-jenner-2019-10>
- Lewis-Smith, H., Bray, I., Salmon, D., & Slater, A. (2020). Prospective pathways to depressive symptoms and disordered eating in adolescence: A 7-year longitudinal cohort study. *Journal of Youth and Adolescence, 49*(10), 2060–2074. <http://dx.doi.org/10.1007/s10964-020-01291-1>
- Li, M., & Mustillo, S. (2020). Linking mother and offspring depressive symptoms: The mediating role of child appearance contingent self-worth. *Journal of Affective Disorders, 273*, 113–121. <https://doi.org/10.1016/j.jad.2020.03.117>
- Lonergan, A. R., Bussey, K., Fardouly, J., Griffiths, S., Murray, S. B., Hay, P., Mond, J., Trompeter, N., & Mitchison, D. (2020). Protect me from my selfie: Examining the association between photo-based social media behaviors and self-reported eating disorders in adolescence. *International Journal of Eating Disorders, 53*(5), 755–766. <https://doi.org/10.1002/eat.23256>
- Lowe-Calverley, E., & Grieve, R. (2021). Do the metrics matter? An experimental investigation of Instagram influencer effects on mood and body dissatisfaction. *Body Image, 36*, 1–4. <https://doi.org/10.1016/j.bodyim.2020.10.003>

- Maheux, A. J., Roberts, S. R., Nesi, J., Widman, L., & Choukas-Bradley, S. (2020). *Longitudinal associations between adolescent social media use and depressive symptoms: The role of appearance-related social media consciousness*. Manuscript submitted for publication.
- 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*(1-2), 1-14. doi:10.1007/s11199-014-0441-1
- Marengo, D., Longobardi, C., Fabris, M. A., & Settanni, M. (2018). Highly-visual social media and internalizing symptoms in adolescence: The mediating role of body image concerns. *Computers in Human Behavior, 82*, 63–69. <https://doi.org/10.1016/j.chb.2018.01.003>
- Markey, C. N. (2010). Invited commentary: Why body image is important to adolescent development. *Journal of Youth and Adolescence, 39*, 1387–1391. <https://doi.org/10.1007/s10964-010-9510-0>
- Mascheroni, G., Vincent, J., & Jimenez, E. (2015). “Girls are addicted to likes so they post semi-naked selfies”: Peer mediation, normativity and the construction of identity online. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 9*(1). <https://doi.org/10.5817/CP2015-1-5>
- Maughan, B., Collishaw, S., & Stringaris, A. (2013). Depression in childhood and adolescence. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 22*(1), 35-40. <https://doi.org/10.1080/1047840X.2020.1820214>
- Mayeux, L., & Kleiser, M. (2020). A gender prototypicality theory of adolescent peer popularity. *Adolescent Research Review, 5*(3), 295–306. <https://doi.org/10.1007/s40894-019-00123-z>
- McConnell, E. A., Clifford, A., Korpak, A. K., Phillips, G., & Birkett, M. (2017). Identity, victimization, and support: Facebook experiences and mental health among LGBTQ youth. *Computers in Human Behavior, 76*, 237-244. <http://dx.doi.org/10.1016/j.chb.2017.07.026>
- McCrae, N., Gettings, S., & Pursell, E. (2017). Social media and depressive symptoms in childhood and adolescence: A systematic review. *Adolescent Research Review, 2*(4), 315–330. <https://doi.org/10.1007/s40894-017-0053-4>
- McEntee, M. L., Serier, K. N., Smith, J. M., & Smith, J. E. (2020). The sum is greater than its parts: Intersectionality and measurement validity of the Eating Disorder Examination Questionnaire

(EDE-Q) in Latinx undergraduates in the United States. *Sex Roles*, 84, 102–111.

<https://doi.org/10.1007/s11199-020-01149-7>

McKinley, N. M., & Hyde, J. S. (1996). The Objectified Body Consciousness Scale: Development and validation. *Psychology of Women Quarterly*, 20(2), 181–215. doi:10.1111/j.1471-6402.1996.tb00467.x

McLean, S. A., Jarman, H. K., & Rodgers, R. F. (2019). How do “selfies” impact adolescents’ well-being and body confidence? A narrative review. *Psychology Research and Behavior Management*, 12, 513–521. <https://doi.org/10.2147/PRBM.S177834>

