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Investigating Social Media Use and its Relation to Body Dissatisfaction in an Early Adolescent Female Sample

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Investigating Social Media Use and Its Relation with Body Dissatisfaction in an Early
Adolescent Female Sample

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science
at Virginia Commonwealth University

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Abstract

INVESTIGATING SOCIAL MEDIA USE AND ITS RELATION WITH BODY
DISSATISFACTION IN AN EARLY ADOLESCENT FEMALE SAMPLE

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A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science
at Virginia Commonwealth University

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Sociocultural models of body dissatisfaction implicate mass media exposure as contributing to body dissatisfaction through thin-ideal internalization and social comparison. Compared with other media types, social media are newer, more rapidly evolving, and less thoroughly researched. Existing research, which has focused on teen and young adult samples, suggests that social media also negatively influence body dissatisfaction. The current study used focus groups to explore the nature and impact of social media use on body dissatisfaction in an early adolescent female sample. Girls in this sample displayed high levels of media literacy and confidence, characteristics they felt were nurtured by positive parental influences and a supportive school environment. The results of this study support the recommendation of body image experts that an ecological approach is optimal for the prevention of body dissatisfaction and eating disorders. Though peer influence gains strength through adolescence, these results demonstrate that parents and schools continue to have important effects on girls' attitudes and behaviors regarding social media and body image.

Overview

Extensive research has examined the influence of sociocultural factors on the development of body dissatisfaction. Elucidating the role of these variables is critical as body dissatisfaction is associated with a wide range of negative outcomes, including low self-esteem, depression, suicidal ideation, unhealthy weight control behaviors, lower levels of physical activity, and tobacco use (Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006; Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006; Stice & Bearman, 2001; Stice, Hayward, Cameron, Killen, & Taylor, 2000; Stice & Shaw, 2003). In particular, body dissatisfaction is a consistent risk and maintenance factor for eating pathology (Stice, 2002), as well as overweight and obesity (Neumark-Sztainer, et al., 2007; Stice & Shaw, 2002). These outcomes are particularly troubling in light of the serious health consequences and mortality associated with eating disorders and obesity (Arcelus, Mitchell, Wales, & Nielsen, 2011). Moreover, epidemiological research indicates that the prevalence of eating disorders is increasing among 15-19 year olds (Smink, van Hoeken, & Hoek, 2012) and obesity rates remain high in this age group as well (Ogden, Carroll, Kit & Flegal, 2014).

Mass media are influential in the development of body dissatisfaction (e.g., Grabe, Ward, & Hyde, 2008; Levine & Harrison, 2009; Silverstein, Perdue, Peterson, & Kelly, 1986). Traditional media, including television, movies, magazines, and billboards, as well as newer social media, are pervasive and widely consumed by both children and adults. These mass media are powerful transmitters of societal values and standards, and are saturated with messages regarding ideal beauty, weight, food, fashion, gender roles, and many more. In Westernized cultures, the female standard of beauty promoted by media is characterized by an extremely thin body that has become thinner over time (Silverstein, Perdue, Peterson, & Kelly, 1986; Spitzer,

Henderson, & Zivian, 1999). Recently, the ideal appears to have shifted to a thin *and* toned body that is often displayed on social networks, particularly image-based platforms such as Instagram (Tiggemann & Zaccardo, 2015). This standard is promoted via so many channels that it becomes nearly impossible to avoid (Lopez-Guimera, Levine, Carracedo, & Fauquet, 2010). Not only are these images ubiquitous, they are also usually significantly altered by digital technology to enhance this ideal further. Unfortunately, these images become normative and seen as realistic, although this standard is unattainable for the majority of women (Kilbourne, 1994). As images of fashion models and female celebrities have grown more unrealistic, the average American woman has become increasingly heavier (Fryar, Carroll, & Ogden, 2012). This widening gap is concerning because, as posited by self-discrepancy theory, dissatisfaction results when an individual becomes aware of and internalizes an ideal and then perceives a discrepancy between this perceived ideal and her actual self (Higgins, 1987; Thompson & Stice, 1999). Research consistently implicates thin-ideal internalization as a risk factor for body dissatisfaction and a critical mediator of the relation between media exposure and eating pathology (Dittmarr & Howard, 2004; Levine & Murnen, 2009). Indeed, Thompson and Stice (1999) assert that thin-ideal internalization is a causal risk factor for body dissatisfaction and eating pathology.

Although the role of magazine, television, and music video images in body dissatisfaction have been extensively studied, the influence of the Internet and, particularly social media, is less well-known, as these media types are relatively new and, given the rapid pace of technology, constantly evolving. Research into the effects of social media are young, but even the little data available suggest that social media exert similar effects as other forms of mass media and negatively impact thin-ideal internalization and body esteem (e.g., Fardouly, Diedrichs, Vartanian, & Halliwell, 2015; Tiggemann & Miller, 2010; Tiggemann & Slater, 2013). There are

many different social media platforms including, but not limited to, Facebook, Instagram, Snapchat, and Pinterest, each with their own unique activities and focus. Given that the Internet and social media are so popular among younger populations, and considering the emerging evidence of their potentially negative effects, additional research on their effects is desperately needed.

The majority of research on the effects of social media on body image has focused on adolescents and young adults, as this demographic group comprises the highest proportion of social media users (Pew Internet & American Life Project, 2015b). Furthermore, most social media platforms, such as Facebook or Instagram, have an age restriction of 13 years and older. Thus, social media is presumably geared towards adolescents and older populations, and efforts are made to prohibit children and early adolescents from accessing these sites. However, these age restrictions are relatively easy to circumvent and data clearly show that younger children are using these platforms as well (Common Sense Media, 2015). Although few studies have examined the use and impact of social media in younger samples, Tiggemann and Slater (2013) found that time spent on Facebook and Myspace was more strongly correlated with body image concerns than overall Internet usage in a sample of girls ages 10-12. Thus, social media appears to have an impact, even within populations nominally too young to access these sites.

The purpose of this study was to elucidate the role of social media in the development of body dissatisfaction in an emerging adolescent sample. As females both consistently report higher levels of body dissatisfaction than males, and constitute the majority of individuals with eating disorders, (Hudson, Hiripi, Pope, & Kessler, 2007; Paxton, Wertheim, Gibbons, Szmukler, Hillier, & Petrovich, 1991), they were the primary focus of this study and review. This study collected qualitative data from focus groups to examine the nature and extent of an early

adolescent female sample's engagement with social media, as well as their perceptions of its impact. Quantitative measures of social media use, thin-ideal internalization, social comparison, and body dissatisfaction were collected to enrich the qualitative data gathered. As the negative outcomes associated with body dissatisfaction often appear early in adolescence, prevention and intervention efforts must target younger populations (i.e., Bucchianeri & Neumark-Sztainer, 2014; Paxton, Neumark-Sztainer, Hannan, & Eisenberg 2006). Media literacy interventions have yielded promising results in reducing shape and weight concerns in preadolescent and adolescent samples (e.g., Halliwell, Easun, & Harcourt, 2011; McLean, Paxton, & Wertheim, 2013; Wilksch & Wade, 2009). Thus, this study seeks to enrich our understanding of how this particular demographic is engaging with these newer forms of media, and the effects this exposure has on body esteem. Ultimately, this information will inform targeted prevention and intervention efforts, such as media literacy, that address the unique contributions of social media.

Definitions and Prevalence

Eating disorders. Eating disorders are mental illnesses characterized by disturbed patterns of emotions, thoughts, and behaviors surrounding food. The current version of the Diagnostic and Statistical Manual of Mental Disorders, the *DSM-5*, currently recognizes three primary eating disorders: anorexia nervosa, bulimia nervosa, and binge-eating disorder (APA, 2013).

Anorexia nervosa is characterized by a self-induced restriction of intake that results in a body weight lower than minimally normal, preoccupation with gaining weight or persistent behavior that prevents weight gain, and a disturbance in one's perception of his/her own weight (APA, 2013). Anorexia nervosa can be further divided into two primary sub-types, restricting type and binge-eating/purging type. Restricting type is distinguished by a lack of binge-eating

and subsequent compensatory behavior for the last three months. Individuals with binge-eating/purging type have engaged in episodes of binge-eating followed by some form of purging behavior during the last three months (APA, 2013).

Bulimia nervosa involves a pattern of binge eating that is followed by some type of compensatory behavior such as self-induced vomiting, laxative use, or excessive exercise. The diagnostic criteria specify that these behaviors occur at least once a week for the last three months. Individuals with bulimia nervosa also experience a significant preoccupation with weight and shape (APA, 2013).

Binge-eating disorder is a newly recognized disorder in the *DSM-5*. Diagnostic criteria include repeated episodes of binge eating characterized by consuming an abnormal quantity of food in a discrete period of time, and also involve a feeling of a loss of control. These episodes are accompanied by physical discomfort and mental distress and must have occurred at least once a week for the last three months. Binge-eating disorder is differentiated from bulimia nervosa by its lack of subsequent compensatory behavior (APA, 2013).

Clinical eating disorders remain relatively rare among the general population. The prevalence of anorexia nervosa (AN) is ~0.3%; the lifetime prevalence of bulimia nervosa (BN) is ~1% (Hoek, 2003). In recent years, estimates of eating disorder prevalence have risen, particularly among adolescent females (Hoek, 2003; Smink, van Hoeken, & Hoek, 2012). This is particularly concerning as eating disorders have potentially serious medical consequences and high mortality rates (Arcelus, Mitchell, Wales, & Nielsen, 2011). It also highlights the importance of examining early risk factors, as the typical age of onset for the majority of eating disorders is < 20 years, with AN emerging earlier than BN (Hudson, Hiripi, Pope, & Kessler, 2007).

Medical complications of AN include bone loss, including osteopenia and osteoporosis, cardiac complications such as abnormal rhythms, and compromised fertility. Potential consequences of BN include electrolyte imbalances that carry serious potential cardiovascular risks, and dental problems caused by self-induced vomiting. Binge-eating disorder is typically associated with the long-term consequences of obesity. Thus, treatment costs and burdens of eating disorders are very high (Agras, 2001). Finally, eating disorders are notoriously difficult to treat, and recovery rates remain relatively low, especially for AN (Herzog, et al., 1999; Steinhausen, 2002).

Body Dissatisfaction

Body image is a complex construct with multiple definitions (see: e.g., Cash, 2001; Slade, 1994; Smolak, 2002; Thompson, Altabe, Johnson, & Stormer, 1994). Although many definitions exist, Cash (2004) defines body image as a "multifaceted psychological experience of embodiment, especially but not exclusively one's physical appearance" (p. 1). Within the field of eating disorder and obesity research, body dissatisfaction characterized by weight and shape concerns is generally most strongly associated with eating pathology (Smolak & Levine, 2001).

Body dissatisfaction can be understood as a person's negative evaluation of his or her own body (Grogan, 2007). In Westernized cultures, body dissatisfaction has long been considered "normative" for women (Rodin, Silberstein, & Striegel-Moore, 1985). Moreover, there is substantial evidence that a large proportion of both males and females experience dissatisfaction with their bodies, and this dissatisfaction is linked with societal ideals shifting to a thinner ideal shape for women, and a more muscular physique for men (Farquhar & Wasylkiw, 2007; Sypeck, Gray, & Ahrens, 2004).

Adult men and women, however, are not the only ones who experience body dissatisfaction. Girls as young as 6 years of age have reported preferences for a body thinner than their own (Lowes & Tiggemann, 2003). In a survey of preadolescent girls (ages 8-10) 55% reported dissatisfaction with their bodies and a desire to be thinner (Wood, Becker, & Thompson, 1996). Unfortunately, body dissatisfaction in girls appears to increase with age. In a longitudinal study, body dissatisfaction increased every year from ages 13 to 16 in the female sample (Bearman, Presnell, Martinez, & Stice 2006). Further, these increases were not explained by an increase in body mass index. The increasing body dissatisfaction across development for girls is particularly concerning given that it is associated with not only eating disorders and overweight, but also predicts other negative consequences in adolescence such as depressed mood and low self-esteem (Paxton, Neumark-Sztainer, Hannan & Eisenberg, 2006).

Body dissatisfaction as a risk factor. Most research on body dissatisfaction has focused on its role as a risk factor for serious conditions such as eating disorders and obesity. Indeed, body dissatisfaction is a robust predictor of eating pathology (Cash, 2002). However, body dissatisfaction is also associated with subthreshold eating disorders, unhealthy weight control behaviors, decreased food and vegetable intake, frequent dieting, and lower activity levels (Bucchianeri & Neumark-Sztainer, 2014) as well as negative psychological outcomes such as depressed mood and low self-esteem (Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006). Further, body dissatisfaction is linked to the initiation of cigarette smoking in adolescent females (Stice & Shaw, 2003). The associations between body dissatisfaction and this range of unhealthy behaviors and negative outcomes demonstrate that body dissatisfaction itself is a significant public health concern (Bucchianeri & Neumark-Sztainer, 2014).

For example, in a four-year longitudinal study conducted with a large cohort of adolescent girls, elevated body dissatisfaction at study entry predicted depression onset in initially non-depressed youth (Stice, Hayward, Cameron, Killen, & Barr, 2000). Similarly, in a sample of early adolescent females, baseline body dissatisfaction was a unique predictor of depressed mood and low self-esteem five years later (Paxton, Neumark-Sztainer, Hannan, & Eisenberg 2006). Researchers have postulated that the association between body dissatisfaction and depressive symptoms in females is likely due in part to appearance being a primary mode of evaluation for females in Western culture (Stice, Hayward, Cameron, Killen, & Barr, 2000). Adolescent females might be particularly vulnerable to the negative effects of body dissatisfaction because their bodies are undergoing changes, including widening hips and increases in adipose tissue, that, although normative during this developmental period, are counter to the slender media ideal. Accordingly, research has shown that pubertal status has a significant impact on body esteem, with post-menarchal females reporting higher body dissatisfaction (Mitchell, Petrie, Greenleaf, & Martin, 2012; O'Dea & Abraham, 1999).

Body dissatisfaction is also associated with substance use in adolescent females. For example, Stice and Shaw (2003) investigated associations among body image, affect, eating disturbances, and initiation of cigarette smoking in 11 to 15 year-old adolescent girls. Results indicated that body dissatisfaction and eating pathology at baseline were significant predictors of cigarette smoking one year later. Cross-sectional research also supports these relations (Larsen, Otten, & Engels, 2009). Moreover, in an analysis of the British Columbia Adolescent Health Survey, which included data from over 30,000 adolescents, there were significant relations between stimulant use, such as cocaine and amphetamines, and body dissatisfaction in girls (Parkes, Saewyc, Cox, & MacKay 2008). These findings suggest that adolescent females might

use certain substances, such as cigarettes or stimulants, as weight control strategies secondary to feelings of body dissatisfaction.

Body dissatisfaction as a risk factor for eating disturbances. Body dissatisfaction is a well-established risk and maintenance factor for eating pathology. Stice's *dual-pathway model* posits that body dissatisfaction leads to dietary restraint, which is itself a risk factor for eating disturbances (Stice, 2002). However, some research suggests that the link between body dissatisfaction and eating problems might be more direct.

In a meta-analytic review, Stice (2002) examined prospective and experimental studies that predicted onset or remission of eating pathology. Only studies that controlled for initial levels of eating disturbances were included, and all of these exclusively examined risk and maintenance variables that were empirically supported in prior research. Meta-analytic results indicated that thin-ideal internalization serves as a risk factor for body dissatisfaction, dieting, and bulimic pathology, and is a maintenance factor for bulimic pathology. Further, body dissatisfaction is a risk factor for dieting and eating pathology and a maintenance factor for bulimic pathology. Stice concluded by noting that body dissatisfaction, is thus "one of the most consistent and robust risk and maintenance factors for body dissatisfaction." (p. 9).

Similarly, in a five-year longitudinal study of adolescents examining shared risk and protective factors for both overweight and disordered eating, body dissatisfaction in adolescent girls (average age of 12) predicted overweight, binge eating, and extreme weight control behaviors five years later (Neumark-Sztainer, Wall, Haines, Story, Sherwood, & van den Berg 2007). Other research has yielded comparable results (e.g., Johnson & Wardle, 2005; Stice & Agras, 1998; Wertheim, Koerner, & Paxton, 2001).

The limited research conducted with girls prior to adolescence suggests that body dissatisfaction has similar negative effects. For example, in a large sample of girls ages 9-14, weight and shape concerns at baseline were predictive of initiation of purging behaviors one year later (Field, Camargo, Taylor, Berkey, & Colditz 1999). Similarly, in a three-year longitudinal study of children ages 6 to14 (Gardner, Stark, Friedman, & Jackson 2000), low body esteem predicted eating disorder scores in boys and girls and clinical body dissatisfaction became a significant predictor at age 11. In a review of cross-sectional studies examining body image concerns and eating disturbances in young children ages 6 to 11, Ricciardelli and McCabe (2001) concluded that body image and weight concerns in children, similar to adolescents, might be related to eating disturbances. They caution, however, that more research is necessary to understand the development of body image in this population. Better measurement tools are needed, as assessing body image and weight concern in children is difficult (Smolak, 2004). This is due, at least partially, to the necessity of designing measures that are developmentally appropriate (i.e., shorter and more simply worded). Moreover, there is a lack of longitudinal research. Thus, it is necessary to clarify the nature of body image concerns prior to adolescence and its link to eating pathology and overweight.

Sociocultural models of body dissatisfaction. Several models have been proposed to explain the role of sociocultural variables in the development of body dissatisfaction and eating disturbance. Although the specifics of each model vary, they all fall within a broader framework that conceptualizes sociocultural factors as transmitting messages regarding body ideals that individuals then internalize. This internalization results in dissatisfaction if the individual perceives a discrepancy between herself and the propagated ideal (Higgins, 1987; Tiggemann, 2011). In Westernized society, female body dissatisfaction is fairly normative (Rodin,

Silberstein, & Striegel-Moore, 1985; Swami, et al., 2010) likely because the promoted standards are often unattainable for most women (Stice & Shaw, 2002; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999).

