SOCIAL MEDIA USE AND ITS IMPACT ON BODY IMAGE:
THE EFFECTS OF BODY COMPARISON TENDENCY, MOTIVATION FOR SOCIAL
MEDIA USE, AND SOCIAL MEDIA PLATFORM ON BODY ESTEEM
IN YOUNG WOMEN

Deanna R. Puglia

A thesis submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Arts in the School of Media and Journalism (Interdisciplinary Health Communication).

Chapel Hill
2017

Approved by:

Seth M. Noar

Allison Lazard

Laura Widman

ABSTRACT

Deanna R. Puglia: Social Media Use and Its Impact on Body Image:
The Effects of Body Comparison Tendency, Motivation for Social Media Use, and
Social Media Platform on Body Esteem in Young Women
(Under the direction of Seth M. Noar)

The purpose of this study was to examine the effects of social media use on body esteem in young women. Through a self-report survey of college women (n=339), it was found that body comparison tendency was negatively correlated with body esteem and positively correlated with the motivation to use social media for body comparisons (both $p<.01$). This study also provided an exploratory investigation (n=58) of the impact that different social media platforms have on body satisfaction. Of the platforms examined, Facebook showed the largest negative correlation with body satisfaction ($r=-.204$). Participants who engaged in higher levels of Facebook use also displayed significantly lower body satisfaction than those with lower Facebook use ($p<.05$). This study suggests that social media is a new avenue for individuals to engage in maladaptive body comparison processes, creating a need for health communication and behavior change interventions that address this issue, especially among vulnerable populations.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

Eating disorders are one of the most prevalent mental health issues in the U.S., especially among young women. The lifetime prevalence of eating disorders among U.S. adult women ranges from 0.5-3.5%, with the average age of onset for these disorders falling between ages 19-25 (National Institute of Mental Health, 2016). This number is significantly higher than the lifetime prevalence among U.S. adult men, which is only 0.1-2.0% (National Institute of Mental Health, 2016). Because of this increased risk and disease burden, young women deserve particular attention when examining the underlying processes and risk factors for eating disorder development and maintenance.

Eating disorder prevention is a public health priority due to the significant risk these disorders pose to both the physical and mental health of those who struggle with them. Among people with mental health diagnoses, those with eating disorders have one of the highest risks of premature death, from both natural and unnatural causes (Harris & Barraclough, 1998). This is especially true of individuals with anorexia nervosa who are at risk for serious and potentially fatal symptoms including cardiovascular and pulmonary problems, endocrine abnormalities, gastrointestinal problems, severe electrolyte abnormalities, and bone demineralization (Mitchell & Crow, 2006). Adolescents with eating disorders are also significantly more likely to develop anxiety disorders, cardiovascular symptoms, chronic fatigue, chronic pain, depressive disorders, limitations in activities due to poor health, infectious diseases, insomnia, neurological symptoms, and suicide attempts during early adulthood (Johnson, Cohen, Kasen, & Brook, 2002).

In addition, eating disorders have proven difficult to treat, with treatment success rates being negatively associated with the length of time between the disorder's onset and the initiation of treatment (Fichter, Quadflieg, & Hedlund, 2006; Reas, Williamson, Martin, & Zucker, 2000). Therefore, the ability to prevent eating disorders in at-risk populations is critical and may be the most effective way to reduce the incidence of eating disorders in the population.

In order to address the growing prevalence of eating disorders, especially among adolescent girls and young women, it is necessary to gain an understanding of the risk factors associated with the development of these behaviors. Body dissatisfaction, or the negative subjective evaluation of one's own body weight or shape, is one of the most robust and consistent predictors of future disordered eating behaviors (Stice, 2002). Body dissatisfaction and other body image disturbances are prevalent in the U.S. and other Western cultures, especially among women, who have consistently reported experiencing body dissatisfaction and other body image disturbances at higher rates than men. In a review of studies that attempted to measure the prevalence of body dissatisfaction in the U.S., it was found that 46%-66% of U.S. women experience "weight dissatisfaction," while their reported dissatisfaction with their "overall appearance" ranged from 23%-56% (Fiske, Fallon, Blissmer, & Redding, 2014). It is therefore necessary to identify and study the factors that negatively influence the body esteem of young women.