McLean, S. A., Paxton, S. J., & Wertheim, E. H. (2016). Does media literacy mitigate risk for reduced body satisfaction following exposure to thin-ideal media? *Journal of Youth and Adolescence*, 45(8), 1678–1695. <https://doi.org/10.1007/s10964-016-0440-3>

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(7), 847–851. <https://doi.org/10.1002/eat.22708>

Meier, E. P., & Gray, J. (2014). Facebook photo activity associated with body image disturbance in adolescent girls. *Cyberpsychology, Behavior, and Social Networking*, 17(4), 199–206. <https://doi.org/10.1089/cyber.2013.0305>

Mills, J. S., Musto, S., Williams, L., & Tiggemann, M. (2018). “Selfie” harm: Effects on mood and body image in young women. *Body Image*, 27, 86–92. <https://doi.org/10.1016/j.bodyim.2018.08.007>

Moreno, M. A., & Uhls, Y. T. (2019). Applying an affordances approach and a developmental lens to approach adolescent social media use. *Digital Health*, 5, 2055207619826678. <https://doi.org/10.1177/2055207619826678>

Nesi, J. (2020). The impact of social media on youth mental health: Challenges and opportunities. *North Carolina Medical Journal*, 81(2), 116–121. <https://doi.org/10.18043/ncm.81.2.116>

Nesi, J., Choukas-Bradley, S., Maheux, A. J., Roberts, S. R., Sanzari, C., Widman, L., & Prinstein, M. J. (in press). Selfie appearance investment and peer feedback concern: Multi-method investigation of adolescent selfie practices and psychosocial adjustment. *Psychology of Popular Media*.

- Nesi, J., Choukas-Bradley, S., & Prinstein, M. J. (2018a). Transformation of adolescent peer relations in the social media context: Part 1—A theoretical framework and application to dyadic peer relationships. *Clinical Child and Family Psychology Review*, *21*(3), 267–294.
<https://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: Part 2—Application to peer group processes and future directions for research. *Clinical Child and Family Psychology Review*, *21*(3), 295–319.
<https://doi.org/10.1007/s10567-018-0262-9>
- Neumark-Sztainer, D., Paxton, S. J., Hannan, P. J., Haines, J., & Story, M. (2006). Does body satisfaction matter? Five-year longitudinal associations between body satisfaction and health behaviors in adolescent females and males. *Journal of Adolescent Health*, *39*(2), 244–251.
<https://doi.org/10.1016/j.jadohealth.2005.12.001>
- Neumark-Sztainer, D., Wall, M., Larson, N. I., Eisenberg, M. E., & Loth, K. (2011). Dieting and disordered eating behaviors from adolescence to young adulthood: Findings from a 10-year longitudinal study. *Journal of the American Dietetic Association*, *111*(7), 1004–1011.
<https://doi.org/10.1016/j.jada.2011.04.012>
- Odgers, C., & Robb, M. (2020). Tweens, teens, tech, and mental health: Coming of age in an increasingly digital, uncertain, and unequal world, 2020. *Common Sense Media*.
<https://www.commonsensemedia.org/sites/default/files/uploads/pdfs/>
- Peat, C. M., Peyerl, N. L., & Muehlenkamp, J. J. (2008). Body image and eating disorders in older adults: A review. *The Journal of General Psychology*, *135*(4), 343–358.
<https://doi.org/10.3200/GENP.135.4.343-358>
- Pennesi, J.-L., & Wade, T. D. (2016). A systematic review of the existing models of disordered eating: Do they inform the development of effective interventions? *Clinical Psychology Review*, *43*, 175–192. <https://doi.org/10.1016/j.cpr.2015.12.004>