   Dual-pathway model. One sociocultural model that has received considerable empirical support is the dual-pathway model (Stice & Agras, 1998; Stice, Shaw, & Nemeroff, 1998). Although this model was conceived to predict bulimia nervosa specifically, it implicates the core sociocultural variables (media, peers, and family) that have been consistently identified as contributing to body dissatisfaction. The dual-pathway model posits that thin-ideal internalization and pressure to be thin from family, peers, and the media, predict body dissatisfaction. In turn, this body dissatisfaction increases the likelihood of dieting and negative affect which, in turn, heighten risk of bulimic pathology (Stice, Shaw, & Nemeroff, 1998). Many prospective and longitudinal studies in a variety of samples provide strong empirical support for the dual-pathway model (e.g., Stice, 2001; Stice, Nemeroff, & Shaw, 1996; Stice, Nemeroff, & Shaw, 1998). Subsequent models, such as the tripartite model of influence, expanded upon the original model to clarify links between body dissatisfaction and eating disturbances (e.g., Halliwell & Harvey, 2006; van den Berg, Thompson, Ombreski-Brandon, & Coovert, 2002).

   Tripartite model of influence. The tripartite model of influence builds upon the dual-pathway model but focuses more on the sociocultural factors that lead to body dissatisfaction specifically, rather than subsequent eating pathology. The model identifies the same variables as the dual-pathway model. Specifically, media, family, and peers are considered the primary constructs that transmit societal messages and exert the most powerful influence on the development of body esteem (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). According to the tripartite model, the aforementioned influences exert their effects via two main

mechanisms--appearance comparison and internalization of the thin ideal. Research with preadolescent, adolescent, and college-aged females provide support for the model (Keery, van den Berg, & Thompson, 2004; Shroff & Thompson, 2006; van den Berg, Thompson, Ombreski-Brandon, & Coovert, 2002). Interestingly, in a cross-sectional study with adolescent females, peer and media influences were significantly associated with body dissatisfaction whereas parental influence was not associated with the mediating variables of social comparison and thin-ideal internalization (Shroff & Thompson, 2006).

Although this research demonstrates strong preliminary support for the tripartite influence model, the cross-sectional nature of these studies precludes conclusions regarding the directional and temporal relations among these variables. Longitudinal examination of the model has been scant; however, some compelling support for the model came from a recent study by Rodgers, McLean, and Paxton (2015). In their study, relations among internalization of the media-ideal, social appearance comparison, and body dissatisfaction were analyzed at baseline, 8, and 14 months in a sample of 7th grade females. They found that internalization of the media-ideal preceded and predicted social appearance comparison, which then predicted body dissatisfaction. They also found a bidirectional relationship between media-internalization and body dissatisfaction, whereby both variables influence each other. The importance of social appearance comparison that emerged from this study further emphasizes the influence of peers at this developmental stage.

Social comparison. In his *social comparison theory,* Festinger (1954) posited that humans have the desire to reflect on and measure their progress and standing in life. As a result, they seek out standards with which to compare themselves. This theory proposes two processes at play: upward social comparison by which individuals compare themselves to someone they

believe is "better" than them in some domain, and downward social comparison, where individuals compare themselves to someone they believe to be worse off than themselves. He further proposed that upward comparisons are more likely to produce negative consequences such as lowered self-esteem, whereas downward comparisons could produce positive consequences such as improved self-esteem. There is extensive literature on the role of social comparison as it relates to media images. This research demonstrates that appearance-focused social comparison leads to body dissatisfaction and is a significant risk factor for eating disturbance (e.g., Engeln–Maddox, 2005; Halliwell & Harvey, 2006; Myers & Crowther, 2009). Further, meta-analysis by Myers and Crowther (2009) found that the relation between social comparison and body dissatisfaction was significant across multiple studies. Interestingly, within that same meta-analysis, the relation between social comparison and body dissatisfaction was stronger among younger populations. The authors of this meta-analysis theorized that this result could be due to this population spending more time with their peers at a critical developmental period when they are more susceptible to the negative consequences of social comparison. Consistent with this hypothesis, Paxton, Eisenberg, and Neumark-Sztainer (2006) found that in early adolescence, negative peer influence was a predictor of body dissatisfaction. These findings highlight the importance of examining social comparison and peer influence in younger populations and evaluating their effects on body dissatisfaction. In particular, given that so much mass media content is appearance-oriented, examining social comparison as a key part of the relation between media exposure and associated mechanisms and outcomes is vital.

Mass Media

All of the sociocultural models of body dissatisfaction highlight the critical role of mass media, which includes television, advertisements, movies, radio, magazines, and even sporting

events. These media platforms communicate societal ideals, values, norms, attitudes and

behaviors. Understanding the role of mass media and their impact on individual's attitudes and

development is vital, as data indicate people are engaging with media more than ever before.

Data also suggest that Americans spend a significant portion of every day consuming various

media; however, the types of media most frequently used are shifting (Nielsen, 2015). For

example, television viewing and radio listening are decreasing, and engagement with digital

media is increasing dramatically. In 2012, American adults spent an average of 5 hours and 12

minutes per day watching live and recorded television. In 2014, that average decreased to 5

hours and 2 minutes. In 2012, American adults listened to the radio an average of 2 hours and 51

minutes daily and in 2015 that number fell to 2 hours and 44 minutes. However, time spent on

the Internet and smartphones has increased since 2012. In 2012, American adults spent an

average of 1 hour and 4 minutes on the Internet on a computer and 53 minutes a day on a

smartphone. In 2014, that number rose to 1 hour and 6 minutes on the computer and a much

more dramatic increase of 1 hour and 33 minutes on a smartphone on average per day.

Perhaps even more concerning is the increasing rates of media use, particularly screen

time, among children and adolescents. In a 2015 survey conducted by Common Sense Media

(2015), 62% of tweens (ages 8 to 12) and 58% of teens (13 to 18) reported watching television

every day. Only 10% of tweens reported using social media every day; however, 45% of teens

reported daily social media use. Overall, this survey found that tweens spend an average of 4

hours and 36 minutes each day engaging with screen media and 5 hours and 55 minutes engaging

with all media. That number jumps dramatically for the teenage demographic, however, which

spends 6 hours and 40 minutes on average with screen media each day, and 8 hours and 56

minutes with all media. Tweens report spending an average of 48 minutes per day on a

smartphone and that number increases to 2 hours and 42 minutes for teens. Thus, teens in America are spending over a third of their day interacting with media.

Although some reports suggest that magazine print circulation has been falling, readership overall is up as digital magazine access has grown dramatically (Bazilian, E., 2013). One notable trend is the steady popularity of fashion magazines, which continue to see their readership rise (Bazilian, E., 2013). In fact, Adweek (2013) reported that one of the fastest growing titles is Teen Vogue, whose readership increased 39% from 2012 to 2013. Given that mass media exert such powerful influence, and data suggest that individuals are engaging with media more than ever, it is critical to examine the promoted ideals and their subsequent effects.

The Westernized body ideal. In Westernized cultures, researchers have noted a marked shift in what is considered the ideal female shape since the 1950s. In the 1950s, a curvy, fuller frame was prized and evinced by cultural icons such as Marilyn Monroe. The emergence of models like Twiggy in the 1960s signaled the beginning of the transition to a thinner ideal. Over time, this ideal shape became drastically thinner. The images broadcast across television and movie screens, and pictured in magazines and advertisements morphed to have less curves, a lower BMI, and began to more closely mimic a prepubescent body than that of the average American female (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Moreover, newer digital technologies have emerged that are capable of manipulating these images to emphasize further features that are already unattainable for most women (Kilbourne, 1994). Recently, "fitspiration" (a combination of fitness and inspiration) has become popular on social networking sites. Fitspiration ostensibly promotes fitness and healthy lifestyle behaviors through images of fit, toned bodies overlaid with text such as "someone busier than you is working out right now" (e.g., Simpson & Mazzeo, 2016; Tiggemann & Ziccardo, 2015). A recent content analysis of

Fitspiration images on Pinterest revealed that they contained as much thin praise as fit praise, signaling that the ideal female figure is now expected to not only be extremely thin, but also fit (Simpson & Mazzeo, 2016). This is problematic as this ideal is still unattainable for most women (Tiggemann & Ziccardo, 2015). Whereas men's bodies begin to converge with the promoted media ideal as they grow from adolescence to adult, women's bodies naturally diverge as their hips widen and adipose tissue increases as they enter adolescence. Thus, the gap between reality and the ideal only grows and heightens the risk for body dissatisfaction in young females.

Research also underscores the emphasis placed by these media on the importance of appearance in general for females. A content analysis of advertisements on websites targeting teens revealed that cosmetic and beauty items were the products most frequently marketed. Weight-loss advertisements constituted 6% of the total advertisements. Of these cosmetic, beauty, and weight-loss advertisements, most displayed a thin, young, and attractive female, consistent with the beauty ideal. Thus, the importance of beauty and thinness for women is stressed even in media intended for young children. Further, a content analysis of children's media showed that 72% of children's videos placed an emphasis on attractiveness (Herbozo, Tantleff-Dunn, Gokee-Larose, & Thompson, 2004). These researchers also found that the majority of characters with thin bodies had other desirable traits; in contrast, obese characters were frequently portrayed negatively, often as villains. Research indicates that these messages influence children. Girls as young as 3 show an awareness and even investment in these beauty ideals. In a study of preschoolers ages 3 to 5, girls were more likely to attribute negative attributes to fat targets, positive attributes to thin targets, and to choose thin targets as playmates or friends (Harriger, Calogero, Witherington, & Smith 2010). Not only did girls choose the thin targets over the fat targets, but they also preferred thin targets more than average targets. This is

a shift from results seen in prior years, where there was no evidence of a preference for thin over average-sized targets within this age group (Musher-Eizenman, Holub, Miller, Goldstein, & Edwards-Leeper, 2004). This suggests that girls as young as 3 are already aware of the stigma attached to overweight and display a preference for thinness. Further, this effect appears to be strengthening over time.

Effects of television and magazines. Given the overwhelming evidence of media's influence on the development of body image, many studies have attempted to distinguish the effects of various media types on body dissatisfaction and eating disturbances across the lifespan. Television, fashion magazines, and music videos have received the most attention and demonstrated the strongest effects. The following paragraphs review some of the more important findings in this area.

A meta-analysis of experimental and cross-sectional studies found that exposure to media images depicting the thin ideal was related to body image disturbance, increased appearance investment, and disordered eating in women (Grabe, Ward, & Hyde 2008). One important finding of this analysis was that the effect of internalization was stronger in studies published in the 2000s compared with the 1990s. This finding must be interpreted cautiously, but suggests that the media's influence (and associated link to thin ideal internalization) might be strengthening as the use of multiple media platforms, and their accessibility, increases. That is, due to the number of media sources now available, such as magazines, television and the Internet, and their increased accessibility (e.g., constant media presence via smartphones), opportunities for exposure to the thin ideal are greater than ever before, and internalization might be more difficult to avoid. The authors of the meta-analysis found consistent small to moderate effect sizes among television exposure, thin-ideal internalization, and body dissatisfaction.

Another meta-analysis with a larger sample of studies and found slightly smaller, but still significant, effect sizes for television exposure and thin-ideal internalization and body dissatisfaction (Murnen, Levine, Groesz, & Smith 2007). This meta-analysis also revealed significant effect sizes for the relations among magazine exposure, thin-ideal internalization, and body dissatisfaction. A noteworthy finding was that the relation between magazine exposure and thin-ideal internalization was particularly strong. Across both referenced meta-analyses, correlations between magazine and television exposure and internalization were strong, and this was especially true for children and adolescents (Levine & Murnen, 2009).

Although cross-sectional and experimental designs allow for general inferences to be made about the relative influence of media exposure on these variables, longitudinal research is needed to demonstrate the cumulative impact that media exposure has over time. There is evidence that even young children are affected by exposure to mass media, and this exposure can influence the development of body image. For example, in an experimental study with Australian adolescents, participants viewed commercials with and without females who embodied the thin ideal (Hargreaves & Tiggemann 2002). Girls exposed to the thin-ideal commercials reported significantly greater body dissatisfaction. The authors followed a subset of this sample two years later to examine potential changes in their body dissatisfaction over time (Hargreaves & Tiggemann, 2003). Girls who both viewed the thin-ideal commercials and expressed the greatest body dissatisfaction at baseline manifested higher body dissatisfaction and drive for thinness at follow-up. These results have been replicated in younger samples. Specifically, in a study with second to fourth grade American girls, researchers assessed the relations between television and magazine exposure and body image ideals at two time points, one year apart (Harrison & Hefner, 2006). Television exposure was measured by hours spent viewing television (type of television

viewed was not measured) and magazine exposure was measured by genre (health and fitness, fashion, and sports) and number read weekly in each category. Interestingly, television exposure was a stronger predictor of body ideals than magazines. Results also showed that television exposure at baseline was more strongly related one year later to a future body ideal (i.e., what the child hopes for her future body) than her current body ideal. The authors stated that thin-ideal internalization must be examined within a developmental framework as it might be operating differently in this age group. That is, prepubescent females might have two body ideals in mind: their current, child-shaped body and their future adult-shaped body. One additional critical finding was that television exposure at time one predicted disordered eating at time two.

These results are similar to those obtained by Moriarty and Harrison (2008) with a sample of first, second, and third graders. Again, researchers measured television exposure and disordered eating at baseline and one year later. Television exposure at baseline significantly predicted disordered eating a year later, regardless of the baseline level of disordered eating. Results were significant even after controlling for interest in dieting and fitness television exposure in the sample. Thus, there is strong support for the theory that media exposure has a powerful influence on the factors leading to body dissatisfaction and ultimately eating disturbances, and these effects are evident in girls as young as second grade.

The Internet. Exposure to media channels such as television and magazines is well studied and identified as highly influential in body image development. However, the Internet is a newer medium and as such, is less thoroughly researched. Further research into the effects of the Internet is needed as its usage is on the rise. Internet usage among American adults rose from 52% in 2000 to 84% in 2015 (Pew Internet & American Life Project, 2015a) and 92% of teens report using the Internet daily (Pew Internet & American Life Project, 2015b). In a survey of

American teens (13-18) and tweens (8-12), Common Sense Media (2015) found that 53% of tweens and 37% of teens have a personal tablet, 24% and 67% have a smartphone, 19% and 45% have a laptop computer and 6% and 11% have a desktop computer.

The increasing access to and usage of digital media is not unique to pre-adolescents, adolescents, or adults. Rates are increasing sharply in children younger than 8 (Common Sense Media, 2013). In 2011, among children ages 0 to 8, 62% reported never having used a mobile device. That number shrank to 28% in 2013. In just two years, the percentage of children ages 0 to 8 who had access to a mobile device rose from 38% to 72%. Estimates for preschool-aged children vary, but it is estimated that they spend between 2.5-4.6 hours a day on average with screen media (Alliance for Childhood, 2012). Television was the most popular form of media for this demographic, followed by DVDs and computer games. Although some metrics stayed relatively stable or decreased from 2011 to 2013, the percentage of children who endorsed daily smartphone or tablet use more than doubled. Given that much of traditional media has moved to digital outlets, and individuals can now consume television, advertisements, magazines, and music videos on computers, smartphones, and tablets, understanding the impact of content delivered via these various platforms is vital.

Early research suggests that the Internet contributes to internalization of the thin ideal and body dissatisfaction. In a study of Australian high school females, researchers examined the relation between media exposure and body dissatisfaction with an emphasis on the Internet (Tiggemann and Miller, 2010). Students reported their use of the Internet, television, and magazines, and completed measures assessing appearance comparison, thin-ideal internalization, and weight dissatisfaction. To measure Internet exposure, girls completed surveys assessing frequency of use, types of sites visited, and the top three sites where they spent the most time.

Questions also assessed the specific social media applications used. As the authors had hypothesized, Internet appearance exposure was associated with weight dissatisfaction and drive for thinness. Thus, this preliminary study into the effects of appearance-focused Internet media paralleled results from similar studies assessing the effects of exposure to television and magazines (Grabe, Ward, & Hyde, 2008; Levine & Murnen, 2009).

In a related study, Bair, Kelly, Serdar, and Mazzeo (2012) examined whether the Internet functions like magazines with respect to its influence on body dissatisfaction and disordered eating. These authors administered questionnaires to a large sample of undergraduate females assessing media use, thin-ideal internalization, body dissatisfaction, and eating disturbances. To assess appearance focused media exposure and frequency, they examined the categories of entertainment, health/fitness, and fashion, and asked participants to rate their most frequently watched or viewed programs or sites. From these data, a mean weekly score of time spent with each category was calculated. Results indicated that undergraduate women spent more time with Internet media than television or magazines, highlighting the growing popularity of the Internet within this demographic. Further, television and Internet exposure and body dissatisfaction were significantly related. Although this study was cross-sectional in design and did not allow for causal inferences, its findings suggested that the Internet appears to impact women's body image in a manner similar to that of television.

There is a dearth of research on the effects of the Internet on pre- and early adolescents. This is likely due to a variety of factors, including parental controls and age-restricted websites; however, data show that Internet use does not begin at age 13. For instance, Common Sense Media (2015) found that in 2013, 72% of children under the age of 9 reported having access to a tablet or smartphone and 10% of children ages 8 to 12 reported using social media daily. Further,

screen time within this age group averaged more than four and a half hours. Thus, emerging adolescents are clearly consumers of these newer forms of media. Moreover, the few studies examining Internet effects on thin-ideal internalization and body dissatisfaction in this population suggest this exposure has an impact. For example, Tiggemann and Slater (2013) evaluated the impact of the Internet, television, and magazine exposure on the body image of girls ages 10 to 12. Almost 98% reported having Internet access in their home, and 38% had access in their own bedrooms. Ninety percent reported using the Internet daily. Consistent with prior research, magazine and television exposure were both related to thin-ideal internalization, dieting, and reduced body esteem. They also found a similar effect size for the relation between those variables and Internet exposure. Consistent with sociocultural models, relations among Internet exposure and lowered body esteem and dieting were mediated by internalization of the thin ideal. Overall, they found that the influence of Internet usage was stronger than that of more traditional forms of media. The authors hypothesized this stronger relation could be because the Internet encourages more active engagement and is not as limited by cost and availability as other forms of media. Thus, the Internet is becoming more intrinsically enmeshed in the daily lives of adolescents. As well, it may be a more potent form of media exposure, as it involves greater levels of active engagement and peer involvement, which creates more social comparison opportunities. As discussed previously, social comparison opportunities are linked to body dissatisfaction (e.g., Myers & Crowther, 2009).