Media images depicting the extremely thin body type that is currently considered ideal in Western cultures has long been examined as a significant contributing factor to the development of body dissatisfaction in young women. For example, in a meta-analysis of experimental studies that examined the effect of media images portraying thin beauty ideals on women's body image, it was found that participants had a significantly more negative body image after viewing images

of thin models compared to those who were exposed to average or plus-sized models (Groesz, Levine, & Murnen, 2002). Body comparisons have been identified as the main mechanism by which media images exert negative influence on body satisfaction. This relationship is thought to be moderated by individual level factors, such as low self-esteem, which predispose individuals to engage in social comparison processes. Engaging in social comparisons with thin-ideal images then leads to feelings of inadequacy which lead to further decreases in self-esteem and body esteem and reinforce an overemphasis on the importance of weight and physical appearance. This then prompts individuals to engage in further social comparisons, thereby trapping these vulnerable individuals in a continuous feedback loop.

Newer media forms, especially social media platforms, are now beginning to receive attention as a potential source of similar negative influence as traditional mass media. Social media are interactive, web-based platforms that allow users to create and distribute content. Social media is not inherently positive or negative in terms of its effects on the body esteem of users, instead, its effects depend largely on the way in which it is utilized. It has been proposed that users are likely to use social media to satisfy different uses and gratifications based on individual factors such as depression or low self-esteem (Perloff, 2014). It is possible that an individual factor such as social comparison tendency could also serve as a motivating factor for social media use. It is imperative that these potential relationships between individual factors, motivations for social media use, and negative health outcomes receive further examination due to the rapid and continuous increase in social media use that is occurring.

In 2015, 65% of American adults utilized social media (Perrin, 2015). This number was even higher for young adults, with 90% of 18-29 year olds using one or more social media platforms (Perrin, 2015). This is a huge increase from the 41% of young adults who reported

using social media a decade ago (Perrin, 2015). Due to its growing popularity and near ubiquity among young adults, social media is now an important new avenue for sociocultural factors to exert influence on young women. For example, social media allows greater opportunities for social interactions with a wider and more diverse network of individuals and allows for larger networks of social support which could potentially have positive impacts on users. However, social media also enables greater opportunities for detrimental processes such as body comparisons with peers and celebrities. This may be especially true as visual-based forms of social media continue to gain in popularity. Instagram is now especially popular among young adults. Introduced in 2010, Instagram had already been adopted by 59% of young adults just six years later in 2016, quickly surpassing the older and more text-based platform, Twitter, which was used by only 36% of young adults that same year (Greenwood, Perrin, & Duggan, 2016). Facebook, which continues to be the most popular social media platform, began as a text-based platform but has also been putting increased emphasis on visual content over the past several years, first adding the ability to post photos in October 2005 and then introducing video sharing capabilities in 2010 (Products.).

Social media has also created a more efficient and accessible way to increase information sharing, which could be both positive and negative. For example, some users create "pro-ana" or "pro-mia" pages which promote anorexic and bulimic behaviors respectively, and are easily accessible to social media users who are already at risk for disordered eating and seeking information about these behaviors. Conversely, supportive groups that promote healthy lifestyles or provide disease management resources also exist on social media platforms.

Due to the lack of understanding about the processes and consequences involved in the wide range of its potential uses, social media has begun to attract attention among researchers.

Studies have been conducted to determine social media's effects on psychological outcomes such as mood, depression (Davila et al., 2012; Haferkamp & Krämer, 2011; Sagioglou & Greitemeyer, 2014), and self-esteem (Gonzales & Hancock, 2011; Stefanone, Lackaff, & Rosen, 2011), as well as physical health outcomes such as disordered eating behaviors (Smith, Hames, & Joiner, 2013).

Some individual factors that have been associated with the development of body dissatisfaction and eating disorders, such as body comparison, could serve as potential motivations for social media use and likely also play a role in the effects observed as a result of social media use. This study aims to examine the relationships between body comparison tendency, the motivation to use social media for body comparison, and body esteem in order to add to the growing body of literature on the ways in which the use of social media platforms affects young women's body image. In particular, this study investigated whether the motivation to use social media for body comparison influences body esteem, and how this new variable fits into the relationship between body comparison tendency and body esteem in young women.