- Perloff, R. M. (2014). Social media effects on young women's body image concerns: Theoretical perspectives and an agenda for research. *Sex Roles, 71*(11–12), 363–377.
<http://dx.doi.org/10.1007/s11199-014-0384-6>
- Prieler, M., Choi, J., & Lee, H. E. (2021). The relationships among self-worth contingency on others' approval, appearance comparisons on Facebook, and adolescent girls' body esteem: A cross-cultural study. *International Journal of Environmental Research and Public Health, 18*(3), 901.
<https://doi.org/10.3390/ijerph18030901>
- Rideout, V., & Robb, M. B. (2018). *Social media, social life: Teens reveal their experiences*. Common Sense Media. <https://www.commonsensemedia.org/sites/default/files/uploads/research/>
- Roberts, S. O., Bareket-Shavit, C., Dollins, F. A., Goldie, P. D., & Mortenson, E. (2020). Racial inequality in psychological research: Trends of the past and recommendations for the future. *Perspectives on Psychological Science, 15*(6), 1295–1309.
<https://doi.org/10.1177/1745691620927709>
- Robinson, L., Prichard, I., Nikolaidis, A., Drummond, C., Drummond, M., & Tiggemann, M. (2017). Idealised media images: The effect of fitspiration imagery on body satisfaction and exercise behaviour. *Body Image, 22*, 65–71. <https://doi.org/10.1016/j.bodyim.2017.06.001>
- Rodgers, R. F., Paxton, S. J., & McLean, S. A. (2014). A biopsychosocial model of body image concerns and disordered eating in early adolescent girls. *Journal of Youth and Adolescence, 43*(5), 814–823. <http://dx.doi.org/10.1007/s10964-013-0013-7>
- Rodgers, R. F., Slater, A., Gordon, C. S., McLean, S. A., Jarman, H. K., & Paxton, S. J. (2020). A biopsychosocial model of social media use and body image concerns, disordered eating, and muscle-building behaviors among adolescent girls and boys. *Journal of Youth and Adolescence, 49*(2), 399–409. <https://doi.org/10.1007/s10964-019-01190-0>
- Romito, M., Salk, R. H., Thoma, B. C., Romito, M., Levine, M. D., & Choukas-Bradley, S. (2021). Exploring transgender adolescents' body image concerns and disordered eating: Semi-structured interviews with nine gender minority youth. *Body Image, 37*, 50–62.
<https://doi.org/10.1016/j.bodyim.2021.01.008>

- Saiphoo, A. N., & Vahedi, Z. (2019). A meta-analytic review of the relationship between social media use and body image disturbance. *Computers in Human Behavior, 101*, 259–275.
<https://doi.org/10.1016/j.chb.2019.07.028>
- Salomon, I., & Brown, C. S. (2020). That selfie becomes you: Examining taking and posting selfies as forms of self-objectification. *Media Psychology, 1*–19.
<https://doi.org/10.1080/15213269.2020.1817091>
- Saunders, J. F., & Eaton, A. A. (2018). Snaps, selfies, and shares: How three popular social media platforms contribute to the sociocultural model of disordered eating among young women. *Cyberpsychology, Behavior, and Social Networking, 21*(6), 343–354.
<https://doi.org/10.1089/cyber.2017.0713>
- Schlenker, B. R., & Pontari, B. A. (2000). The strategic control of information: Impression management and self-presentation in daily life. In A. Tesser, R. B. Felson, & J. M. Sels (Eds.), *Psychological perspectives on self and identity*. (pp. 199–232). American Psychological Association.
<https://doi.org/10.1037/10357-008>
- Schooler, D., & Daniels, E. A. (2014). “I am not a skinny toothpick and proud of it”: Latina adolescents’ ethnic identity and responses to mainstream media images. *Body Image, 11*(1), 11–18.
<https://doi.org/10.1016/j.bodyim.2013.09.001>
- Scully, M., Swords, L., & Nixon, E. (2020). Social comparisons on social media: Online appearance-related activity and body dissatisfaction in adolescent girls. *Irish Journal of Psychological Medicine, 1*–12. <https://doi.org/10.1017/ipm.2020.93>
- Seekis, V., Bradley, G. L., & Duffy, A. L. (2021). Social networking sites and men’s drive for muscularity: Testing a revised objectification model. *Psychology of Men & Masculinities, 22*(1), 189–200. <https://doi.org/10.1037/men0000265>
- Sherman, L. E., Payton, A. A., Hernandez, L. M., Greenfield, P. M., & Dapretto, M. (2016). The power of the Like in adolescence: Effects of peer influence on neural and behavioral responses to social media. *Psychological Science, 27*(7), 1027–1035. <http://dx.doi.org/10.1177/0956797616645673>