Social media. Social media is not only a form of mass media but also involves peer influence and social comparison. The number of teens engaging daily with social media is skyrocketing due to the rapid pace of digital technology's growth. Nearly three quarters of teens ages 13 to 17 have access to a smartphone (Pew Internet & American Life Project, 2015b).

Across social media sites, 71% of teens report having a Facebook account, 52% have an

Instagram account and 41% have a Snapchat account. It is interesting to note that the three most

common social media applications used by teens involve heavy peer and photo sharing

interactions. Given that peers have been identified as a key variable important influences on the

development of body image (Clark & Tiggemann, 2006), and appearance media exposure's

influence is well established, more research on the effects of social media is clearly warranted.

Although only a few studies of social media and body image exist, results suggest that

this media type has an important impact. For example, Fardouly, Diedrichs, Vartanian, and

Halliwell (2015) recently examined whether the effects of Facebook differed from those of a

fashion magazine in a sample of 17 to 25-year-old females in the UK. They found that for

women who make more appearance comparisons, exposure to Facebook was related to a desire

to change face, hair, and/or skin related features. However, Facebook did not have an immediate,

direct effect on body satisfaction. This research is limited in its ecological validity as it measured

the immediate and one-week post impact of general Facebook exposure, but it does suggest that

social media sites such as Facebook could have a unique effect for women who are more likely

to make appearance comparisons. This also highlights the importance of examining social

comparison in the context of social media exposure, and for high risk groups.

The impact of social media has been most extensively studied in late adolescents and

young adults. This is likely due to the fact that these demographic groups are frequent social

media consumers (Pew Internet & American Life Project, 2015b). Also, the age restriction for

most social media websites is thirteen and older. Thus, research on the effects of social media on

early adolescents is extremely limited. However, the above-mentioned study highlights the

relevance of social media for younger children (Tiggemann & Slater, 2013). For instance,

although the age limits for sites like Facebook and Myspace are 13 and older, 43% of the 10 to 12-year-old female sample reported having a Facebook account. Further analyses also revealed that the time spent on social networks resulted in stronger correlations with body image disturbance than general Internet usage. Thus, research on the effects of Internet use generally, and social media specifically, should include younger samples.

The Role of the Single-Sex School Environment

In addition to general societal pressures, it is possible that the school environment plays a role in shaping young adolescent's appearance-related attitudes and beliefs. Social learning theory posits that an individual gains knowledge by observing others within social contexts (Bandura, 1977). Accordingly, as this age group spends a large proportion of their waking hours at school, the school environment might impact how societal messages affect students. As this study was done with a sample from an all-female school, research on the impact of single-sex school environments is of particular interest. However, there is relatively little research on how single-sex schools shape appearance-related concerns. Instead, the literature focuses mainly on academic achievement and psychosocial outcomes. Results to date are relatively inconclusive (Pahlke & Hyde, 2016).

Supporters of single-sex education posit that separating boys and girls increases girls' academic achievement due to biological differences, although this view has received significant criticism (Eliot, 2013; Pahlke & Hyde, 2016). A meta-analysis revealed negligible differences in mathematics and science performance between boys and girls in single-sex versus co-educational school environments (Pahlke, Hyde, & Allison, 2014). However, this meta-analysis also identified significant methodological problems and lack of controls in many studies comparing

school environments. These issues muddy the debate on this topic, and makes assertions about the benefits or problems with gender segregated schooling unreliable.

Some argue that a single-sex classroom can be empowering, particularly for girls, because it helps to increase their expectancy for success (e.g., Lee, Marks, & Byrd, 1994; Shapka & Keating, 2003). However, others counter that single-sex environments can inflict pressure to attain a superwoman ideal by promoting academic and career achievement but still presenting traditional gender role expectations such as marriage and motherhood (Mensinger, 2010). Several studies indicate that achievement motivation and nontraditional gender role aspirations could play a role in the development of body dissatisfaction and eating problems (e.g., Silverstein & Perlick, 1995). In a study with undergraduate women, placing a greater importance on socially desirable masculine traits was related to disordered eating (Timko, Striegel-Moore, Silberstein, & Rodin 1987). Further, women who endorsed a greater number of roles as being central to their self-worth placed increased emphasis on the importance of their physical appearance and displayed more eating disorder symptoms. The authors concluded that women who internalize the need to fulfill both masculine and feminine gender roles, (i.e., the superwoman ideal), are more likely to have disturbed eating.

To date, there is little research available on the impact of the single-sex school environment on sociocultural awareness, attitudes, or body esteem. The research that does exist has been done largely in countries outside the US with older students (i.e., Delfabbro, Winefield, Anderson, Hammarström, & Winfield, 2011). However, due to the ongoing debate surrounding single-sex education, further study is warranted. For instance, as mentioned previously, some suggest that there is greater pressure in single-sex environments for girls to achieve (Mensinger, 2010). Others hypothesize that a single-sex school environment could engender greater

appearance concerns as there are more girls to compare oneself against in a female-only school setting (Spencer, Barrett, Storti, & Cole, 2013). The aforementioned study by Spencer et al. (2013) did not find differences in social comparison or body concerns between women at single-sex and mixed-sex colleges. Similarly, a study with Australian adolescents found no differences in levels of physical appearance satisfaction between girls attending single-sex schools and coeducational schools (Delfabbro, et al., 2011).

However, some studies of Australian adolescents have found a link between the emphasis on professional success and the desire for a leaner body. For instance, researchers surveyed 142 adolescent girls (mean age = 15) attending single-sex and coeducational schools in Australia (Dyer & Tiggemann 1996). Girls from the single-sex school endorsed a thinner ideal and displayed greater weight concern and dissatisfaction than those attending the coeducational school. Additionally, although there were no differences in role concerns between school types, the importance of professional success uniquely predicted the preference for a leaner ideal for girls in the single-sex school environment. Tiggemann (2001) attempted to replicate these findings with a sample of 261 Australian adolescents. No significant differences emerged between preferred body shape or disordered eating scores between girls in single-sex versus coeducational school environments. However, girls from the single-sex school placed more importance on intelligence and professional success than those attending the coeducational school and this was associated with the preference for a thinner figure. Finally, a study examining differences between Australian university students who had attended single-sex and coeducational high schools extended this work (Davey, Jones, & Harris 2011). The groups did not differ on measures of eating disorder symptomatology, gender role concern, or social

comparison. However, consistent with prior research, women who had attended single-sex schools endorsed a thinner ideal.

Thus, there is research that implicates single-sex schools as having a potential negative impact on girls' preferred body shape and some of these studies suggest this could be linked to a drive for success. However, a recent study contradicts this prior evidence (Cribb & Haase 2016). The authors compared girls ages 13-15 attending single-sex and coeducational schools in the UK on perceived social support, sociocultural awareness and thin-ideal internalization, and self-esteem. In this sample, girls attending coeducational schools displayed greater thin-ideal internalization. A moderation analysis revealed a negative relation between internalization and self-esteem in girls attending the coeducational school, such that girls with higher internalization had lower self-esteem scores. They did not find this result in girls attending the same-sex school. Finally, perceived social support was positively related to self-esteem in girls attending the single-sex school. This research suggests that single-sex schools could impart protective factors that weaken the influence of sociocultural messages on self-esteem in adolescent girls.

As illustrated, the research on single-sex education has yielded mixed results. Methodological concerns are often highlighted as contributing to the inconsistent literature. One chronic methodological challenge is that it is impossible to conduct true experimental research in the United States because single-sex schooling remains voluntary. Therefore, it is not possible to randomly assign students to either school environment. As well, much of the existing research is cross-sectional in nature, making it impossible to identify causal mechanisms. Finally, the majority of research examined individual differences in students across school types. However, to date, we could not find research that examines the characteristics of the school environment itself, other than the gender composition, on student variables such as sociocultural

internalization or body image. It cannot be assumed that all single-sex schools share enough characteristics to generalize results. This gap in the literature is likely one cause of inconsistent study results. Further research is warranted to examine what characteristics of the school environment may serve to attenuate or strengthen the impact of media exposure on students.

The Current Study

This study attempted to elucidate the role of social media exposure in the development of body image in an emerging adolescent female sample. For the last several decades, researchers have noted the increasing trend towards a thinner, fitter, and more unattainable beauty ideal, promoted across a variety of channels. Although many variables come together to promote body dissatisfaction and eating disturbance risk, mass media are implicated as being primary sources of communication on society's ideals. Since the 1950s, the desirable female body shape has gone from curvaceous, with wider hips and fuller breasts, to an extremely thin, and now toned, shape that is unattainable for the vast majority of women (Simpson & Mazzeo, 2016; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999; Tiggemann & Ziccardo, 2015). Contradictory to this trend towards society's preference for a thinner female body, the average American woman has grown larger. The widening gap between the beauty ideal and what is attainable puts women at greater risk for body dissatisfaction. Further heightening the risk is the increasing media use by Americans, particularly children and adolescents. As media use is likely the most potent transmitter of the message of female beauty, there seems to be no escape from these societal expectations. This sets up a potentially harmful scenario as body dissatisfaction is strongly linked with a host of negative outcomes, such as low self-esteem, depressed mood, and cigarette smoking. Of particular concern is its strong relation to eating disorders and overweight, both of which carry significant health consequences, heightened risk of mortality, and are characterized

by chronic illness courses (Arcelus, Mitchell, Wales, & Nielsen, 2011; Herzog, et al., 1999; Steinhausen, 2002).

Although the impact of various media channels like television, magazines, and music videos are relatively well-known, the Internet and social media are comparatively young and constantly evolving. Early research suggests that Internet exposure, particularly appearance-focused content, is linked to body image problems in adolescent and adult female samples (e.g., Bair, Kelly, Serdar, & Mazzeo, 2012; Fardouly, Diedrichs, Vartanian, & Halliwell, 2015; Tiggemann & Miller, 2010; Tiggemann & Slater, 2013). However, it is not known whether Internet exposure exerts a unique influence on these pathways, or if it is the additive effect of media exposure that is most powerful. Social media platforms are particularly intriguing, but as of yet relatively uncharted, territories to explore. Many social media sites such as Instagram and Snapchat are almost entirely image focused. Thus, there is no shortage of opportunities for appearance focused exposure and social comparisons. Research is needed to determine if social media exert their own unique effects on body image and eating behaviors or, again, if it is the cumulative effect that is ultimately harmful. Most of the early research on social media logically focused on late adolescents and young adults as data demonstrate they are the heaviest consumers of such media (Pew Internet & American Life Project, 2015b). Accordingly, few studies have explored social media exposure in younger populations. However, statistics show that although early adolescents are ostensibly restricted from accounts on many social media sites due to age, many are finding ways to circumvent these rules (Common Sense Media, 2013).

This study used qualitative and quantitative methods to explore social media engagement, exposure, attitudes, and beliefs in an emerging adolescent female sample. The researcher used focus groups to learn how this population interacts with social media and how it perceives social

media's impact. This study adds to the literature on the role of social media exposure and body dissatisfaction in a sample of early adolescent American girls. In particular, the qualitative data enriches our understanding of this population's subjective experience as it relates to social media engagement with the hope that it will offer direction for further study and prevention programming aimed at reducing the potential harmful effects of social media use on a preteen population.

Method

Participants

Participants were recruited from the 7th and 8th grades at a local, private school for girls in Richmond, VA. This school's enrollment is 80 students across 5th-8th grades. Each grade level has 20 students. The school's administration limited the participant pool to the 7th and 8th grades due to concerns about the developmental readiness of the younger students to answer questions about social media. All 7th and 8th grade students were given the opportunity to participate. A total of 38 girls, 19 from each grade, participated in the focus groups. One 8th grade student was not in school the day of the groups and one 7th grade student opted out of participating. There were a total of six focus groups, each with five to seven participants. This small number is recommended as developmentally appropriate for this age group (Kennedy, Kools, & Krueger, 2001).

A total of 36 students completed surveys, 52.8% (n=19) in the 7th grade and 47.2% (n=17) in the 8th grade. The age of the sample ranged from 12 to 14 years with a mean age of 13.14. Participants were instructed to choose all ethnic/racial groups that applied. The sample identified as 86.1% White (n=31), 13.9% Black (n=5), 5.6% Hispanic (n=2), and 2.8% Asian (n=1). Participants were surveyed on their number of older and younger siblings as parents suggested that students with older siblings may have more exposure to social media. Within the sample, 77.8% (n=28) indicated they had siblings. Of those with siblings, 13 of the students had between one and two younger siblings and 22 of the students had between one and three older siblings.

To protect confidentiality and limit identifiable data, socioeconomic status was not surveyed. However, the composition of the school consists of primarily students who come from

upper-middle class homes. Given the relatively homogeneous backgrounds of students at this school, results generalize to only early adolescent upper-middle class American females. This homogeneous sample is a strength of the current study, as it offered direct access to the experiences of this specific group; further within group similarity often fosters rapport, enhancing cohesion and sharing (Hughes & DuMont, 1993).

Measures

Demographic information. Participants were surveyed on their age, grade level, race, and number of older and younger siblings. Number of siblings was queried based on parent feedback prior to data collection. During an initial meeting, students' parents suggested that those with older siblings might have more exposure to social media and might be more frequent users as a result. The demographic questions are presented in Appendix A.

Social media use. A questionnaire was developed that assessed Internet access, time spent on social media sites and applications, and types of social media activities. This measure is presented in Appendix B. Questions assessed the specific sites participants visit and the sites on which participants have accounts. Additional questions probed the types of online activities in which the participants typically engage, such as read posts by friends, read news articles, and post pictures. Participants were also queried about the frequency with which they engage in specific activities, such as general posting and posting pictures, of themselves and their friends. As well, they were asked to rate how often the pictures they or their friends post are selfies. Finally, participants were asked to rate how they perceive their social media use compares with that of other girls their age.

Social comparison. Social Comparison was measured using the *Physical Appearance Comparison Scale-Revised* (PACS-R; Schaefer & Thompson, 2014), an eleven-item measure

that assesses appearance based comparisons. Items range from 0, "Never" to 4, "Always." Scores range from 0 to 44, with higher scores indicating an increased tendency to make physical comparisons. The PACS-R yields internally consistent and stable scores, and has demonstrated convergent validity with measures of body dissatisfaction, eating pathology, sociocultural influences on appearance, and self-esteem in a large sample of college women (Schaefer & Thompson, 2014). Further studies have found Cronbach's alphas ranging from .96 to .97 (Schaefer, Thibodaux, Krenik, Arnold, & Thompson, 2015). Although the PACS-R has not been validated in a preadolescent sample, this measure was chosen because it is a revision of the original Physical Appearance Comparison Scale which has yielded inconsistent psychometric results (PACS; Thompson, Heinberg, & Tantleff, 1991). The PACS-R revision takes into account weight and shape concerns, which research suggests might be important links to disordered eating behaviors (Fairburn & Beglin, 2008), and has improved psychometric properties (Schaefer & Thompson, 2014). The Cronbach's alpha in this study was .97. The PACS-R is presented in Appendix C.

Thin-ideal internalization. Thin-ideal internalization was measured with the *Sociocultural Attitudes Towards Appearance Questionnaire-4* (SATAQ-4; Schaefer, et al., 2014). The SATAQ-4 is a widely used and well-validated measure of awareness of and attitudes about sociocultural ideals of thinness as well as perceived media, parental, and peer pressures to conform to those ideals. Though the SATAQ-4 is a recently revised version of the SATAQ-3 and has not yet been validated with a preadolescent sample, it was used in this investigation because some studies have found inadequate validity and reliability of the scale in its original form when used with this age group (Wilksch & Wade, 2012). The measure includes 22 items rated on a five-item scale. Responses range from "Definitely Disagree" to "Definitely Agree." Higher

scores indicate higher internalization and perceived pressure. Five subscales measure

internalization of the thin ideal and internalization of the muscular ideal as well as perceived

family pressure, peer pressure, and media pressure. These subscales are calculated by computing

the mean score for each item in the scale. Initial analyses have demonstrated that this measure

yields reliable and valid scores in adult female samples (Schaefer, et al., 2014). The Cronbach's

alpha in this study was .90. The SATAQ-4 is presented in Appendix D.

Body dissatisfaction. The Body Dissatisfaction subscale of the *Eating Disorders*

Inventory-3 (EDI-BD; Garner, 1991) was used to measure body dissatisfaction. It is presented in

Appendix E. This is a nine-item scale with scores ranging from 0 to 54. Items are rated on a 6-

point scale ranging from 1, "Always" to 6, "Never." Four items are reverse-coded. Higher scores

indicate greater body dissatisfaction. This measure has shown strong internal consistency with

populations as young as 8 years of age (Blowers, Loxton, Grady-Flesser, Occhipinti, & Dawe,

2003; Wood, Becker, & Thompson, 1996). The Cronbach's alpha in this study was .93.

Procedure

Focus group methodology was used in this study because it generates a large amount of

data in a relatively short amount of time (Morgan, 1996). Further, group synergy can foster

creativity, and provide rich data around a topic (Nassar-McMillan & Borders, 2002). Focus

groups are commonly used in exploratory research where relatively little about a topic is known

(Greenbaum, 1998). Increasingly, focus groups are also used as an aid in developing survey

questions as they enable the population of interest to serve as a resource in creating and refining

items. For instance, the population of interest can provide insight on proper item wording or

phrasing (Nassar-McMillan, et al., 2002). This is important in the current study given that the

purpose is to guide further research. In addition, focus groups are especially useful with child

and adolescent populations. In particular, by the end of middle childhood, children are generally able to express their thoughts and feelings and adjust their discourse in a socially appropriate manner. Further, richer data can be obtained, as focus groups with children and adolescents decrease self-consciousness, because participants are in the presence of peers (Kennedy, Kools, & Krueger, 2001). Although, in the current study, the sample was relatively homogeneous, this is actually an advantage for focus group research that is designed to examine a cultural phenomenon. Having a homogenous sample gives researchers access to the direct experience and language of the population of interest. Further, focus groups comprised of participants from a similar background or culture foster rapport and offer a platform for discussion and elaboration on themes and issues in their unique social world (Hughes & DuMont, 1993).

The school approached our research team because parents asked for help with talking to their children about social media and monitoring their usage. Initial meetings were conducted with the school administration to discuss the feasibility of conducting an exploratory study that examined social media use in early adolescents.

Approval by the Virginia Commonwealth University Internal Review Board was obtained. A parental opt-out procedure was utilized. Ten days prior to the focus group dates, the school emailed parents a letter from the researcher. This letter contained all the information typically contained in an informed consent. This document is included in Appendix F. Parents were given until the study date to either sign and return the form to the school or call the researcher directly. No parents opted their daughters out of the study.