CHAPTER 2: LITERATURE REVIEW

It has been proposed by some scholars that a "normative discontent" exists among U.S. women, thereby making women's experience of body dissatisfaction a social norm (Fredrickson & Roberts, 1997; Rodin, Silberstein, & Striegel-Moore, 1984). Evidence showing high levels of both body dissatisfaction and disordered eating behaviors among U.S. women also supports this claim (Fallon, Harris, & Johnson, 2014; Fiske et al., 2014; National Institute of Mental Health, 2016). For example, in a study of roughly 1,600 adolescents, girls were found to experience higher levels of body dissatisfaction, pressure from the media, and weight dissatisfaction than boys (Knauss, Paxton, & Alsaker, 2008). College women also scored higher than men on body surveillance, body shame, appearance anxiety, and disordered eating (Tiggemann & Kuring, 2004). This evidence indicates that young women are a particularly vulnerable population for the development of body image disturbances and disordered eating behaviors and should therefore continue to serve as the targets for ongoing investigations into the processes associated with these risk factors. Several theoretical frameworks have been developed to identify and explain the factors and processes that influence women's body esteem.

Objectification Theory

Objectification Theory developed out of feminist theories and posits that socio-cultural factors, such as gender roles, cultural emphasis on females' appearance, the social and economic success associated with achieving and maintaining an idealized appearance, and the objectification of women in the media cause women to view themselves as objects to be looked

at and evaluated by others. This phenomenon is known as objective body consciousness (OBC) (Fredrickson & Roberts, 1997; Gonzales & Hancock, 2011; Lindberg, Hyde, & McKinley, 2006; Stefanone et al., 2011). OBC is believed to prompt women to engage in body surveillance in order to ensure that they are conforming to accepted cultural standards and to avoid being judged negatively by society. When women experience discrepancies between their body and the cultural reference, they experience body shame. Body surveillance and body shame have been associated with negative psychological outcomes in women, including depressed mood, lowered body esteem and disordered eating behaviors (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996; Tiggemann & Kuring, 2004).

Mass Media and Body Image

Although the processes associated with Objectification Theory are the result of the complex socio-cultural environment in which women live, mass media has received a large portion of the blame for creating and promoting the ultra-thin body type that is currently considered "ideal" in Western cultures.

Both correlational and experimental studies have been conducted that link thinness-depicting media exposure to women's generalized dissatisfaction with their bodies, increased investment in their appearance, and increased endorsement of disordered eating behaviors (Birkeland et al., 2005; Grabe, Shibley Hyde, & Ward, 2008), as well as an increase in disordered-eating symptomatology, drive for thinness, and body dissatisfaction (Harrison & Cantor, 1997).

Social Ecological Theory

The Social Ecological Theory is another established and well supported theory that outlines some of the processes underlying the development of body dissatisfaction and

subsequent disordered eating behaviors in women. This theory proposes that social influences act on individuals and negatively affect their body image through the mediating processes of internalization of the thin-ideal and social comparisons. The body dissatisfaction that results from these social influences is a concern due to the connection that has been made between body dissatisfaction and negative physical and psychological outcomes, such as depression (Lindberg et al., 2006; Tiggemann & Kuring, 2004) and disordered eating behaviors (Stice, 2002; Stice & Shaw, 2002).

Guided largely by feminist theories, researchers have argued that internalizing ideal media images causes women and girls to place a high level of importance on their appearance, rather than other personality characteristics or abilities (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996). This is what is referred to as thin-ideal internalization. Women's endorsement of the cultural emphasis on appearance then prompts them to seek out references against which to evaluate their own appearance and their progress toward attaining the thin-ideal. In this way, appearance and body comparisons are perceived by women as processes that provide useful diagnostic information. Although motivated by hopes of self-improvement, in actuality these comparison processes typically have detrimental effects on body esteem (Rodgers, McLean, & Paxton, 2015).

Several studies have supported the relationship between internalization of the thin-ideal and body dissatisfaction in response to magazine and mass media exposure (Keery, van den Berg, & Thompson, 2004; Tiggemann & Miller, 2010), the use of the internet and social media (Meier & Gray, 2014; Tiggemann & Miller, 2010), and peer influences (Keery et al., 2004). Internalization has also been shown to be a predictor of body dissatisfaction in adolescent girls

(Knauss et al., 2008) and was found to be a causal risk factor for body dissatisfaction, dieting, negative affect, and bulimic pathology in women (Stice, 2002).

Tripartite Influence Model

The most commonly referenced iteration of the Social Ecological Theory is the Tripartite Influence Model of body image and eating disturbance (Thompson, 1999). This model is so named because it identifies three specific sources from which these instigating social influences originate; family, peers, and the media.