- Shroff, H., & Thompson, J. K. (2006). The tripartite influence model of body image and eating disturbance: A replication with adolescent girls. *Body Image, 3*(1), 17–23.
<http://dx.doi.org/10.1016/j.bodyim.2005.10.004>
- Simoncic, T. E., Kuhlman, K. R., Vargas, I., Houchins, S., & Lopez-Duran, N. L. (2014). Facebook use and depressive symptomatology: Investigating the role of neuroticism and extraversion in youth. *Computers in Human Behavior, 40*, 1–5. <https://doi.org/10.1016/j.chb.2014.07.039>
- Skowronski, M., Busching, R., & Krahé, B. (2020). Predicting adolescents' self-objectification from sexualized video game and Instagram use: A longitudinal study. *Sex Roles*.
<https://doi.org/10.1007/s11199-020-01187-1>
- Slater, A., & Tiggemann, M. (2012). Time since menarche and sport participation as predictors of self-objectification: A longitudinal study of adolescent girls. *Sex Roles, 67*(9–10), 571–581.
- 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*(3), 375–389. <https://doi.org/10.1177/0361684314554606>
- Solomon-Krakus, S., Sabiston, C. M., Brunet, J., Castonguay, A. L., Maximova, K., & Henderson, M. (2017). Body image self-discrepancy and depressive symptoms among early adolescents. *Journal of Adolescent Health, 60*(1), 38–43. <https://doi.org/10.1016/j.jadohealth.2016.08.024>
- Starr, C. R., & Zurbriggen, E. L. (2019). Self-sexualization in preadolescent girls: Associations with self-objectification, weight concerns, and parent's academic expectations. *International Journal of Behavioral Development, 43*(6), 515–522. <http://dx.doi.org/10.1177/0165025419873036>
- Steele, R. G., Hall, J. A., & Christofferson, J. L. (2020). Conceptualizing digital stress in adolescents and young adults: Toward the development of an empirically based model. *Clinical Child and Family Psychology Review, 23*(1), 15–26. <https://doi.org/10.1007/s10567-019-00300-5>
- Steinsbekk, S., Wichstrøm, L., Stenseng, F., Nesi, J., Hygen, B. W., & Skalická, V. (2021). The impact of social media use on appearance self-esteem from childhood to adolescence – A 3-wave community study. *Computers in Human Behavior, 114*, 106528.
<https://doi.org/10.1016/j.chb.2020.106528>

- 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*(3), 438–444. <https://doi.org/10.1037/0021-843X.109.3.438>
- Stice, E., Marti, C. N., & Durant, S. (2011). Risk factors for onset of eating disorders: Evidence of multiple risk pathways from an 8-year prospective study. *Behaviour Research and Therapy, 49*(10), 622–627. <http://dx.doi.org/10.1016/j.brat.2011.06.009>
- Subrahmanyam, K., & Šmahel, D. (2011). *Digital youth: The role of media in development*. Springer. <http://dx.doi.org/10.1007/978-1-4419-6278-2>
- Subrahmanyam, K., Šmahel, D., & Greenfield, P. (2006). Connecting developmental constructions to the internet: Identity presentation and sexual exploration in online teen chat rooms. *Developmental Psychology, 42*(3), 395–406. <http://dx.doi.org/10.1037/0012-1649.42.3.395>
- Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance*. American Psychological Association. <https://doi.org/10.1037/10312-000>
- Tiggemann, M., Anderberg, I., & Brown, Z. (2020). Uploading your best self: Selfie editing and body dissatisfaction. *Body Image, 33*, 175–182. <https://doi.org/10.1016/j.bodyim.2020.03.002>
- Tiggemann, M., Hayden, S., Brown, Z., & Veldhuis, J. (2018). The effect of Instagram “likes” on women’s social comparison and body dissatisfaction. *Body Image, 26*, 90–97. <https://doi.org/10.1016/j.bodyim.2018.07.002>
- Trekels, J., Ward, L. M., & Eggermont, S. (2018). I “like” the way you look: How appearance-focused and overall Facebook use contribute to adolescents’ self-sexualization. *Computers in Human Behavior, 81*, 198–208. <https://doi.org/10.1016/j.chb.2017.12.020>
- Twenge, J. M. (2020). Increases in depression, self-harm, and suicide among U.S. adolescents after 2012 and links to technology use: Possible mechanisms. *Psychiatric Research and Clinical Practice, 2*(1), 19–25. <https://doi.org/10.1176/appi.prcp.20190015>