Focus groups occurred on two separate dates during the school day with the 8th graders participating on the first date and the 7th graders participating on the second date. The focus groups were comprised of girls from the same grade, as there are likely developmental

differences in expression or comprehension across grade levels (Kennedy, Kools, & Krueger, 2001). During the first ten minutes, researchers explained the study and procedure to all of the students as a group. They answered any questions from the participants and distributed assent forms. The assent form is included in Appendix G. Once signed, all assent forms were kept in a sealed manila envelope and transported back to the researcher's lab where they were stored in a locked filing cabinet, separate from other data. On the first date, all 8th grade students assented to participate. One student was not in school that day, so a total of 19 8th grade students participated. On the second date, 19 of the 20 7th grade students assented to participate. One student declined and participated in other activities during the focus groups.

Three focus groups were held concurrently during the time typically reserved for Health class. Each group was comprised of five to seven girls, as this group size is recommended for youth in this age range (Kennedy, Kools, & Krueger, 2001). Further, smaller groups are recommended as they offer participants more time to respond, share, and interact (Hughes & Dumont, 1993). Prior to the date of actual data collection, the Health teacher assigned each girl to a particular group. She did not inform the participants of their group assignment until it was time to start. The intention was to prevent interpersonal issues that could arise from group composition and to foster an environment in which participants would feel free to speak openly.

Each group had one facilitator and one note-taker. The facilitators were the Principal Investigator and five other doctoral level students. Each group also had a note-taker who kept track of time, managed the audio recording, and took detailed notes and observations from the group. The note-takers were undergraduate psychology majors and doctoral level psychology students. All volunteers received training specific to this study and in research ethics generally. Use of a note-taker is recommended especially for focus groups with younger populations, as

their contributions enrich the data analysis and allow for data triangulation (Kennedy, Kools, & Krueger, 2001). Prior to data collection, all facilitators and note-takers met to orient to the interview procedures and discuss the interview questions.

Once participants assented, the teacher informed each student of her group assignment. The groups were held in three separate, private rooms within the school. Prior to the start of audio-recording, everyone introduced themselves. Then, the facilitator went over the introduction and group rules. The facilitator informed participants that they could decline to answer any questions or leave the focus group at any time. They were asked to not use any names once recording began and to not speak to others outside of the focus groups about what was said in order to respect the confidentiality of other participants. The facilitator then asked the group for questions. Once questions were answered and introductions were done, the note-taker started the audio-recording.

Focus group leaders used a semi-structured interview schedule. Questions were developed based on the literature. However, an inductive approach was utilized because it allows for participants' responses to guide discussion (Peterson-Sweeney, 2005; Wilkinson, 1998). Thus, although questions were based on relevant literature around media impact, facilitators were instructed to not be bound by the interview guide but rather follow the flow of conversation. As this is an exploratory study into how early adolescents engage with and perceive social media, it was important to not allow a priori assumptions to direct the conversation. Thus, facilitators were given freedom to explore other topic areas related to social media if they came up and seemed relevant.

The focus group discussion guide can be found in Appendix H. The first questions centered on how participants currently engage with social media. The facilitators asked about

specific social media sites and applications the group used, frequency of visits, the type of content viewed and content typically posted. Further probes explored how this engagement affected participants emotionally and the nature of their perceptions of engagement with the content. In particular, following the literature, questions were posed around how social media use affects social comparison, perceptions of ideal body size and shape, and body image. Participants were allowed to speak freely until a topic was exhausted. Probing questions were asked when necessary to clarify and explore topics further, and were based on issues raised by group members. Groups were approximately 50 minutes in length, as recommended with this age group (Kennedy, Kools, & Krueger, 2001; Tiggemann, Gardiner, & Slater, 2000).

Once all topic areas were exhausted, facilitators asked the group if there was anything else they wanted to share about the topic of social media. At the conclusion of the groups, the note-takers ended the audio-recordings and the facilitators thanked the groups for their participation and insights. The audio-recordings were transferred to a secure network server on the day of the focus groups and the files were deleted from the recording devices.

Data Analyses

Quantitative analysis. The researcher created a REDCap database for data entry. All survey data were entered into REDCap and then double entry was done by undergraduate research assistants to ensure reliability. Any discrepancies were identified and fixed. Once data entry was complete and verified, quantitative data were exported to SPSS 23.0. Descriptive statistics were calculated, including means, standard deviations, and frequencies. Survey data were used primarily to enrich the results of the qualitative analysis. As this is an exploratory study with a small sample size, no hypotheses were proposed. In addition to descriptive statistics, Pearson product moment correlations and simple linear regressions were calculated. Two-tailed

tests were used because although prior research suggests a positive association between media exposure, thin-ideal internalization, social comparison, and body dissatisfaction (e.g., Levine & Harrison, 2009; Tiggemann & Miller, 2010), considerably less data are available for early adolescent populations. A two-tailed test helps protect against the possibility of making a Type I error.

Qualitative analysis. The analysis of the focus group data was accompanied by an audit trail. The researcher kept ongoing notes and dates of all activities, discussions, and decisions made to provide a trace of the logic and enable others to judge the trustworthiness of the findings and interpretation (Creswell & Miller, 2000; Rodgers & Cowles, 1993; Wolf, 2003). The PI and trained research staff transcribed focus groups. Prior to transcription, the PI met with each transcriber to orient to the procedure and process. Transcribers transcribed in Google Docs or Microsoft Word. Once complete, the PI transferred the transcriptions to Atlas.ti for coding. Transcribers put nonverbal information in brackets. In particular, transcribers noted information such as laughter, hesitation, pauses, group agreement or disagreement, cross talk, tone of voice, and emphasis. Once complete, either the facilitator or note-taker for each group verified the transcript, and the PI typed the notes taken by the note-taker to aid in data triangulation and enrich the transcript data. These notes included observations from the group such as group dynamics and group agreement.

The thematic analysis method was used to identify themes in the data. Themes refer to patterns within the dataset that are relevant to the research question (Braun & Clark, 2006). At minimum, thematic analysis is a process of organizing and describing data and at maximum, its results allow for interpretation of the construct being studied (Boyatzis, 1998; Braun & Clarke, 2006). Thematic analysis was chosen for this study because it is not bound to a pre-

existing theoretical orientation, nor is its goal necessarily to generate new theories (Braun & Clarke, 2006). This study aimed to examine how early adolescent females engage with a newer form of mass media and how that engagement potentially contributes to body dissatisfaction. Thus, the researcher eschewed other qualitative data approaches, such as grounded theory, that intend to generate hypotheses and theoretical frameworks. Because this research is exploratory, an inductive process was employed, whereby the researcher did not analyze the data with a priori hypotheses derived from prior research (Braun & Clarke, 2006). This means that the themes identified within the data were driven by the responses themselves. Although the focus group discussion guide was formulated based on the relevant literature, the researcher remained open and flexible and allowed the data to drive the formation of themes. Thus, themes were based on actual participant discourse. This is important so that future studies reflect the participants' social realities and are not driven primarily by the researcher's own biases or a priori hypotheses (Hughes & DuMont, 1993).

Consistent with the thematic analysis steps recommended by Braun and Clarke (2006), the PI read each verified transcript carefully and took notes. Specifically, the PI noted the major themes that were emerging, and reviewed the observational notes taken during each session to enrich understanding of the data. Once all transcripts were reviewed, the PI created a preliminary list of themes and subthemes evident across each transcript. Then, a secondary researcher, also a doctoral student in Psychology, read each transcript and reviewed the list of themes. After both researchers read the transcripts and identified themes, they discussed the list and talked through discrepancies. Discrepancies were minimal and included collapsing one major theme into other, more applicable themes. For instance, the PI initially identified a theme about the pros and cons of social media use. After discussion with the secondary researcher, this theme was identified as

more appropriately collapsed into the *Social Media Engagement* theme. Due to the minimal number of disagreements, a tertiary researcher was not used. Once the primary and secondary researcher reached agreement, the PI generated a list of themes and sub-themes.

After generation of the themes, the PI established a codebook (Braun & Clarke, 2006). Codes refer to the most basic element of the data that are meaningful to your analysis (Boyatzis, 1998). Whereas themes tend to be broad, codes are much more specific and may fit into one or more identified themes. Consistent with the recommendations of Gibbs (2007), the PI sought to assign analytic codes, thereby moving beyond simple description or categorization and into basic interpretation of what is being said. Each code was given a concise and descriptive name and was accompanied by a more detailed description in the codebook. All major, relevant responses (excluding unintelligible utterances or irrelevant cross talk) were assigned one or more codes. The nonverbal information noted in the transcript as well as the observational notes from each session were used as a data triangulation method to guide coding and enrich the analysis. The PI first coded three transcripts and made notes identifying utterances that did not clearly fit into one or more codes. Then, the secondary researcher used the codebook to code the same three transcripts and paid special attention to utterances highlighted by the PI. The researchers then met to discuss the coding, paying special attention to questionable utterances. Discussions from this meeting resulted in further refinement of the codebook whereby definitions were sharpened and redundant codes were removed or collapsed. The PI returned to the first three coded transcripts and revised the coding in line with the newest version of the codebook.

Once the first three transcripts were recoded, the PI and secondary researcher independently coded the remaining three transcripts using the revised codebook. The researchers met again to discuss questionable utterances and modify the codebook. Again, differences were

minimal and a third researcher was not necessary. The PI then recoded the final three transcripts to remain consistent with the revisions. Analysis of the coding frequency data revealed infrequently used codes and codes that co-occurred alongside other codes. These codes were either deleted or merged with other codes. Upon completion of coding, a final list of themes and sub-themes was established.

Results

Quantitative Results

Internet and social media use. Of the 36 survey respondents, 35 reported having Internet access at home and one respondent left the question blank. The mean response to the question, "How many hours a day do you use the Internet (on any device)?" was 3.25 hours per day. One-third of the sample reported using the Internet for more than three hours per day.

Social media use was high in the sample. Out of 36 survey respondents, 34 endorsed the question, "Do you ever visit social media sites or apps?" Participants rated how often they visited social media sites or apps on a 7-point scale ranging from "Less than once a week" to "Multiple times a day." Out of 32 total responses, only three participants (8.4%) indicated they visited social media sites less than daily. Of the remaining sample, ten participants (27.8%) reported visiting social media sites daily and 19 (52.8%) reported accessing social media multiple times a day.

Facebook was excluded from the remaining results as no participants endorsed visiting the site. Participants indicated the specific social media sites they visited and those on which they had accounts. They then rated their top three most visited sites. Consistent with focus group responses, Instagram and Snapchat were overwhelmingly popular within this sample. Though not originally included as an option, several girls wrote in that they used Musical.ly and

YouTube, also consistent with focus group data. Those particular applications were primarily mentioned within focus groups with the 7th graders. Instagram was rated within the top three most accessed sites by three-quarters of the sample. Snapchat was included in the top three by half of the sample. From both the survey data and focus group responses, picture and video dominant sites were overwhelmingly more popular with this sample than other text-based sites such as Twitter.

Consistent with focus group responses, quantitative results revealed frequent social media visits but comparatively infrequent posting. The most common response to the survey question, "How often, on average, do you post on social media?" was "Once a Month" (38.9%, $n = 14$) followed by "2-3/Month" (27.8%, $n = 10$). Only eight girls endorsed posting weekly or more often (22.2%). Results were similar for the question, "How often, on average, do you post pictures?" Again, "Once a Month" was the most common response (38.9%, $n = 14$) followed by "2-3/Month" (27.8%, $n = 10$). Only four girls (11.1%) endorsed weekly or more frequent picture posting.

Also consistent with the focus group discussion, participants did not endorse frequent selfie posting. When asked how often, on average, the pictures they posted were selfies, 61.1% ($n = 22$) indicated that none of the pictures were selfies. This was followed by 22.2% ($n = 8$) "Less than Half", 5.6% ($n = 2$) "Half" and only one participant (2.8%) endorsed that "More than Half" of the pictures posted were selfies.

On the surveys, participants were also queried about how often their friends posted pictures and how often those pictures were selfies. Paired samples t-tests examined differences between how the participants rated themselves and their friends on both questions. Students perceived that their friends posted pictures more often, $t(30) = 3.724$, $p = .001$, and that their

friends' pictures were more likely to be selfies, $t(30) = 6.352$, $p < .001$. The participants most commonly endorsed "Once a Month" for the frequency of posting pictures whereas they indicated their friends posted pictures "2-3/Month" on average. In terms of selfies, participants most commonly reported that "None" of their pictures were selfies, whereas they most commonly rated that "Less than Half" of their friends' pictures were selfies. These data are consistent with the content of the focus group discussions in which the students felt that their own activities on social media were different than those students from other school environments.

Table 1. *Social Media Frequency Table*

$n = 36$	Visit	Have Account	Rated in Top Three
Instagram	77.8% ($n = 28$)	75.0% ($n = 27$)	75.1% ($n = 27$)
Snapchat	52.8% ($n = 19$)	52.8% ($n = 19$)	50.0 % ($n = 18$)
Pinterest	44.4% ($n = 16$)	44.4% ($n = 16$)	19.4% ($n = 7$)
Vine	30.6% ($n = 11$)	33.3% ($n = 12$)	11.1% ($n = 4$)
Tumblr	22.2% ($n = 8$)	19.4% ($n = 7$)	16.7% ($n = 6$)
YouTube	22.2% ($n = 8$)	--	--
Musical.ly	16.7% ($n = 6$)	--	--

Table 2. *Frequency of Activities on Social Media*

$n = 36$	%	Rated as Top Three
Read Posts by Friends	75.0% ($n = 27$)	72.2% ($n = 26$)
Like/Comment on Friend Posts	75.0% ($n = 27$)	58.3% ($n = 21$)
Post Pictures	72.2% ($n = 26$)	36.1% ($n = 13$)

Read Posts by Celebrities	52.8% (*n* = 19)	19.4 % (*n* = 7)
Read News Articles	25.0% (*n* = 9)	16.7% (*n* = 6)
Read Other Articles	27.8% (*n* = 10)	13.9% (*n* = 5)
Like/Comment on Celebrity Posts	41.7% (*n* = 15)	8.4% (*n* = 3)
Read Gossip Articles	16.7% (*n* = 6)	2.8% (*n* = 1)

Table 3. *Activity Detail*

Post Pictures *n* = 36	How often do you post?	How often do you post pictures?	How often do your friends post pictures?
Never	11.1% (*n* = 4)	22.2% (*n* = 8)	--
Once/Month	38.9% (*n* = 14)	38.9% (*n* = 14)	19.4% (*n* = 7)
2-3/Month	27.8% (*n* = 10)	27.8% (*n* = 10)	25.0% (*n* = 9)
Weekly	8.3% (*n* = 3)	2.8% (*n* = 1)	13.9% (*n* = 5)
2-3/Week	5.6% (*n* = 2)	5.6% (*n* = 2)	13.9% (*n* = 5)
Daily	8.3% (*n* = 3)	2.8% (*n* = 1)	13.9% (*n* = 5)

Table 4. *Selfies*

n = 36	Participants	Friends
None	61.1% (*n* = 22)	11.1% (*n* = 4)
Less than Half	22.2% (*n* = 8)	41.7% (*n* = 15)
Half	5.6% (*n* = 2)	25.0% (*n* = 9)
More than Half	2.8% (*n* = 1)	8.3 % (*n* = 3)

Parental monitoring. Participants answered questions assessing whether their parents limited their access to social media as well as if their parents check in on their activities on the Internet and social media. Although only 38.9% (*n* = 14) indicated that their parents limited their access, 58.3% (*n* = 21) reported that their parents monitored their activities. This is somewhat discrepant from focus group discussions where the majority of participants endorsed some form of parental restriction or monitoring. In response to the survey question that asked about the nature of parental involvement, many participants wrote that their parents followed them on their social media accounts, with Instagram being the most frequently mentioned. Other responses ranged from parents doing research prior to allowing access to a particular application, restricting access until a certain age is reached, getting approval to post pictures, not being allowed to post pictures of one's face, parents looking at internet history, and parents reading text messages.

Social comparison, thin-ideal internalization, and body dissatisfaction. Means and standard deviations are presented in Table 5. All study variables, with the exception of internalization of the muscular ideal, were correlated. This is consistent with the *tripartite model of influence,* which states that pressures from parents, peers, and the media are related to body dissatisfaction through social comparison and thin-ideal internalization (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999).

Table 5. *Correlations and Descriptive Statistics for Study Scale Variables*

	1	2	3	4	5	6	7	Mean	SD
1. PACS-R	-	.66**	.51**	.62**	.63**	.78**	.76**	15.89	11.84
2. SATAQ-4-TI		-	.50**	.36*	.46**	.57**	.62**	2.81	.88
3. SATAQ-4-MI			-	.04	.22	.20	.31	2.38	.83
4. SATAQ-4-FP			.	-	.57**	.50**	.60**	2.15	1.00

5. SATAQ-4-PP	-	.63**	.58**	1.92	1.04
6. SATAQ-4-MP		-	.71**	2.93	1.29
7. EDI-3-BD			-	28.11	11.16

*p < .01, **p < .001

Qualitative Results

The focus groups began with questions about which social media applications the sample used and the nature of their interaction with them. The next questions were based upon sociocultural theories that implicate mass media as major influencers on body dissatisfaction (e.g., Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). One theme, *Social Media Norms,* emerged from the initial data and is descriptive in nature, capturing the specifics of how the sample reported using social media. The remainder of the themes developed from the questions grounded in sociocultural theory of body dissatisfaction. These themes were interpretive in nature, rather than purely descriptive, and often overlapping. Throughout data analysis, it became clear that many themes were actually sub-themes that fell within two overlapping primary themes. These themes include *Personal Agency* and *Us versus Them*. *Personal Agency* refers to the sample's perception that how one engages with social media and how one responds to this engagement is a matter of personal choice and responsibility. This theme has overlapping elements with *Us versus Them*. The *Us versus Them* theme emerged throughout the focus groups both explicitly and implicitly. The sample frequently indicated that their particular school environment was different from that of their peers attending other schools. As such, many of the girls described their habits and attitudes as being different and not reflective of their broader population, i.e., 7th and 8th grade females in the Richmond area. Much of the sample attributed these differences to the unique culture of their school. That is, the school imparted both implicit

messaging and direct education on self-acceptance, acceptance of differences, valuing diversity, confidence, and media literacy that contributed to the values of personal agency and responsibility. These two global themes affected all of the substantive themes that will be described. As the following themes cannot be described without touching upon the attitudes of personal agency and the nature of the school environment, descriptions of these two themes will be interwoven with the descriptions of the sub-themes rather than discussed separately. Discussion of the themes is qualified by quotations from the participants themselves. To protect confidentiality, names have been changed.