Figure 2.1. Tripartite Influence Model of body image and eating disturbance (Keery et al., 2004).
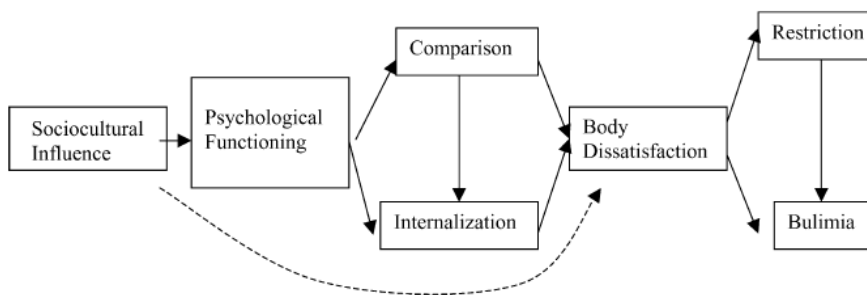
Although there is evidence to support this model, the processes outlined in the model have not received extensive exploration in the context of social media. Social media is a unique form of media through which users are exposed to content primarily created by peers, and to a lesser extent, family members. However, similar to traditional mass media, social media platforms also expose users to media content featuring models and other celebrities (Prieler & Choi, 2014). Therefore, social media can simultaneously serve as all three sources of sociocultural influence included in the Tripartite Influence Model. This combination of various concurrent influences may potentially lead to unique effects on the subsequent processes outlined in the model.

The Tripartite Influence Model indicates that regardless of the source of the sociocultural influence, the process of social comparison acts as a key mediating factor in the development of body dissatisfaction and subsequent disordered eating behaviors. Therefore, it is important to consider social comparisons, and particularly body comparisons, and their effects on these body-related outcomes, especially in the under-studied context of social media.

Social Comparison Theory

Social Comparison Theory states that individuals engage in comparisons with others in order to determine their relative social standing and worth (Festinger, 1954). This theory can be applied to a range of personal and social attributes, including an individual's attractiveness based on their body size and shape.

Engaging in upward social comparisons (i.e. comparisons with those perceived to be better off for a given attribute) can have positive effects when the comparisons are made with a similar target, such as a peer, because the target seems to represent an achievable goal that is within reach and is therefore perceived as motivating. When upward social comparisons are made with a dissimilar target, such as a fashion model, negative outcomes can result, since achieving parity with the dissimilar target feels out of reach (Ridolfi, Myers, Crowther, & Ciesla, 2011). Downward social comparisons (i.e. comparisons with those perceived to be worse off on a particular attribute) seem to have positive effects for both similar and dissimilar targets, therefore, it is upward social comparisons that are implicated in the promotion of negative affect and body image disturbances.

Upward social comparisons to both media images and peers have been associated with body dissatisfaction (Ridolfi et al., 2011). Body comparisons to thin-ideal peers have been shown to produce significant increases in body dissatisfaction after exposure (Krones, Stice, Batres, &

10

Orjada, 2005). A meta-analysis by Myers and Crowther (2009), which included both correlational and experimental studies, found a large effect size for the relationship between engaging in social comparisons and resulting negative body satisfaction outcomes. These effects, while heterogeneous, were found to be moderated by both gender and age, with larger effects observed for both women and younger individuals (Myers & Crowther, 2009). A study of college women also indicated that social comparison mediated the effects of the sociocultural influences outlined in the Tripartite Influence Model on body dissatisfaction (van den Berg, Thompson, Obremski-Brandon, & Coovert, 2002).

Social Comparison Theory indicates that people seek out targets for comparison for the aspects of the self that they consider to be important (Festinger, 1954). Due to the socio-cultural pressures to be physically attractive and incredibly thin, it has been proposed that women are motivated to look to various sources in order to find references to use for body comparisons (Rodgers et al., 2015). Due to the current ubiquity, popularity, convenience, and accessibility of social media, it is logical to deduce that social media may serve as a platform for body comparison for some users. Social media is a new potential source of social influence that could serve as an efficient platform through which to conduct social comparisons. Therefore, it is important to further examine the body comparison process in the context of social media.