- Twenge, J., & Farley, E. (2020). Not all screen time is created equal: Associations with mental health vary by activity and gender. *Social Psychiatry and Psychiatric Epidemiology*, *56*, 207–217. <https://doi.org/10.1007/s00127-020-01906-9>
- Twenge, J. M., Joiner, T. E., Rogers, M. L., & Martin, G. N. (2018). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and links to increased new media screen time. *Clinical Psychological Science*, *6*(1), 3–17. <https://doi.org/10.1177/2167702617723376>
- Valkenburg, P. M., & Peter, J. (2011). Online communication among adolescents: An integrated model of its attraction, opportunities, and risks. *Journal of Adolescent Health*, *48*(2), 121–127. <http://dx.doi.org/10.1016/j.jadohealth.2010.08.020>
- Valkenburg, P. M., & Peter, J. (2013). The differential susceptibility to media effects model. *Journal of Communication*, *63*(2), 221–243. <https://doi.org/10.1111/jcom.12024>
- van der Schuur, W. A., Baumgartner, S. E., & Sumter, S. R. (2019). Social media use, social media stress, and sleep: Examining cross-sectional and longitudinal relationships in adolescents. *Health Communication*, *34*(5), 552–559. <https://doi.org/10.1080/10410236.2017.1422101>
- van Eldik, A. K., Kneer, J., Lutkenhaus, R. O., & Jansz, J. (2019). Urban influencers: An analysis of urban identity in YouTube content of local social media influencers in a super-diverse city. *Frontiers in Psychology*, *10*. <https://doi.org/10.3389/fpsyg.2019.02876>
- Vandenbosch, L., & Eggermont, S. (2016). The interrelated roles of mass media and social media in adolescents' development of an objectified self-concept: A longitudinal study. *Communication Research*, *43*(8), 1116–1140. <https://doi.org/10.1177/0093650215600488>
- Walther, J. B. (2011). Theories of computer-mediated communication and interpersonal relations. In M. L. Knapp & J. A. Daly (Eds.), *The Handbook of Interpersonal Communication* (4th ed., pp. 443–479). Sage.
- Wang, S. B., Haynos, A. F., Wall, M. M., Chen, C., Eisenberg, M. E., & Neumark-Sztainer, D. (2019). Fifteen-year prevalence, trajectories, and predictors of body dissatisfaction from adolescence to

middle adulthood. *Clinical Psychological Science*, 7(6), 1403–1415.

<http://dx.doi.org/10.1177/2167702619859331>

- Wang, Y., Chu, X., Nie, J., Gu, X., & Lei, L. (2021). Selfie-editing, facial dissatisfaction, and cosmetic surgery consideration among Chinese adolescents: A longitudinal study. *Current Psychology*.
<https://doi.org/10.1007/s12144-020-01280-4>
- Watson, L. B., Lewis, J. A., & Moody, A. T. (2019). A sociocultural examination of body image among Black women. *Body Image*, 31, 280–287. <https://doi.org/10.1016/j.bodyim.2019.03.008>
- Wilksch, S. M., O’Shea, A., Ho, P., Byrne, S., & Wade, T. D. (2020). The relationship between social media use and disordered eating in young adolescents. *International Journal of Eating Disorders*, 53(1), 96–106. <https://doi.org/10.1002/eat.23198>
- Williams, A., & Gonlin, V. (2017). I got all my sisters with me (on Black Twitter): Second screening of *How to Get Away with Murder* as a discourse on Black Womanhood. *Information, Communication & Society*, 20(7), 984–1004. <https://doi.org/10.1080/1369118X.2017.1303077>
- Williamson, G., & Karazsia, B. T. (2018). The effect of functionality-focused and appearance-focused images of models of mixed body sizes on women’s state-oriented body appreciation. *Body Image*, 24, 95–101. <https://doi.org/10.1016/j.bodyim.2017.12.008>
- Yau, J. C., & Reich, S. M. (2019). “It’s just a lot of work”: Adolescents’ self-presentation norms and practices on Facebook and Instagram. *Journal of Research on Adolescence*, 29(1), 196–209.
<https://doi.org/10.1111/jora.12376>
- Zheng, D., Ni, X., & Luo, Y. (2019). Selfie posting on social networking sites and female adolescents’ self-objectification: The moderating role of imaginary audience ideation. *Sex Roles*, 80(5–6), 325–331. <https://doi.org/10.1007/s11199-018-0937-1>
- Zimmer-Gembeck, M. J., Hawes, T., & Pariz, J. (2021). A closer look at appearance and social media: Measuring activity, self-presentation, and social comparison and their associations with emotional adjustment. *Psychology of Popular Media*, 10(1), 74–86.
<https://doi.org/10.1037/ppm0000277>

Table 1.