Social media norms. Focus groups began with open questions on social media use and the type of sites visited and frequency of these visits (see Appendix H for the focus group discussion guide). The overwhelming majority of students endorsed social media use, but in three out of the six groups at least one student indicated she did not use social media.

Social media applications. Consistent with the survey data, Instagram and Snapchat were mentioned most frequently. Instagram was mentioned 82 times in the 7th grade groups and 75 times in the 8th grade groups. Snapchat was mentioned 36 times in the 7th grade groups and 56 times in the 8th grade groups. The 7th graders more often endorsed using YouTube and Musical.ly, a relatively new application that involves taking short videos of oneself lip-syncing to songs. Musical.ly was mentioned 28 and 2 times and YouTube was mentioned 30 and 13 times in the 7th and 8th grade groups, respectively. Some students endorsed using Twitter, Tumblr, and Vine, but reported use of these sites was far less frequent. Although Pinterest was occasionally mentioned, students questioned whether it qualified as a social media site and indicated that it is not used often by their demographic. When asked about Facebook, the overwhelming consensus was that Facebook was for older generations. Most commonly,

students mentioned their older siblings or parents used Facebook. The following quotations

highlight the students' perspectives of Facebook:

> Rita: Nobody uses Facebook anymore, only our parents.
>
> Carly: Yeah, my parents are obsessed with Facebook.
>
> Jane: It's more of like older people connecting with like their college friends who they haven't seen in like twenty years {laughter follows around the room}.

Social media etiquette. Germane to the topic of social media norms is implicit

expectations of appropriate behavior on social media. The theme of social media etiquette

emerged almost immediately throughout all of the groups and discussions of standard behavior

on social media were interwoven with judgments on what was acceptable and unacceptable.

There was far more discussion of unacceptable social media behavior than acceptable.

Within the theme of *Social Media Etiquette*, there were only three codes categorized as

acceptable behavior, whereas seven codes were categorized as unacceptable. Further highlighting

the negative valence of the topic, there were 145 quotations coded as unacceptable social media

behavior and only 38 coded as acceptable. Interestingly, the topic of etiquette came up much

more frequently in the 8th grade groups. Whereas only 58 quotations were categorized in the

social media etiquette theme in transcripts from the 7th grade groups, 127 quotations fell within

that theme in the 8th grade groups.

Acceptable behaviors included posting one's artwork, posting pictures of oneself with

friends (termed 'groupies'), and posting infrequently. Examples of unacceptable social media

behaviors included following an 'excessive' number of accounts, posting too frequently,

repetitive posts, making negative comments, seeking praise, being artificial, and posting pictures

of oneself ('selfies'). Additionally, participants mentioned an apparently acceptable ratio exists

between the number of accounts one follows and the number of followers one has. For instance,

Candace said, "…it kind of bothers me when people follow a million people…like, when they follow so many more people than they have followers." This quote was met with strong agreement within the group and Jane followed it up by saying, "You have to, like, know the difference between a lot and, like, an extreme amount. Like, some people follow, like, thirty, some people follow, like, nine hundred. I don't have that much time to look at all those pictures." When discussing social media norms, the participants endorsed frequent social media visits but infrequent posting. Indeed, too-frequent posting was met with judgment by the group and described as "annoying" by several participants. Similarly, the participants spoke negatively of repetitive posts, with repetitive selfies drawing the greatest criticism. However, one example of acceptable social media behavior that emerged was posting creative pursuits, particularly music or art. In fact, repetitive posts were looked at much more positively if they included someone's artwork. This is best summarized by Jane who said, "Like, let's say you're posting art, like if it's like a different piece of art every day, then, like, that's cool, but if it's, like, pretty much the same picture every day then it just kind of gets old because it's like, I feel like you've seen it already." Negative comments, seeking praise, being artificial, and selfies were spoken about more broadly within the theme of *Social Media Engagement* and as such will be discussed in more detail in that section. *Selfies* emerged as its own theme due to the strong response it aroused from all of the groups.

   Frequency of viewing and posting. Focus group facilitators asked participants how often they engage with social media. A large disparity emerged between how often the students viewed social media versus how much they post. Of those that endorsed social media use, the majority indicated they checked social media daily or multiple times a day. Responses ranged from "I'm on at least once [a day], generally twice" to "Like a hundred." Indeed, social media

applications, for those who visit, are a fundamental part of their day. Some students expressed

concern with how often they were checking in, such as Karen who said, "I actually go on there

constantly and I realized it so I took a week away from it because I saw this video how everyone

posted on social media so I stopped it for a week and a half. But it made me really think about it,

so I stopped going on there as much but I still go on there a lot." However, many students

acknowledged the large part in their lives social media play but did not view it as harmful. The

following two quotes reflect this attitude:

> Jane: It's like every day, it's like part of life for us, our generation {sounds of agreement from others}…, I don't really use it like to show what I'm doing I kind of use it as entertainment or just to see what other people are doing.

> Carly: Um, yeah it's just kind of like, it's not like a big deal anymore, it's just kind of like our life and it's like a daily thing. I mean, like, with my friends, it's like a big like topic, I mean we're not like addicted or anything.

The majority of the participants indicated they looked at social media applications daily

or multiple times a day. However, consistent with implicit etiquette rules, they indicated that

they posted much less frequently. The following quotations reflect typical responses to the

question of how often the participants posted on social media:

> Heather: I don't really post much. Maybe once a week.

> Emma: Umm…every few weeks.

> Gretchen: I post like, I post like once every few weeks or something; I don't post that often.

As the sample did not endorse frequent posting, focus group facilitators asked if the

participants felt their posting habits differed from their peers outside of the school. The sample

generally agreed, like Jenny who said, "Our class doesn't really post a lot." Some participants

mentioned part of the reason for the discrepancy was the school policy on cell phone use.

Monica described, "We don't have our phones…like, use them at school." Generally, the sample could not elaborate on *why* they perceived that they posted less on social media than their peers from other schools, like Dana who said, "I mean, I don't really know if it's cause of the environment. I don't really know why. But they definitely post a lot of different stuff than we do." Thus, reasons why the sample perceived they posted less frequently than their peers from other schools did not emerge from the focus group data.

Parental monitoring. Both whether or not participants used social media, and how they engaged with it, was influenced by parental monitoring and restriction. The few girls who reported not using social media indicated that this behavior was, at least in part, due to their parent(s) restricting all or some of their access. One participant initially reported not using social media because she was not a 'fan' of it and did not like putting herself out there. Later when asked how her parents felt about social media, she said, "That could be a reason, 'cause I'm like brought up in that, um, atmosphere. My parents don't really use any social media." This was not a typical response as the sizeable majority of participants endorsed heavy social media use. However, the previous quotation demonstrates the level of influence parental involvement and modeling had on some of the participants in the sample.

Many participants indicated that their parents did not fully restrict their social media access but did monitor it. Methods of monitoring included parents creating an account to follow their child, requiring that their child obtain approval of a picture or post prior to posting, asking for social media passwords, checking internet history, and checking text messages. Participants' attitudes about this monitoring varied. Some said that it did not bother them because they did not feel they had anything to hide, like Jane who said, "I mean, like I said, my mom will like follow me and she sees my story but like I don't really care cause there's nothing on it I'm like don't

want her to see." Other participants expressed discomfort with this monitoring, like Carly who said, "It like gives me anxiety whenever my parents are like 'okay, I'm gonna just like check something' and they like actually check my computer history a lot and so like I start to like freak out like even though I've done like nothing wrong which makes them like get a message that like I did something even though I've done nothing. And so I'm like constantly worried about what I use." Similarly, Rachel expressed that when her parents check her text messages, she is hurt by her mother's lack of trust, "I'm, like, really hurt that she doesn't trust me enough to make my own choices." For some participants, the parental monitoring resulted in adjusted social media habits such as Jessica who said, "Sometimes I'll adjust my outfit, cause my parents are kind of strict about that, so I make sure all my outfits are decent enough and having my mom check my Instagram, it's made me stop liking a lot of stuff and kind of unfollowing some accounts." However, other participants found ways around the monitoring, like Emma who said she avoided her mother checking her text messages by, "carrying my phone around everywhere so she never looks at it." Other participants outright ignored or rejected their parent's attempts to monitor, like Lisa who shared, "My parents, like, tried to make a lot of restrictions and, like, I don't listen to them anymore."

Many participants shared that their parents either restrict their social media use altogether or have specific rules on the particular applications they are allowed to use. Again, there was no discernable pattern to the responses. Only one participant indicated that her parents do not allow her to use social media at all. Many parents restricted particular applications. For instance, multiple participants said their parents will not allow them to have an account on Instagram or Snapchat, like Sarah who said, "I don't have a Snapchat and I really want one but my mom won't let me get it because it's not safe or something." Other parents put age or grade restrictions on

certain applications like Janet who said, "My mom said I can't get an Instagram until I'm in the 9th grade." Finally, multiple participants reported that their parents restrict *what* they post on social media. In fact, a few participants mentioned their parents placed restrictions on posting selfies. Emma shared, "When I first got Instagram I couldn't post selfies," and similarly Carly said, "There used to be a time where I couldn't post any pictures of, like, when it was just me on Instagram."

Though rare, one participant indicated that her parents were unconcerned with her social media use. She said, "My parents really don't care about social media...they just kinda let me do whatever I like, they don't really bother me about what I'm doing on my computer. 'Cause I really don't do that many things ever so they're not really worried I guess." Many girls echoed the sentiment that their parents were less concerned with their behavior online than about what they could be exposed to. Jessica summarized this well when she said, "Yeah I think that they're, they care more about, like, what you're going to be exposed to rather than what you put out yourself." Though some participants endorsed circumventing parental regulations and restrictions, for many the oversight of their parents impacted the extent and quality of their engagement.

Likes and comments. Likes and comments came up frequently through the groups. The girls generally agreed that they liked posts more often than they commented on posts. Several participants revealed that they feel pressure to like the pictures that their friends post. Interestingly, a common theme throughout the groups was the acceptable ratio of followers to likes, where those with more followers should expect more likes on a picture. However, posts with what was regarded as a smaller than acceptable ratio engendered judgment and suspicion. The following quote illustrates this point:

Jessica: Like I know [name redacted] has 2000 followers {whispers}, they're not really real. Um and um she only gets like 400 likes {snickers in background}. Okay that's a lot! But like compared to like how many followers she has…

When asked if the number of likes or comments a post receives matters, participants generally disagreed. A common response was one like Jane who said about likes, "They don't really mean anything." However, they did acknowledge that they have peers who care about the number. For instance, Lisa said, "I mean, I personally don't really care but I know some people who kind of like...not like compete, but it's like, they feel like accomplished when they get like a certain number." Similarly, Jenny said, "There are definitely people who are like really caught up in the number." Thus, again, the participants communicated a perceived disparity between their attitudes towards likes and comments and those of their peers from outside the school environment.

Despite the participants agreeing that they do not view likes and comments as important, they noted that this type of attention to their posts was validating. For instance, Gretchen said, "Like when you see it, it's like, like I don't really care [about] the number, but like it's just nice to see that they saw it." Some girls expressed a great deal of enthusiasm for the attention they received on their posts. For instance, Molly said, "Yeah it makes you feel nice cause like oh they appreciate what you posted or they appreciate whatever you said it's like wow thanks! Thanks for that." It can also be validating for physical appearance as Dana said, "It's just like nice in general to like have someone to be like 'oh, you look pretty'." Finally, some girls even mentioned that the validation on social media can make them feel seen, such as Jessica who said in response to receiving attention on a post, "I exist in this social media world."

Selfies. Of all the subjects that came up in the focus groups, the topic of selfies aroused the most consistent and emotionally charged responses. Although the conversations around

selfies fit into several other themes, it became clear that selfies warranted their own unique theme due to how often they were mentioned and the strong reactions they garnered. Within the theme of selfies, several sub-themes emerged. Similar to engagement described above, the valence skewed negative, such that there were four codes that fell within the negative sub-theme, including the view of selfies as annoying, selfies as egotistical, selfies as seeking praise and selfies as unnecessary. Only two quotations were identified that seemed to capture a positive perception of selfies, however of one of those, a negative qualifier was added. Jane described selfies as "really cool" and Hannah said, "They can be fun but can be very annoying."

Very few participants endorsed posting selfies on social media which is consistent with quantitative results. Not only did the participants generally deny posting selfies, but for many it was important to indicate that they also lacked the desire to post them. When facilitators asked the groups about posting selfies, common responses included, "I'd never want to anyway" and "I'd never post one now." Generally, the discussions around selfies were critical and, at times, harsh. The reasons for the negative evaluations of selfies differed. Common perceptions were that posting selfies are an attempt to seek praise or validation or a show of egocentricism. When asked why they believed people posted selfies, Rachel said, "So they can get compliments" and Carly agreed, saying, "Compliments, it's just the compliments." Jordan was more specific when she said, "People say in a post…, "I look so ugly in this"…then they post it to feel better about themselves which is kind of sad, too." Many participants described how this kind of post turned into a back and forth stream of compliments in the comments. Monica summarized it well when she said, "People always comment like, "Oh, you're so pretty" and the person who posted the selfie comments, "No, you are" and they're like, "What? No." It keeps going back." This frustrated the participants who felt the back and forth compliments were unnecessary. Heather

echoed a common response when she said, "Accepting compliments is so much easier than being like, "No, no, you are pretty."" Emma agreed by saying, "It's like, why can't you just say, "thanks"?" Finally, many participants mentioned that they saw selfies as egotistical. Dana said, "They just make me think they're kind of self-centered" and Jordan said, "I think they're kind of like, conceited, too…when people just like post pictures of themselves." As in the other themes, participants perceived a divide between the students of this school and their peers from other schools regarding social media use. Though the conversations revolved around the selfie behavior of peers, very few participants endorsed needing the praise elicited by selfies. Meghan summarized it well when she said, "I don't need people to tell me I'm pretty on social media."

Bathing suit selfies elicited particularly strong opinions. Participants described a common social media scenario of peers posting pictures of themselves in bathing suits, often when not at the beach. Girls viewed these types of pictures as unnecessary but also artificial (tying back into social media etiquette) and exposing. Selfies were also criticized sharply due to their often revealing nature. Many girls criticized bathing suit pictures because they viewed them as an attempt to get sexual attention. For instance, Hannah said, "Bikini, like, pictures on the beach…You're obviously trying not to, like, show off your face" and Carly agreed, "You're trying to show off a little something lower than your face."

Finally, although less common, some participants admitted that they did not post selfies due to their own appearance concerns or lack of confidence. In general, many participants denied social comparison or appearance concerns within the context of social media. However, in most groups, at least one participant acknowledged appearance concerns. When participants were asked why they do not post selfies, Clara said simply, "Cause I'm ugly." Heather replied, "I just don't really always feel comfortable with, like, how I look sometimes." Some of the participants

talked about taking selfies but never posting them. For instance, Emma said, "You just find out all your flaws when you look at it" and Jordan laughed in reply, "I look horrible in selfies." Several girls mentioned that they felt uniquely unattractive in the context of selfies. For example, Jessica said, "Sometimes I'm like, "Oh I look pretty in the mirror today" and then it always looks horrible in pictures." Though few girls were vocal about this, statements such as these aroused strong agreement in the groups.

The language used to describe selfies was mostly negative. The most common word used to describe selfies was "annoying." The reasons for this varied, but extend beyond the discussion of praise-seeking or ego. Participants indicated that those who post selfies tend to do so frequently and these posts tend to be repetitive. Consistent with social media etiquette, repetitive posts are viewed unfavorably. Overall, participants saw selfies as simply unnecessary. A common response was that one should not need to post a selfie because anyone viewing the selfie already knows what that person looks like. Julia said, "…we know what your face looks like" and Hannah agreed saying, "People can see your face in photos of you with other people. What's the point of posting like a photo of you?" This quotation also highlights the social media etiquette rule that posting pictures of yourself is acceptable only when other people are in the photo.

The theme of personal agency and acceptance again surfaced throughout the discussion of selfies. Many participants qualified their judgments of selfies by acknowledging that posting them was not reflective of *their* identity or character. For instance, Emma said, "Yeah, I mean, I don't really post, like, selfies, that's just, like, not really my thing" and Jessica replied, "Yeah, yeah, same. I never take pictures of myself. I'm just not that type of person." A tension arose between the negative judgments around selfies but also the value many held of personal agency

and choice. Claudia said, "Well, sometimes it's just, I feel like I wanna unfollow the person because it's like, yeah I've seen you before, I mean, but I know it's their choice and I guess I'm okay with it." Similarly, Christina emphasized the value of personal agency saying, "If that's what you like…if it makes you happy, then do it." Selfies generated empathy for some participants. In reference to fishing for compliments, Heather acknowledged that to some degree the desire for validation is human, "I don't usually like to say fishing for compliments because I know we all kind of go through that...but I try not to do it just cause…I don't know…"

Social comparison. Facilitators asked participants if they believed social media influenced their tendency compare themselves to others. Responses in the groups were inconsistent. Many participants endorsed some degree of social comparison or appearance concern but denied that social media use played a part. The reasons given for this varied. The girls in the group displayed surprising levels of media literacy. That is, they were aware of the degree of retouching of mass media images and as such saw them as artificial. As well, many viewed celebrities as living in a different world and thus felt less prone to compare themselves to them. This is reflected in the following quote by Dana, "The thing is that I know they are wearing pounds of makeup and that it is Photoshopped." Christina also demonstrated this overall media literacy when she said, "I don't know about anybody here, but seeing magazines or like Victoria's Secret or something like that, other people may think that everybody should be like that but it's Photoshop and it's fake." This literacy and insight proved to be valuable in negating some of the potential harmful effects of social comparison on social media. Rebecca said, "[Sometimes] I wish I looked more like that. But like it's alright because sometimes I forget that they're just pictures, like that's not what people actually look like that's just one set moment and I don't see myself the way that other people see me, so…"

Other participants, however, did disclose that social media posts could lead them to make comparisons. Emma said, "Sometimes when I see someone post a picture, not necessarily a selfie, but just any picture, I'm like, "I'm not that cute…" There also arose a tension between the awareness of the problems of social comparison, yet the dissonance of still engaging in it. Claudia described this discomfort well when she said, "Like I know sometimes I'll look at pictures and it'll make me feel like not happy with myself cause sometimes I'll wanna look like them but I don't and then it makes me feel really uncomfortable and stuff." Other girls mentioned that the intersection of puberty and social media proved to be a catalyst for comparison, such as Carly who said, "I don't know, I feel like pictures on social media trigger that. I know I've had, I've felt like a lot of things like that a lot. And then I guess being like a teenager and I guess going through puberty makes it a lot harder, especially cause like I guess we're growing more and I know a lot of my clothes don't fit me anymore and that's really made me upset cause I felt like it wasn't a good thing and I didn't like it and I thought I was just too big and I don't know, it just made me feel uncomfortable."