Only one correlational study was found in which social comparisons made on social media were examined in relation to body image, and only in the context of Facebook (Fardouly & Vartanian, 2015). This study indicated that Facebook comparisons mediate the relationship between Facebook use and body image concerns. In addition, body dissatisfaction and drive for thinness were both positively correlated with Facebook appearance comparison, with both celebrities and peers serving as sources of upward comparison on Facebook (Fardouly &

Vartanian, 2015). While there is some evidence that body comparisons are automatic and unconscious (Gilbert, Giesler, & Morris, 1995), an experimental study by Want and Saiphoo (2017) presented evidence that making comparisons to media images is not an automatic process, but requires some cognitive effort, and is therefore under an individual's control, at least to a certain extent. Therefore, it is possible that social media users may need to be motivated to engage in body comparisons on social media in order to experience significant negative effects on their body esteem.

Motivations for Social Media Use

The fact that processes such as body comparisons can occur in the context of social media does not necessarily imply that all users are engaging in these processes. Social media users presumably have different motivations and gratifications which they are seeking to fulfil via social media use (Perloff, 2014). Several studies have sought to enumerate the different motivations that individuals have for engaging in social media use. They include entertainment, personal utility, information seeking, convenience, altruism (Al-Menayes, 2015), socialization, status-seeking (Prieler & Choi, 2014), reassurance, validation (Perloff, 2014), and social comparisons to assess one's opinions or abilities (Cramer, Song, & Drent, 2016). Although individuals may also have varying motivations for the use of traditional mass media, social media is more interactive and customizable than mass media, which allows users to have greater control over the available content (Perloff, 2014). Therefore, motivations for social media use may have a greater effect on whether or not users engage in certain processes on social media, compared to the more passive and imposed consumption that occurs for mass media platforms such as television and magazines. Users' motivations for social media use therefore deserve additional attention.

The motivations that users have for their use of social media may have interesting implications for body esteem and eating behaviors. For example, social media may serve as a platform for appearance feedback seeking. In a study investigating the effects of social networking use on depression, it was found that the quality of social media interactions was important in determining the resulting psychological outcomes, with less positive and more negative interactions predicting increases in depressive symptoms over time (Davila et al., 2012). Similarly, it is possible that the quality of the feedback that users receive on social media, especially regarding their bodies or appearance, may play an important role in body esteem. For example, positive comments or a high number of "likes" received on a user's photo could serve as a source of positive feedback that may then promote body esteem, whereas negative comments or a lack of positive feedback may negatively impact a social media user's body esteem. However, feedback that confers social rewards and approval based on weight, body shape, or another aspect of physical appearance could also have negative consequences on users by serving to reinforce the importance of those physical characteristics.

Some other motivations for social media use, such as seeking negative social evaluations or engaging in social comparisons, are considered maladaptive uses. Maladaptive use of Facebook was found to predict increases in body dissatisfaction as well as disordered eating behaviors such as bulimic symptoms and over-eating episodes (Smith et al., 2013). In addition, if individuals are motivated to use social media for maladaptive processes, such as accessing targets for body comparison, there are several features of social media that could potentially exacerbate these negative effects on body esteem. These features include the tendency of users to engage in positive self-presentation leading to an increasing prevalence of idealized imagery on social media platforms, and the 24/7 availability of social media content.

Users' motivations for social media use have not yet been examined as potential influences on outcomes such as body esteem. Although diverse motivations for social media use exist, due to its centrality in leading theoretical models of body dissatisfaction and disordered eating, this study focused specifically on the motivation to use social media for body comparisons.

Selective Self-Presentation on Social Media

Body comparison with peers has been studied in other contexts, but has not received significant attention in the context of social media. The images of peers that adolescents and young women see on social media are very different from in-person peer comparisons. Social media is a space where users create selective self-presentations based on the images, messages, and other content that they choose to share. The majority of users choose to create a positively biased self-presentation (Gonzales & Hancock, 2011). In the case of photos, this often consists of posting idealized images through the use of camera angles, filters, and digital manipulation software, such as Photoshop, thereby allowing users to share images of themselves in the most flattering way possible. Developing a personal identity through self-presentation has been cited as an important aspect of social media use by college students (Manago, Graham, Greenfield, & Salimkhan, 2008). This act of engaging in selective self-presentation through social media has been associated with higher self-esteem in studies of college students (Gonzales & Hancock, 2011), indicating that there are potential psychological benefits that could be gained from the creation of an idealized online self.