Theoretical Overview of How Social Media Features May Exacerbate Adolescent Girls' Body Image Concerns, Adapted from the Transformation Framework (Nesi et al., 2018a, b)

Social Media Feature	Definition	Application to Adolescent Girls' Body Image Concerns
Visualness	Extent to which photos and videos are emphasized	<ul style="list-style-type: none"> • Emphasizes physical appearance as dominant feature of the self • Allows for carefully curated and edited images • Exacerbates self-objectification and social comparison
Quantifiability	Allowance for countable social metrics	<ul style="list-style-type: none"> • Creates clear reinforcement (or lack thereof) for physical appearance, in the form of numbers of likes, comments, views, retweets, etc. • Encourages social comparison between feedback received by self and others
Availability	Ease and speed with which content can be viewed and shared, regardless of physical location or time of day ("24/7")	<ul style="list-style-type: none"> • Content shared by self and others can be viewed 24/7 • Immediate reinforcement (or lack thereof) of content posted • No break from possibility of one's images being posted or viewed; adolescents must be "camera-ready" • Allows for social comparison 24/7
Publicness	Accessibility of information to large audiences	<ul style="list-style-type: none"> • Access to broader peer network creates exposure of self and others to a larger audience • Exacerbates the imaginary audience phenomenon • As with availability, allows opportunity for social comparison with greater numbers of peers, exacerbates the need to be "camera-ready"
Permanence	Permanent accessibility of content	<ul style="list-style-type: none"> • Allows revisiting of one's own and others' content and feedback • Underscores the importance of attractive photos/videos • As with availability and publicness, increases the opportunity for social comparison and exacerbates the need to be "camera-ready"
Asynchronicity	Time lapse between aspects of communication	<ul style="list-style-type: none"> • Allows greater opportunity for careful curation and editing of content
Cue Absence	Degree to which interpersonal cues are absent	<ul style="list-style-type: none"> • Can further emphasize physical appearance, given the absence of other cues

Note: Adapted from Nesi, Choukas-Bradley, & Prinstein (2018a, 2018b) and Choukas-Bradley & Nesi (2020). Some examples may be related to multiple social media features.

Table 2.*Theorized Processes Through Which Social Media May Increase Adolescents' Body Image Concerns*

	Description	Examples that illustrate relevance to body image
<i>Physical Appearance of Others</i>		
Exposure to Idealized Images of Peers	SM encourages upward social comparisons with curated and edited images of attractive peers	<ul style="list-style-type: none"> • Comparing one's weight, shape, and attractiveness to edited images of friends and other peers on SM. Images have been edited to increase attractiveness using filters, blemish-correctors, and/or reshaping/resizing tools
Exposure to Images of Celebrities and Influencers	SM increases exposure to images of celebrities and influencers	<ul style="list-style-type: none"> • Observing how a "typical adolescent girl" becomes a famous SM influencer through posting beauty tutorials • Exposure to ads on one's SM feed showing models selling beauty products, designed to look like posts from peers • Following a celebrity's daily posts makes the celebrity feel like a more realistic point of comparison
Quantifiable Indicators of Approval	SM provides quantifiable indicators of how popular/well-liked peers' and influencers' images are	<ul style="list-style-type: none"> • Observing that peers' photos/videos receive more "likes" or comments when they wear more makeup or pose in objectifying ways • Tracking how influencers gain followers through posting images that showcase their physical attractiveness
<i>One's Own Physical Appearance</i>		
Appearance-Related Social Media Consciousness	SM encourages consciousness of one's appearance on SM	<ul style="list-style-type: none"> • Looking at one's own photos/videos on SM again and again • Imagining how one will look to an online audience, even when offline
Exposure to One's Own Image	SM increases adolescents' exposure to their own image, including edited images of oneself	<ul style="list-style-type: none"> • Chronically checking one's images for compliance with beauty norms • Comparing one's actual body to an edited photo of oneself
Over-valuing One's Own Appearance and Sexual Appeal	SM encourages over-valuing of one's appearance and sexual appeal	<ul style="list-style-type: none"> • Equating one's self-worth with one's SM images • Posing in sexually provocative ways on SM
Peer Approval of One's Own Images	SM provides quantifiable indicators of how popular/liked one's own photos/videos are, increasing the focus on the "self as a brand"	<ul style="list-style-type: none"> • Tracking which selfies receive more likes • Posting at "high traffic" times of day • Feeling shame or disappointment if one's photo/video does not receive enough likes, and deleting it from one's account

Figure 1.

Developmental–Sociocultural Model of Adolescent Girls’ Social Media Use, Body Image Concerns, and Mental Health