However, overall, the sample endorsed high levels of confidence and denied excessive social comparison. Marissa said, "I feel pretty confident in myself…I mean, I might like, like look at somebody and be like, "yeah she's really pretty" but like I wouldn't be like, "No, like" you know, like, I'm happy with who I am, like I wouldn't wanna be anybody else." Similarly, Rachel said, "Everybody here is pretty confident, so that's good." Many participants displayed a heightened awareness of the dangers of social comparison. Dana said, "Comparing yourself to someone is a pretty big problem." When the facilitators asked the groups how they learned media awareness and confidence, many pointed to the school environment. Jessica pointed out that using social media could affect body image, but more so for those outside the school

environment, "I would say like social media affects how they feel about their body but I don't think it affects anybody here." Jordan agreed saying, "Yeah, we're more aware." The following conversation offers insight into how this particular school environment spreads the values of media literacy and confidence.

> Heather: At this school they teach us how to like yourself and self-confidence and stuff.

> Christina: This is…a really inclusive school and it teaches you how you shouldn't care how other people think of how you look but in other public schools, I feel like the media gets to more people, because it's like more media focused than it is building on your self-confidence.

> Ashley: Our teachers in health class, like all the umm teachers help us with confidence [and] teach us to build a really thick wall so that this stuff do[es] not get to you and I guess you are more immune to it because you know you are fine and so does your class too.

> Jessica: Well yeah. And your homeroom teachers too. They always build up your confidence and we've heard this message a lot, "people that pick on other people, it says more about them than it says about you."

> Emma: I also take a club, actually during lunch today and it's called "Mirror Mirror", and it's actually about respecting your body and determining who you are not matter what and stuff.

> Ashley [speaking about those at public schools]: It seems like people aren't trying to build up their confidence and normally are trying to knock it down.

In other groups, participants mentioned a club called "RED [Respecting Everyone's Differences] Group" where girls learned about and discussed the importance of acceptance and understanding diversity. Although these groups are voluntary, they are popular among the student body. Finally, for some, not having boys in the school environment made a difference. Gina said, "I guess since we are at an all-girls school, that also makes a difference because we don't have a lot of guys following us but I know my sister has guys following her and she has to make sure her pictures are like perfect and that she gets a certain amount of likes." However,

other students downplayed the importance of this such as Ashley who said, "I mean guys follow me but I could care less about what they think."

Similar to the other themes, the value of personal agency again arose. Many girls mentioned that they simply chose to not follow accounts that have content that would lead to social comparison. Gina said, "I don't really follow the kinds of things that I'd be like…if I see someone that's pretty I'm like, "oh, that's great."" However, Sarah also acknowledged that even when she tried to avoid such content, it could be hard to escape, "it tends to show up sometimes though. You try your hardest to avoid it and, boom, there is a lot of boob just on your feed" and Carly agreed saying, "It is hard to get away from it."

Social media engagement. Focus group facilitators asked the participants to describe the ways they perceived social media to be both positive and negative. However, even without prompting, participants frequently voiced the benefits and pitfalls of social media use. Again, similar to the theme of etiquette, the valence of social media engagement skewed heavily negative. Seven codes were categorized as negative social media engagement, three were positive and three codes were neutral. Fifty-two quotations were coded as reflecting positive social media engagement and 173 as negative. Interestingly, though many of the participants defended their social media use, the conversations consistently came back to elements that are harmful.

Examples of the negatives of social media engagement included alienation, dependency, social media use as a distraction, bullying, drama, and fear of judgment. Many girls expressed that social media can lead to a feeling of being left out. A common scenario mentioned was seeing pictures on social media of get-togethers or events to which the participants were not invited. Though the participants did not always explicitly address how being alienated made

them feel, the underlying tone indicated it made the girls feel sad and confused. The following

quotations demonstrate this:

> Jordan: I feel like there's been times when, like, a group of, like, friends will get together and it's like a lot of, like, your really close friends and then you're kind of like, "oh…why wasn't I invited?"

> Monica: Sometimes it's happened where, like, "I can't hang out, sorry", and then you see that they made plans, like, after you said that, with some other people.

Also within the category of alienation was feeling left out due to not having social media

or having access to certain applications. For instance, Jana said, "I just remember before I got an

Instagram I would always feel, like, kind of left out because everybody would be like, "Guess

what I saw on Instagram?" The participants also acknowledged that social media could lead to

isolation even when spending time with friends. Several times participants mentioned that social

media use got in the way of in-person interaction and that this was deleterious to their

relationships. The following quotation describes a time Carly attempted to speak to a friend who

was using her phone and how she perceived this alienation as being harmful to her friendship:

> Carly: Cause, if you're on your phone and you're like talking to them, you don't actually know if they're listening. They could say, "I'm listening," but it doesn't mean they really are and you want them to listen cause you're talking and when they're not listening it kind of just makes you feel a little sad. It shows they don't care what you have to say and it doesn't make you feel very good.

Similarly, the groups acknowledged that being dependent on social media can be

harmful. For instance, Jane said, "I think our culture's too dependent on it" and Christine said, "I

almost don't want [it] anymore because I am afraid I will become obsessed or something."

Jessica pointed out that this obsession can lead to an over-reliance on the opinions of others,

saying, "I feel like you can be really obsessed with it, like you care about what other people

think." However, along with this awareness came a sense of personal agency. The participants

acknowledged the possibility of becoming dependent on social media but also the importance of

being mindful of their engagement. Gretchen said, "Sometimes I can [tell myself], 'I need to go without looking for it for [a few] days' so I don't get obsessed with it."

The participants acknowledged that social media use is ubiquitous in their lives. Though many girls promoted the entertainment value of social media, others expressed concern about how the sites are used by others. For instance, Heather said, "…I don't know, like I've seen a lot of people, whenever they could be possibly enjoying life, they're taking photos." Many of the participants mentioned that social media use can interfere with school work. Emma said, "I have, like, no restraint at all…I have terrible time management whenever I'm on social media." Similarly, Jessica said, "…you look on it instead of doing homework and you regret that." Cora even mentioned that social media use can become such a distraction that homework is not completed, "…and then, like, I don't get my homework done and my mom gets really mad at me." However, the groups were generally divided on this. Although some girls admitted that social media use interfered with their schoolwork, others defended their ability to strike a balance between using social media and doing school work. Many participants described a system of using checking in on social media as a reward for doing a certain amount of work. Molly said, "I usually get my homework done still though {murmurs of agreement}, cause, like, even though, like, there's like a point where I'm like, 'okay, I have to stop' and then I slam it down. And then, like, I can always, like, check it and then put it down and then check it again, put it down, and I still get stuff done." Tina responded in agreement by saying, "I do, like, the thing where you do, like, one problem and then I, like, check or reply, and then you do another problem and then you check and reply."

Other negatives of social media use cited in the groups included bullying and interpersonal drama. However, this was often spoken about as happening outside of their school

environment as very few participants endorsed that they or their classmates participated in any of the bullying or drama themselves. Nevertheless, the participants reported that they found the bullying and drama disturbing and unnecessary. For instance, Jane said, "I've seen some things on social media and like, comments that were really, really, unnecessary and it just hurts me to read it…" However, similar to other negatives mentioned on social media, the girls were aware of and promoted their own self-agency. Christina said, "I think you have to learn how to use it properly because if you can't handle seeing other people hanging out and you care that deeply, I suggest you don't get on social media."

Throughout the groups, many participants expressed that due to the implicit rules of etiquette on social media, they feared being judged for what they posted. Though the groups agreed on and abided by the various etiquette rules described above, participants also felt restricted by them. Julie said, "When I, like, post, like, um, playing music and stuff, I feel like it may make people think that I'm trying to impress them, but, like, I kind of just wanna share with people."

Although the conversations around social media engagement skewed towards the negative, participants did perceive some aspects of social media positively. When asked what they liked about using social media, the overwhelming consensus was that social media foster and facilitate connection. In particular, for this sample, the girls reported that social media allowed them to stay engaged with friends while on breaks from school as well as with friends attending different schools or living in other areas. Katie said, "If you're on spring break or into the summer and you can't, don't see your friends, it's sort of nice to know what they're up to." Similarly, Taylor said, "I have friends from the other side of the world and I want to know what they are doing and I haven't talked to them in a really long time." The participants also

mentioned that social media will allow them to stay in touch with their friends once they leave

the school as students disperse to several different area schools after the 8th grade. Carly

summarized this by saying, "When we go to high school, we'll stay connected with all of our

class."

The other overwhelming response to the positives of social media use was that social

media have entertainment value. Throughout the groups, the students indicated that using social

media is fun. Indeed, common replies to the question included, "It's fun," "It's cool," and "It's

entertaining." Again, the themes of agency and acceptance showed up as the girls viewed

themselves as having personal agency and responsibility to use social media appropriately. For

instance, Jessica said, "If you're like enjoying it and then you're not like, like addicted to it, then

I think it's fine." When speaking on the positives of social media, an implicit theme of validation

emerged. As mentioned earlier, many participants mentioned enjoying receiving likes and

comments on posts because it made them feel appreciated or seen. As Lila said, "It makes you

feel nice cause, like, oh they appreciate what you posted, or they appreciate whatever you said.

It's like, 'wow, thanks!'" Christine agreed saying, "It makes me feel happy. It makes me feel

nice." As well, feeling connected on social media allowed the participants to feel a sense of

shared humanity. Monica said, "It's nice to see people that like, like the same thing as you, or

like, feel the same way about things." Echoing that, Jordan said, "We live in Richmond which is,

like, a smaller area, so, like, it's really cool to see, like, people across, like, the world that like the

same stuff you do." Finally, some participants revealed that they felt more accepted on social

media than in their personal lives, like Rita who said, "Sometimes for me, I'm kind of bad. I feel

more accepted on social media than I do by, like, my family and stuff like that…it's kind of nice

having social media and having, like, a safe place." Thus, for some, social media provide a safe outlet for self-exploration that is not otherwise available in their lives.

Discussion

Mass media exposure is consistently implicated as influencing body image from childhood through adulthood, in men and in women. In Westernized cultures, mass media impart a thin, and more recently, very fit, body ideal for women. When women internalize this ideal and perceive it as different from their own bodies, body dissatisfaction occurs. Social comparison can heighten this dissatisfaction. Festinger's (1954) *social comparison theory* states that individuals most often make comparisons with similar peers and that these comparisons are especially influential because individuals see the standards set by peers as attainable. Although there is ample research on media effects, particularly those of television and magazines, research investigating the impact of social media is relatively sparse. Additionally, much of the prior research has involved young adult samples, as they are statistically the heaviest social media consumers (Pew Internet & American Life Project, 2015a). So far, research shows a link between social media exposure and body dissatisfaction (e.g., Fardouly, Diedrichs, Vartanian, & Halliwell 2015; Rodgers & Melioli, 2015). However, there is a dearth of research examining the effects of social media on pre- and early adolescent samples. The current study used qualitative methodology to explore both how young adolescent girls use social media, and their perceptions of these media's impact on social comparison and body dissatisfaction. Although focus group questions were grounded in empirically supported sociocultural theories, this study used an inductive approach with a semi-structured discussion guide to allow for flexibility and conclusions derived from the data themselves rather than from a priori hypotheses.

Both quantitative and qualitative results on frequency of Internet and social media use were consistent with past research and statistics (e.g., Pew Internet & American Life Project, 2015b). That is, both internet and social media use were high in this sample. All participants reported having Internet access at home. Over 90% reported using social media at least daily, and half reported visiting social media sites multiple times per day. The most popular applications within this sample were visual social media platforms like Instagram and Snapchat. This is consistent with survey results by Pew Internet & American Life Project (2015b) that showed these visual platforms are the most popular with girls.

Parental influence was an important factor in the degree of social media use by the sample. The most common reason for not using social media was parental restriction. Parental modeling was powerful for at least one participant in the sample who indicated she was not interested in social media because her parents did not use it themselves. A few participants spoke about ignoring or getting around their parent's rules and restrictions. However, though many voiced displeasure with the restrictions their parents set, or with their monitoring, generally these parental strategies were effective in moderating the sample's social media use.

This result conflicts with two prior studies which found that parental restrictions and monitoring were generally *not* effective mediators of children's Internet use. For instance, in a study of 4th through 6th grade students in Hong Kong, parental restrictions were unrelated to children's Internet use (Lee & Chae, 2007). Similarly, parental filtering and monitoring of Internet sites and activities were not effective in reducing use in a UK study of children and adolescents aged 9 to 19 years (Livingstone & Helsper, 2009). Thus, the results of the current study should be interpreted with caution. However, the bulk of studies on parental mediation strategies are several years old and done with samples outside the United States. Thus, temporal

or contextual factors could account for the difference observed in this sample. As well, these studies examined general Internet use rather than social media specifically. It is possible, as in the current study, that parental mediation strategies specific to social media could be effective moderators of social media behavior.

Moreover, research in the areas of behavior problems and substance use, for example, demonstrates the power of parental influence on adolescents' behaviors. A large body of research demonstrates that parental knowledge of children's activities is negatively associated with conduct problems in adolescents (see Racz & McMahon, 2011 for a review). As well, many studies show a negative association between parental monitoring and adolescent substance use (e.g., Bogenschneider, Wu, Raffaelli, & Tsay, 1998; Steinberg & Fletcher, 1994). Finally, there is a clear relation between the initiation of substance use in children and adolescents and parental substance use (e.g., Bailey et al., 2016; Biederman, Faraone, Monuteaux, & Feighner, 2000). Thus, parental modeling is particularly effective in the area of substance use and could have broader implications. Further research is warranted, as it is possible that how parents use the Internet and social media affects children and adolescent engagement. The qualitative nature of this study precludes any conclusions about causality. However, current findings offer important directions for future research.

Consistent with sociocultural theories of body dissatisfaction such as the *dual-pathway model* (Stice, 1994) and the *tripartite model of influence* (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999), higher scores on measures of social comparison and thin-ideal internalization were significantly associated with greater body dissatisfaction in this study. Interestingly, the girls did not report frequent social comparisons. In fact, many actively denied comparing themselves to others and pointed out the potential harm of making these comparisons.

Several potential explanations for these results exist. One, it is possible that this particular sample is less prone to social comparison, as they displayed high levels of both media literacy and awareness of the potential dangers of investment in sociocultural ideals. This could buffer them from making such comparisons. Another possibility is that the face validity of the questions, in conjunction with social desirability, led to censored responses by the sample. Wood (1996) outlined research that demonstrates that individuals may be reluctant to admit to social comparison, particularly downward comparison, due to it being socially undesirable. It is also possible that participants are simply unaware that they compare themselves. Indeed, Wood (1996) cited multiple studies suggesting that social comparison might be an automatic process that happens outside of one's awareness. In summarizing the literature, Wood (1996) posits that when individuals encounter social information, comparison happens automatically. This seems plausible within this sample as many participants explicitly denied social comparisons, yet their comments reflected that such comparisons were made (e.g., one participant who stated she did not feel social media contributed to social comparison but later mentioned comparing herself to a peers who posts selfies). Future studies should examine the association between social comparison and media literacy to see if heightened media literacy decreases the likelihood of appearance-based social comparisons.

Although many participants endorsed appearance concerns, not all perceived that social media use was a contributor. It is possible that social media exposure is not analogous to other forms of mass media exposure and does not similarly impact body esteem. It is also possible that type of exposure or dosage matters. However, due to the small sample size and lack of comparison groups, conclusions cannot be drawn from this study. Again, this sample demonstrated high levels of media literacy. For example, many participants were knowledgeable

about the use of Photoshop to digitally alter images and acknowledged the artificial nature of celebrities' social media identities. This level of media literacy could have offset some of the potential deleterious effects of exposure to such images. This literacy, however, also could have contributed to social desirability. Participants may have been unwilling to admit that they were affected by such images due to their knowledge of their potential harm.

There are many reasons to believe that social media could exert a negative influence on body esteem. In particular, social media are highly visual and statistics demonstrate that girls engage the most with visual-based applications such as Instagram and Snapchat (Pew Internet & American Life Project, 2015b). Thus, similar to other forms of mass media, there is likely high exposure to thin-ideal content. Further, social media platforms are unique from other forms of media in that they involve peer interaction. According to sociocultural theories of body dissatisfaction, peers transmit messages about body ideals that influence body dissatisfaction (Clark & Tiggemann, 2006). Thus, social media involve not only media pressure but also potentially peer pressure. Though social comparison theory posits that upward comparisons might result in the most harm as individuals perceive a greater discrepancy between themselves and those they view as superior (Festinger, 1954), some research on social media contradicts this. In a sample of female undergraduates, peer comparisons were more strongly related to body dissatisfaction than comparison with media figures (van Vonderen & Kinnally, 2012). In an experiment with female undergraduates, participants viewed either celebrity images, equally attractive unknown peer images, or travel images on Instagram (Brown & Tiggemann 2016). Exposure to both celebrity and peer images increased body dissatisfaction and this was mediated by state appearance comparison. No significant difference between exposure to celebrity or peer images emerged. Thus, social media might make a particularly potent contribution to body

dissatisfaction due to their high levels of appearance-based content that offer ample social comparison opportunities and exposure to the thin ideal.

Though the research on media literacy and media literacy programs is so far inconclusive, many studies show promising results. One factor that contributes to the variable research results is the lack of a consistent way to measure media literacy and its components (McLean, Paxton, & Wertheim, 2016). As well, there is an array of cross-sectional research, but relatively few experimental and prospective studies. However, the research that exists demonstrates the potential of media literacy interventions. For example, in a sample of 7th grade Australian females, there was an indirect, inverse relation between media literacy and body dissatisfaction fully mediated by thin-ideal internalization and appearance comparisons. In a longitudinal study evaluating the effects of a media literacy intervention versus a control group on a sample of 8th grade Australian students, shape and weight concerns were reduced for the group receiving the media literacy intervention (Wilksch & Wade, 2009). Encouragingly, these results were maintained at a 30-month follow-up. Main effects were also found for body dissatisfaction and dieting.

The timing of these media literacy interventions also seems to matter. The two previously mentioned studies involved early adolescent populations. In a study with college-aged women, making counterarguments in response to exposure to thin-ideal images was not related to social comparison, appearance-related dissatisfaction, or thin-ideal internalization. Challenging the media ideal was not an effective protective factor for that older sample. Researchers hypothesize that timing is crucial as by late adolescence and early adulthood, ideas about appearance may be relatively ingrained, making it more difficult to intervene (Yager, Diedrichs, Ricciardelli, & Halliwell, 2013). Though there have been reviews assessing the effectiveness of body image

programs across age groups (i.e., Yager, et al. 2013), no known studies to date have done so for media literacy interventions. McLean, Paxton, and Wertheim (2016) conducted a systematic review of media literacy research but did not analyze if results differed depending on the age of the sample. Future studies should examine if there is an ideal time to target media literacy. Finally, there is no known research that examines media literacy specifically aimed at social media. As social media involve interaction with peers, celebrities, and others, media literacy programs likely need refinement and evaluation to address those issues unique to social media. It should also be noted that though some researchers have called for media literacy programs to encompass social media (Andsager, 2014), others caution against implementing such programming without further research (Perloff, 2014). Perloff argues that such programs, though well-intentioned, can elicit resistance and reactance. As well, he asserts there is not enough research to confirm that social media do indeed exert harmful effects. As referenced previously, although many studies demonstrate negative associations between social media exposure and body dissatisfaction (e.g., Strubel, Petrie, & Pookulangara, 2016), the participants in this study showed awareness of the potential negative influence of social media and denied being affected. Thus, more research is likely needed before social media literacy interventions can be effectively implemented. The current study provides support for the potential power of media literacy in moderating one's level of thin-ideal internalization, body dissatisfaction, and eating concerns.

This study also underscores the importance of the school environment in shaping media literacy, confidence, and appearance concerns. When asked where they learned about the artificial nature of media images and the potential harmful effects, many participants mentioned the supportive school environment as being particularly important. Indeed, in several of the groups, girls described how the school imparted messages of self-acceptance, acceptance of

differences, understanding and valuing diversity, media literacy, and confidence. Girls also perceived that their school environment was unique. In fact, some participants expressed the belief that other schools, such as large coeducational public schools, actually impart the opposite messages. This was the most intriguing and unexpected finding of the current study.

There has been little research examining the potential of the school environment as a protective factor against body image disturbances. As well, much of the literature warns that a single-sex school environment could be harmful for body esteem. For instance, multiple studies found that female adolescents in single-sex schools internalized a thinner body ideal than girls in coeducational schools (i.e., Dyer & Tiggemann, 1996). In a study with Australian adolescents (mean age = 16 years), there were no significant differences between girls from coeducational or single-sex Catholic schools on ideal figure or eating disorder scores, however girls from the single-sex school placed a greater emphasis on achievement (Tiggemann, 2001). This emphasis in turn was associated with a preference for a thinner ideal figure among girls in the single-sex school environment. In contrast, emphasis on achievement was linked with preference for a larger ideal figure for girls in the coeducational school environment. Thus, past research demonstrated potentially troubling links between thin-ideal internalization and achievement for girls in single-sex schools. However, a recent study by Cribb & Haase (2016) found contrary results. Girls (mean age = 13 years) in the single-sex school environment displayed less thin-ideal internalization. As well, school environment moderated the relation between internalization and self-esteem such that greater internalization was related to lower self-esteem in girls attending the coeducational school. The authors hypothesized that the lack of opposite sex peers might decrease appearance concerns in single-sex school environments. They also found that social support had a positive association with self-esteem for girls in the single-sex school.

Sociocultural theories such as the *tripartite model of* influence (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999) posit that peers exert powerful influence in transmitting sociocultural messages. Positive peer support might be promoted by the school environment and could help to mitigate some of the potential harm of exposure to sociocultural ideals.

It is unclear why these research findings are so discrepant. The mean age in the studies by Dyer and Tiggemann (199) and Tiggemann (2001) was higher, 15 to 16 years, than the mean age of 13 in both the current study and the study by Cribbs and Haase (2016). As hypothesized by Mensinger (2010), girls in single-sex school environments might face increased pressure to achieve a superwoman ideal, striving to reach both societal beauty ideals and academic success. It is possible that by middle to late adolescence, sociocultural ideals are more entrenched and academic pressures are increasing, thereby contributing to the increased thin-ideal internalization and drive for achievement noted in these studies. However, additional research is needed examining specific characteristics of the school environment that might explain why some studies have found that girls in single-sex schools display higher internalization of the thin ideal, and yet, other investigations found the opposite result. Though many studies hypothesized that the presence or absence of opposite sex peers influenced appearance concerns, none have assessed whether girls within a single-sex environment perceive that as a factor. As well, none of the available research measured variables such as teachers' attitudes and behaviors relating to sociocultural factors. It is possible that the discrepancies in results could be due in part to school and teacher characteristics. The results of our study strongly suggest the culture of the school contributed to lower social comparison and greater appearance satisfaction. Girls spoke explicitly about specific programming the school offered, such as a club aimed at accepting differences and a body image club. They also spoke of the supportive culture of the school, evident in the

attitudes and messages that teachers and administrators promoted. As well, parents at this school are highly involved, as evidenced by both their communication to school administration of their concern over moderating social media use and girls' responses about the degree of parental social media monitoring practices. Thus, this particular school seems to take an ecological approach to the prevention of body dissatisfaction and eating problems, as is recommended by many experts in the field (e.g., Levine & Smolak, 2006; Neumark-Sztainer, 1996). That is, prevention is best undertaken when teachers are trained, school policies and school environment are modified, and parents are involved.

Conclusion

The purpose of this study was to examine how social media use impacts thin-ideal internalization, social comparison, and body dissatisfaction in an emerging adolescent female sample. Mass media exposure is often harmful for body esteem. However, social media are less thoroughly researched. In particular, the effects of social media on early adolescents is relatively unknown. Although age restrictions are in place to dissuade those younger than 13 from having social media accounts, girls in this sample indicated that these restrictions are easy to circumvent and did not prevent them from gaining access.

Because there is so little research with this population, this study employed a qualitative approach. Qualitative methodology is useful when social phenomena are not well understood and need further refinement prior to quantitative measurement (Ritchie, 2003). Information gained from qualitative inquiry has inherently limited generalizability due to the small, homogeneous sample. However, the aim of qualitative research is to gain information relevant to a specific group (Heppner, Kivlighan, & Wampold, 1999). The goal of this study was to inform later

research that can be used to target prevention efforts aimed at reducing the negative impacts of

social media use on body dissatisfaction in a young, vulnerable population.

This sample of 7th and 8th grade girls from a small, private single-sex school, largely

denied excessive social comparison or body dissatisfaction and displayed high levels of media

literacy and self-confidence. When asked how they obtained these ideals, many participants

mentioned the supportive and educational school environment as being the primary vehicle for

such attitudes and messaging. Research supports school-based programming for both media

literacy and prevention of body image and eating concerns (e.g., McLean, Paxton, & Wertheim,

2016; Yager, Diedrichs, Ricciardelli, & Halliwell, 2013). In particular, experts promote an

ecological approach to prevention and intervention in schools (Yager et al., 2013). That is, a

singular program is not sufficient to reduce body image concerns or disordered eating.

Prevention efforts are best applied when schools provide training for their staff, adjust their

policies and culture, and include parents in the process. As well, a systematic review of the

effectiveness of classroom-based body image programs found that the most effective age group

to target is 12-13 years, compared with 14-16 years (Yager, et al., 2013). This study did not

quantitatively assess the school environment, programming, or attitudes. However, the

qualitative data suggest that the school involved in this study evinces that ecological approach

and does so at the optimal age for prevention.

Strengths and Limitations

Qualitative research is an important first step in understanding how social media use

impacts middle school-aged females. Without the rich, nuanced, and specific information

gathered from members of the population themselves, it is possible that researchers could distort

their social reality. Focus groups offer initial information that appropriately guides future

research because the information gathered is based on the subjective experiences of a sample of the population of interest. Focus groups are particularly useful for exploratory research with an early adolescent population, as the interaction between peers can serve to decrease self-consciousness and enhance vulnerability. Also, there is the potential for group synergy whereby the participants both question and explain themselves to each other (Morgan, 1996). Additionally, researchers gain access to the specific language and discourse of the population of interest, by querying its members directly. In this way, focus groups help mitigate potential biases stemming from prior research conceptualizations or researcher ignorance. In this study, the inductive approach proved to be a strength. It allowed for the emergence of data that offered insight on avenues for future prevention research. Had the researchers gone in with a strict interview protocol or predetermined hypotheses, it is possible that information about the protective school environment may not have been gleaned.

Focus groups also have a number of potential limitations. They often lack external validity due to the relatively small and homogeneous sample. However, the aim of this research was to explore the subjective experiences of a sample of emerging adolescent girls, not to make generalizations to larger populations or to other demographics. In this way, the homogeneous nature of the focus groups was a strength as it fostered rapport and allowed for more fluid dialogue. Another potential limitation of focus group methodology is that the group setting can alter or vary participant responses (Kreuger, 1994). Group dynamics can influence certain viewpoints to be suppressed. As well, the public nature of the groups mean that privately held opinions might not be expressed. For this reason, the groups rather than the individuals are the unit of analysis in focus groups (Smithson, 2010). That is, opinions in focus groups are constructed collectively and analyzed as such. Particular to this study, many participants denied

excessive appearance concerns and specifically denied that social media impacted such concerns. It is possible that social desirability influenced the participants, causing those with dissenting opinions to be hesitant to speak up. As well, the questions posed were face valid and could have further evoked social desirability. It is also possible that we did not pose the right questions to obtain the information we were seeking. Future research should continue to explore how to best word questions to foster a sense of comfort and safety in the group. Focus group methodology is recommended for this age group as early adolescents might feel more comfortable in the presence of peers (Kennedy, Kools, & Krueger, 2001). However, individual interviews might garner more vulnerable responses.

Another concern is the bias that is inherent in qualitative research. Because the methodology does not rely on quantitative and standardized measures, researchers had to subjectively interpret the data. For this reason, it was important that all researchers involved in the project be aware of their potential biases and a priori conceptualizations throughout the process. The use of the audit trail helped to reduce bias and provide accountability to the process and interpretations. It also allows other researchers to trace the logic should they want to replicate or extend this study. In addition, having regular meetings with a secondary coder strengthened the credibility of the findings.

In conclusion, this study explored how young adolescent females use social media and their related perceptions and experiences. In particular, we were interested in how the sample used social media, and how they thought this use influenced their feelings about their bodies. Although mass media exposure is linked to body dissatisfaction, it is critical to examine the influence of social media on young adolescent populations to enhance prevention and intervention efforts. Results of the current study suggest that parental involvement and school

environment play crucial roles in the relation between social media exposure and appearance concerns. The perspectives gained from this study have important implications for future prevention research.

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Appendix A

Demographic Questionnaire

Date: _____

Current Age (circle one):   8   9   10   11   12   13   14

Current Grade (circle one):   5th   6th   7th   8th

Please Choose the Race(s) That Best Describe(s) You (Circle All That Apply):

White   Black   Hispanic   Asian

Hawaiian   Pacific Islander   Native American

Appendix B

Social Media Use

Date: _____

Can you use the internet in your home?   Yes   No

For the following devices, please circle if you are able to use these devices at home, at school, and if you have any of these devices for your personal use

I Use This Device At….(Circle All That Apply)

Desktop Computer	School	Home	I Have My Own
Laptop Computer	School	Home	I Have My Own
iPad/Other Tablet	School	Home	I Have My Own
E-Reader with Data/Wireless	School	Home	I Have My Own
Smart Phone	School	Home	I Have My Own
Cell Phone (No Data)	School	Home	I Have My Own

Other WiFi Devices Not Listed Above:

_____

_____

How many hours a day do you use the Internet (on any device)?

  None   Less than 1   1   2   3   4   5   6 or
                                          more

What do you most often use to get on the Internet (circle one)

Desktop Computer   Laptop Computer   Tablet   E-Reader   Smart Phone

Do you ever visit social media sites or apps?

Yes   No

What social media apps do you visit (circle all that apply)?

Facebook	Vine	Twitter	Periscope	Google+
Instagram	WhatsApp	Kik	Whisper	Other (Please List)
Snapchat	Tumblr	Pinterest	MySpace	

Other Sites:

_____

On what social media apps do you have an account?

Facebook	Vine	Twitter	Periscope	Google+
Instagram	WhatsApp	Kik	Whisper	Other (Please List
Snapchat	Tumblr	Pinterest	MySpace	

Other Sites:

_____

Do your parents limit your access to the internet and/or social media?

Yes   No

Do your parents check in on what you do on the internet and/or social media?

Yes   No

If so, please use the space below to describe.
(Examples may include things such as, "I'm not allowed to have a phone" or "My parents read my text messages" or "my parents won't let me have a social media account."

IF YOU AND YOUR FRIENDS DO NOT USE SOCIAL MEDIA AT ALL, YOU MAY END THE SURVEY HERE.

At what age did you first start using social media?
_____

How often do you visit social media sites/applications?

Never	Less Than 1/Week	Once/Week	2-3/Week
Five Times/Week	Daily	Multiple Times a Day	

Please list your top 3 most visited social media sites:

1) _____

2) _____

3) _____

What types of activities do you do on social media (Choose All That Apply)?

Read Posts by Friends	Read News Articles	Read Other Articles	Post Links	Like/Comment on Friend Posts
Read Posts by Celebrities	Read Gossip Articles	Post Pictures	Post Other	Like/Comment on Celebrity Posts

Other Activities Not Listed Above:

_____

_____

From the list above, what 3 activities do you do most often on social media sites?

1) _____

2) _____

3) _____

How often on average do you <u>post</u> on social media sites?

Never	Once a Month	2-3/ Month	Weekly	2-3/ Week	Daily	Multiple Times a Day

How often, on average, do <u>your friends</u> post pictures?

Never	Once a Month	2-3/ Month	Weekly	2-3/ Week	Daily	Multiple Times a Day

How often, on average, are the pictures <u>your friends</u> post selfies?

None	Less than Half	Half	More than Half	All

How often, on average, do you like/comment on <u>your friends'</u> pictures?

Never	Rarely	Sometimes	Often	Always

How often, on average, do <u>you</u> post pictures?

Never	Once a Month	2-3/ Month	Weekly	2-3/ Week	Daily	Multiple Times a Day

How often, on average, are the pictures <u>you</u> post selfies?

None	Less than Half	Half	More than Half	All

How often, on average, do your friends like/comment on your pictures?

Never   Rarely   Sometimes   Often   Always

How do you feel you compare to other girls your age?

	Much Less Than Others	Less Than Others	About the Same	A Little More Than Others	Much More Than Others
How often you visit social media sites?	1	2	3	4	5
How often you post on social media sites?	1	2	3	4	5
How often you post pictures on social media sites?	1	2	3	4	5
How often you like/comment on social media sites?	1	2	3	4	5

Appendix C

Physical Appearance Comparison Scale-Revised (PACS-R)

People sometimes compare their physical appearance to the physical appearance of others. This can be a comparison of their weight, body size, body shape, body fat or overall appearance. Thinking about how you generally compare yourself to others, please use the following scale to rate how often you make these kinds of comparisons.

Never	Seldom	Sometimes	Often	Always
0	1	2	3	4

	Never				**Always**
1. When I'm out in public, I compare my physical appearance to the appearance of others.	0	1	2	3	4
2. When I meet a new person (same sex), I compare my body size to his/her body size.	0	1	2	3	4
3. When I'm at work or school, I compare my body shape to the body shape of others.	0	1	2	3	4
4. When I'm out in public, I compare my body fat to the body fat of others.	0	1	2	3	4
5. When I'm shopping for clothes, I compare my weight to the weight of others.	0	1	2	3	4
6. When I'm at a party, I compare my body shape to the body shape of others.	0	1	2	3	4
7. When I'm with a group of friends, I compare my weight to the weight of others.	0	1	2	3	4
8. When I'm out in public, I compare my body size to the body size of others.	0	1	2	3	4
9. When I'm with a group of friends, I compare my body size to the body size of others.	0	1	2	3	4
10. When I'm eating at a restaurant, I compare my body fat to the body fat of others.	0	1	2	3	4
11. When I'm at the gym, I compare my physical appearance to the appearance of others.	0	1	2	3	4

Appendix D
Sociocultural Attitudes Towards Appearance Questionnaire – 4 (SATAQ-4)

Directions: Please read each of the following items carefully and indicate the number that best reflects your agreement with the statement.

Definitely Disagree = 1
Mostly Disagree = 2
Neither Agree Nor Disagree = 3
Mostly Agree = 4
Definitely Agree = 5

	Definitely				**Definitely**
	Disagree				**Agree**
1. It is important for me to look athletic.	1	2	3	4	5
2. I think a lot about looking muscular.	1	2	3	4	5
3. I want my body to look very thin.	1	2	3	4	5
4. I want my body to look like it has little fat.	1	2	3	4	5
5. I think a lot about looking thin.	1	2	3	4	5
6. I spend a lot of time doing things to look more athletic.	1	2	3	4	5
7. I think a lot about looking athletic.	1	2	3	4	5
8. I want my body to look very lean.	1	2	3	4	5
9. I think a lot about having very little body fat.	1	2	3	4	5
10. I spend a lot of time doing things to look more muscular	1	2	3	4	5

Answer the following questions with relevance to your Family (include: parents, brothers, sisters, relatives):

11. I feel pressure from family members to look thinner.	1	2	3	4	5
12. I feel pressure from family members to improve my appearance.	1	2	3	4	5
13. Family members encourage me to decrease my level of body fat.	1	2	3	4	5
14. Family members encourage me to get in better shape.	1	2	3	4	5

Answer the following questions with relevance to your Peers (include: close friends, classmates, other social contacts):

15. My peers encourage me to get thinner.	1	2	3	4	5
16. I feel pressure from my peers to improve	1	2	3	4	5
17. I feel pressure from my peers to look in	1	2	3	4	5
18. I get pressure from my peers to decrease my level of body fat.	1	2	3	4	5

Answer the following questions with relevance to the Media (include: television, magazines, the Internet, movies, billboards, and advertisements):

19. I feel pressure from the media to look in better shape.	1	2	3	4	5
20. I feel pressure from the media to look thinner.	1	2	3	4	5
21. I feel pressure from the media to improve my appearance.	1	2	3	4	5
22. I feel pressure from the media to decrease my level of body fat.	1	2	3	4	5

Note: SATAQ-4 Scoring:
Internalization – Thin/Low body fat: 3, 4, 5, 8, 9
Internalization – Muscular/Athletic: 1, 2, 6, 7, 10
Pressures – Family: 11, 12, 13, 14
Pressures – Peers: 15, 16, 17, 18
Pressures – Media: 19, 20, 21, 22

Appendix E

Eating Disorder Inventory-3 (EDI-3); Body Dissatisfaction Subscale

Directions: Please circle the number that corresponds to the way you feel about your body.

1. I think that my stomach is too big.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

2. I think that my thighs are too large.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

3. I think that my stomach is just the right size.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

4. I feel satisfied with the shape of my body.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

5. I like the shape of my buttocks.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

6. I think that my hips are too big.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

7. I think that my thighs are just the right size.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

8. I think that my buttocks are too large.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

9. I think that my hips are just the right size.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

Appendix F

Parental Opt-Out Letter

Dear Parent or Guardian:

I am a first-year Counseling Psychology PhD student at Virginia Commonwealth University. I am conducting a study to investigate how girls in grades 5-8 use social media and the impact of social media on how they perceive themselves and others. I request permission for your daughter or female dependent to participate.

STUDY DESCRIPTION

Participation in the study involves your daughter filling out questionnaires. These questionnaires ask about social media use, peer comparison, and body image. Participation also involves your daughter (female dependent) attending a group meeting in which she and fellow females within her grade discuss social media use. Topics will include how they use social media, and what impact they believe social media has on them and their peers.

Questionnaires will be filled out during class time. They will take approximately half an hour. The group meeting will last for approximately 1 hour. Your female dependent's participation is entirely voluntary. She may choose not to participate. She may refuse to answer any questions asked during the surveys or group meeting. She may also stop participating in this study at any time.

No data will be linked to names or any other identifiers. We will collect demographic from all participants (age, grade, and race). We will not collect birth date or any other identifying data.

Groups will include approximately 4-8 girls. They will be led by study staff under the supervision of Dr. Suzanne Mazzeo, a licensed clinical psychologist. This study is designed to examine the opinions of a group of people. Your female dependent's information will be included with information from all other participants, and her individual answers will be aggregated and kept completely confidential. The meetings will be digitally audio recorded so we are sure to get everyone's ideas, but no full names will be recorded on the digital audio.

RISKS AND DISCOMFORTS

Possible risks and inconveniences associated with participation in this study include feeling concerned or embarrassed after thinking about social media use or the impact social media have. Your daughter (or female dependent) does not have to answer any question she does not want to answer. If she participates in the group meeting, she does not have to talk about anything she does not want to talk about, and she can leave the group program at any time.

BENEFITS, COMPENSATION, AND COSTS

This is not a treatment study, and your child is not expected to receive any direct benefits from participation in the study. The information from this research study may lead to an intervention in the future for parents and preadolescents aimed at critically examining social media use and strategies for positive engagement. There is no compensation provided for participation in the study. There is no cost other than the time your daughter spends filling out surveys and participating in the group meeting.

CONFIDENTIALITY

Information gathered in this study will be maintained in a manner consistent with federal and state laws and regulations. This means that all information your female dependent provides to us, and all of her answers to our questions, will be kept confidential. No one outside the research team will have access to your female dependent's records.

Potentially identifiable information about your child will consist of digital audiotapes of the focus groups. The groups will be digitally audiotaped, but no full names will be recorded. At the beginning of the session, all members will be asked to not use names so that confidentiality and privacy is maintained. The audio files and the notes will be stored electronically behind a password-protected secure firewall, or in a locked cabinet. After the information from the audio is typed up, the audio will be destroyed. Data are being collected only for research purposes. Data will be identified by code numbers, not names, and stored in a locked research area. These code numbers will not be linked to names. No personal identifying information will be collected. Other written and recorded files will be kept in a locked file cabinet for five years after the study ends and will be destroyed at that time. No files will be kept indefinitely. Access to all data will be limited to study personnel.

Although the researcher will take every precaution to maintain confidentiality of your daughter's responses, the nature of focus groups prevents the researchers from guaranteeing confidentiality. However, the researchers will instruct group members to not use names or any other identifying information. Further, participants will be asked to respect the privacy of their fellow participants and not repeat what is said during the groups to others.

We will not tell anyone the answers your child (female dependent) gives us; however, information from the study and the consent form signed by you may be looked at or copied for research or legal purposes by Virginia Commonwealth University. But, if your child (female dependent) tells us that someone is hurting her, or that she might hurt herself or someone else, the law says that we have to let people in authority know so they can protect your child (female dependent). Finally, what we find from this study may be presented at meetings or published in papers, but neither your name nor your child's (female dependent's) name will ever be used in these presentations or papers.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

Your child does not have to participate in this study. If your daughter does not participate, the services provided by the school and her standing within the school will not be impacted.

Your daughter's participation in this study may be stopped at any time by the study staff or the sponsor without your consent. The reasons might include:
- the study staff thinks it necessary for her health or safety;
- she has not followed study instructions; or
- administrative reasons require her withdrawal.

If you withdraw consent from the study before the group meetings, there are no anticipated consequences.

QUESTIONS
In the future, you may have questions about your daughter's participation in this study. If you have any questions, complaints, or concerns about the research, contact:

> Dr. Suzanne Mazzeo
> Virginia Commonwealth University
> Department of Psychology
> P.O. Box 842018
> Richmond, VA 23284-2018
> Phone: 804-827-9211
> 804-404-3593

If you have any questions about your daughter's (or female dependent's) rights as a participant in this study, you may contact:

> Office for Research
> Virginia Commonwealth University
> 800 East Leigh Street, Suite 3000
> P.O. Box 980568
> Richmond, VA 23298
> Telephone: 804-827-2157

You may also contact this number for general questions, concerns or complaints about the research. Please call this number if you cannot reach the research team or wish to talk to someone else. Additional information about participation in research studies can be found at http://www.research.vcu.edu/irb/volunteers.htm.

CONSENT

Please only return this form with your signature if you do not grant permission for your daughter to participate in this research study.

If you do not consent to your daughter's participation, please return this form to Orchard House by __date of data collection___, 2016. You may also call the researcher directly at 804-404-3593. If you do not return this form or call the researcher by __date of data collection___, your daughter will have the option to participate in the study if she chooses to do so.

☐ I do not grant permission for my daughter to participate in this study.

_____
Signature of Parent/Guardian

_____
Printed Parent/Guardian Name

_____
Date

Blair Burnette, BA
Counseling Psychology Doctoral Student
Virginia Commonwealth University

Appendix G

YOUTH ASSENT FORM

TITLE: Exploration of Social Media Use and Its Impact on Body Dissatisfaction in a Preadolescent Female Sample

VCU IRB NO.: HM20006424

This form may have some words that you do not know. Please ask someone to explain any words that you do not know. You may take home a copy of this form to think about and talk to your parents about before you decide if you want to be in this study.

What is this study about?
The purpose of this study is to understand more about preteen females' thoughts on social media, how they use social media, and how using social media makes them feel about themselves, their bodies, and their friends.

What will happen to me if I choose to be in this study?
If you choose to participate, your involvement in this study will all take place today. You will be asked to fill out surveys that ask about how you use social media, what you think about social media, and how using social media makes you feel.

You may also be asked to participate in a group meeting in which we discuss how you and your friends use social media, what you think about social media, and how using social media makes you feel. You will meet in groups that will include about 4-6 of you and your peers. The meetings will be audio recorded so we are sure to get everyone's ideas, but no full names will be recorded on the audio.

If you decide to be in this research study, you will be asked to sign this form. Do not sign the form until you have all your questions answered, and understand what will happen to you.

What might happen if I am in this study?
Sometimes talking about these things makes people upset or embarrassed. You do not have to answer any questions you do not want to answer and you may stop the surveys at any time.

If you participate in the group meeting, you do not have to talk about anything you do not want to talk about. You can leave the group at any time. If you do become upset, the people running the group will help you.

What do I get if I am in this study?
You do not receive any direct benefit from being in this study but your participation will help researchers learn how social media affect people your age. You will not receive compensation for participating in this study.

Will you tell anyone what I say?
We will not tell anyone the answers you give us. We will not share your answers with your teachers or parents or friends. However, if you participate in the group meeting, other members of your group will know what you say. If you tell us that someone is hurting you, or that you might hurt yourself or someone else, the law requires us to let people in authority know so they can help you.

If we talk about this study in speeches or in professional papers, we will never use your name.

Do I have to be in this study?

You do not have to be in this study. If you choose to be in the study you may stop at any time. No one will blame you or criticize if you drop out of the study. If you choose not to participate, your education will not be affected. You will still have access to all the services provided by your school and your standing within the school will not be affected.

Questions
If you have questions about being in this study, you can talk to the following persons or you can have your parent or another adult call:

Dr. Suzanne Mazzeo
Virginia Commonwealth University
Department of Psychology
P.O. Box 842018
Richmond, VA 23284-2018
Phone: 804-827-9211

Do not sign this form if you have any questions. Be sure someone answers your questions.

Assent:

I have read this form. I understand the information about this study. I am willing to be in this study.

_____   _____
Youth Name (Printed)   Youth Signature   Date

_____
**Name of Person Conducting Informed Assent
Discussion / Witness (Printed)**

_____   _____
Signature of Person Conducting Informed Assent   Date
Discussion / Witness

_____   _____
Principal Investigator Signature (if different from above)   Date

Appendix H

Focus Group Discussion Guide

Social Media Use-General
1. Do you all use social media?
2. What social media sites and applications do you use?
    a. Follow-up questions on whether they access them via their computer, phone, both
3. What do you do on these sites?
    a. Further clarification on whether or not they browse the site, post on the site, comment on other people's posts, or any combination.
4. How often do you access these sites?
    a. Follow-up questions on which sites are visited most often, frequency; attempt to learn approximate hours/day spent on social media

Peers/Celebrities
1. Do your friends use the same sites/applications?
2. How does looking at what your friends post make you feel?
3. What about celebrities?
4. Do you or your friends post 'selfies'?

Emotions/Perceptions
1. How does it make you feel when you see these pictures?
2. How does it make you feel when others comment or like your posts?
3. Do you feel like seeing what your friends or celebrities post affects you emotionally?
4. Do you feel like seeing what your friends or celebrities post affects how you feel about your body?

Conclusion
1. What else do you want to share about using social media? What impact do you believe it has on you and your friends?
2. Do you like using social media? Do you want to use social media as often as you do?

Appendix I

Author Vita

CAROLYN BLAIR BURNETTE

Department of Psychology
Virginia Commonwealth University
806 West Franklin Street, Richmond, VA 23284
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Email: burnettecb@vcu.edu

EDUCATION

2015 - Present	**Virginia Commonwealth University**, Richmond, VA
	Ph.D., Counseling Psychology (APA-Accredited)
	Faculty Advisor: Suzanne Mazzeo, Ph.D
	Master's Thesis: Investigating Social Media Use and Its Relation with Body Dissatisfaction in an Early Adolescent Female Sample
2004 - 2008	**Kenyon College**, Gambier, OH
	B.A., Psychology
	Elissa B. Carleton Scholarship for Excellence in Psychology (2006-2008)
	Faculty Advisor: Linda Smolak, Ph.D.

Research Interests:

My current research interests focus on prevention and treatment of eating and weight related concerns and eating disorders. In particular, I am interested in how sociocultural factors, particularly mass media and social media, influence the development of body image.

PROFESSIONAL EXPERIENCE

2015 - 2016	**Virginia Commonwealth University**, Richmond, VA
	Academic Advisor, Department of Psychology
	Advise undergraduate psychology students in course scheduling, degree planning, and post-graduation plans.
2013 - 2015	**Monroe Harding**, Nashville, TN
	Impact Measurement Coordinator
	Built Salesforce database to track agency-wide data; duties included building custom data forms, creating workflow rules, managing security and user permissions, report-building, and other data tracking and summarization. Designed implementation plan for agency-wide database rollout and conducted and delegated ongoing staff trainings. Assisted in implementation of agency-wide transition to trauma-informed care model.
2009 – 2010	**Vanderbilt University,** Nashville, TN

Program Coordinator, Department of Nursing Education & Professional Development
Coordinated three departmental programs including orientation for new nursing staff, nursing student placement, and a two-month nursing internship program for nursing students. Scheduled events, organized rosters and materials, served as liaison for new employees and students, and managed program data. Across all three programs, implemented new processes that simplified and organized data tracking which resulted in increased efficiency and productivity.

CLINICAL EXPERIENCE

2015 – Present   **Virginia Commonwealth University**, Richmond, VA
Supervisors: Suzanne Mazzeo, Ph.D. & Rachel Gow, Ph.D.
Roles: Co-leader of a manualized, weekly, cognitive behavioral support and skills-based group for parents of overweight children (ages 5-11) who are at or above the 85th percentile for BMI. Conduct structured interviews and a brief interview and survey battery for parents and children including the Physical Activity Recall, Pediatric Quality of Life Inventory, and other measures of health behavior and psychological well-being.

2016 – Present   **Virginia Commonwealth University**, Richmond, VA
Counseling Practicum I, University Counseling Services, Division of Student Affairs
Supervisors: Jan Altman, Ph.D. & Lauren Pucci, M.A.
Roles: Providing brief individual therapy for young adult collect students with a wide range of mental health concerns. Conducted semi-structured diagnostic intake interviews, maintained case files, and coordinated referral services for clients. Participated in case conferences and seminars with a particular focus on multicultural awareness and competence, case conceptualization, and treatment planning.

RESEARCH EXPERIENCE

2015 – Present   **Virginia Commonwealth University,** Richmond, VA
Project Coordinator, Graduate Research Assistant, and Undergraduate Research Coordinator, Healthy Eating Lab
Advisor: Suzanne Mazzeo, Ph.D.
Assist in IRB preparation, participant recruitment, data collection, data management, data entry, data analysis, and management of undergraduate research interns.

2010 - 2013   **Vanderbilt University,** Nashville, TN
Program Coordinator, Department of Special Education, KidTalk Research Lab
Advisor: Ann Kaiser, Ph.D.
Coordinated with site research staff; managed team of research assistants; assessed data reliability and assessment fidelity; assisted with participant recruitment; assisted with preparation of manuscripts and conference presentations; built RedCap databases for data entry and tracking; ensured accuracy and completion of all data.

2008 - 2009	**Stanford University,** Stanford, CA
	Social Sciences Research Assistant, Department of Psychiatry
	Advisor: Stewart Agras, Ph.D.
	Worked as data center coordinator for three NIH funded clinical studies. Assisted with participant recruitment, assessment, and scheduling; wrote study protocols; built and managed Filemaker databases; designed data tracking systems; entered and managed data; coordinated with other site research assistants

PUBLICATIONS

In Preparation

Burnette, C. B., Simpson, C. C., & Mazzeo, S. E. Exploring gender differences in the link between weight suppression and eating pathology.

Burnette, C. B., & Mazzeo, S. E. Investigating social media use and its relation with body dissatisfaction in an early adolescent female sample.

POSTER PRESENTATIONS

Burnette, C. B., Kwitowski, M. A., Mazzeo, S. E. (2017, June). *The Influence of Social Media on Body Image: Considering School Environment as a Protective Factor.* Poster to be presented at the International Conference on Eating Disorders. Prague, CR.

Burnette, C. B., Simpson, C. C., & Mazzeo, S. E. (2017, June). *Exploring Gender Differences in the Link Between Weight Suppression and Eating Pathology.* Poster to be presented at the International Conference on Eating Disorders. Prague, CR.

Burnette, C. B., Simpson, C. C., & Mazzeo, S. E. (2016, October). *Weight Suppression and Dietary Restraint: Considering Gender as a Moderator.* Poster presented at the XXIInd Annual Meeting of the Eating Disorders Research Society. New York, NY. **SELECTED UNDERGRADUATE RESEARCH EXPERIENCE**

2007 - 2008	**Kenyon College**, Gambier, OH
	Independent Study Project, Department of Psychology
	Faculty Advisor: Dr. Linda Smolak, Ph.D.
	Pursued independent research under the guidance of Dr. Linda Smolak. This experimental research examined if feminism is a protective factor for internalization and body dissatisfaction. Involvement included all phases of the research from planning, IRB approval, recruiting participants, conducting the experiment, examining data, to the write up of the project.
2007 - 2008	**Kenyon College,** Gambier, OH
	Independent Study Project, Department of Psychology
	Faculty Advisor: Dr. Sarah Murnen, Ph.D.

Designed an experimental study with Dr. Sarah Murnen and two other students concerning self-objectification. I was involved in research design, IRB approval process and data collection. Research was presented at the Ohio Undergraduate Conference in Psychology in 2008.

RECENT COMMITTEE INVOLVEMENT

2016 – Present   Member, Patient-Carer Committee of the Academy for Eating Disorders

PROFESSIONAL ORGANIZATIONAL AFFILIATIONS

2016 – Present   American Psychological Association (APA)
2016 – Present   APA Division 10: Society for the Psychology of Aesthetics, Creativity and the Arts
2016 – Present   APA Division 17: Society of Counseling Psychology
2016 – Present   APA Division 35: Society for the Psychology of Women
2016 – Present   APA Division 46: Society for Media Psychology and Technology
2015 – Present   Academy for Eating Disorders
2006 – 2010   Sigma Xi Scientific Research Society

TRAININGS & PROFESSIONAL DEVELOPMENT

August 2016   SafeZone Training, Virginia Commonwealth University, Richmond, VA