While engaging in this practice may be initially beneficial, this practice also creates an environment in which an individual is bombarded with unrealistic portrayals of their peers and other online social connections (Cramer et al., 2016). This access to a large number of optimized

selves may in turn play a role in normalizing "ideal" body and beauty standards, leading to the perception that these essentially unattainable standards are the social norm for which women should be striving and ultimately achieving. In this way, idealized peer images on social media are becoming very similar to the thin-ideal depicting traditional media that have been shown to have detrimental effects on body esteem in women.

However, the images encountered on social media, unlike traditional mass media images, are primarily of peers. This is an important distinction since peer comparisons have been shown to be more impactful than mass media images, especially among adolescent girls and young women. This suggests that the influence social media images have on women may be different from that of the mass media images which have received the bulk of attention in the body image literature. In addition, the increasingly visual nature of social media raises additional concerns for users' body esteem.

Role of Visuals in Body Comparisons on Social Media

In order to engage in body comparisons on social media, a user must encounter images of others' bodies to use as a reference. Although all current social media channels allow for the inclusion of multimedia content, such as photos and videos, some platforms feature more of these visual types of content than others. The predominantly visual nature of some social media platforms, such as Instagram, may exacerbate the effects of body comparisons by exposing users to more idealized images, thereby allowing them to engage in more comparisons with peers and celebrities. Instagram in particular also includes native image editing features which allow users to modify images within the platform itself, making this process both easy and convenient. Other social media platforms, like Twitter, are much more heavily text-based, so users encounter fewer thin-ideal images to use for body comparisons while spending time on these platforms.

Previous studies that have been conducted on social media's effects on body image and eating disorders have either used an overall measure of total social media use, or have examined the effects of only one particular social media platform, such as Facebook. However, the various social media platforms that are currently being used by young women are not all being used for identical purposes, nor do they afford equivalent opportunities for the processes that may influence body image and eating disorders, such as body comparisons (Meier & Gray, 2014). As previously discussed, visual, photo-based platforms, such as Instagram, may have a greater influence on young women who engage in body comparisons than other social media platforms, such as Twitter, that feature more text-based content. In this way, measures of overall social media use may be obscuring the influences of platforms which better lend themselves to certain processes, such as body comparisons.

Due to the potential differences between visual and text-based platforms, it is necessary to examine the relationships between the time spent on particular social media platforms and effects on body satisfaction. Assessing whether the time users spend on particular platforms displays different associations with body esteem will allow for a more nuanced understanding of the processes that influence body esteem and related body image beliefs and behaviors. Understanding the effects of social media platforms on the health of heavy users, such as young women, will be essential for the development of future initiatives and interventions to protect and promote the physical and mental health and well-being of this at-risk population.

CHAPTER 3: HYPOTHESES

This study examined the relationships between body comparison tendency, the motivation to use social media for body comparison, and body esteem in order to increase the understanding of some of the effects thought to be associated with social media use. The study also explored the motivation to use social media for body comparisons as a potential new mechanism by which body comparison tendency may influence body esteem in young women.

Consistent with the Social Ecological Theory and Tripartite Influence Model it was hypothesized that:

H1: Body comparison tendency will be negatively correlated with body esteem in young women.

Due to women's motivation to find additional references to assess their body size and shape, it was expected that:

H1a: Body comparison tendency will be positively correlated with the motivation to use social media for body comparison.

Perloff (2014) proposed a model in which the uses and gratifications sought from social media serve as a link between predisposing individual factors, such as low self-esteem, depression, internalization of the thin-ideal, etc., and attitudinal and behavioral outcomes. Body comparison tendency is an individual risk factor that may influence users' motivations to use social media platforms to satisfy their desire to engage in body comparison, therefore it was hypothesized that:

H2a: Motivation to use social media for body comparison will be negatively correlated with body esteem.

H2b: Motivation to use social media for body comparisons will mediate the relationship between body comparison tendency and body esteem.

Figure 3.1. Proposed mediated model for the relationship between body comparison tendency and body esteem.

```
┌──────────────────┐     ┌──────────────────┐     ┌──────────────────┐
│  Body Comparison │ →   │ Motivation to Use│ ↔   │   Body Esteem    │
│ Tendency (BEECOM)│     │ Social Media for │     │     (BESAA)      │
│                  │     │    Body          │     │                  │
│                  │     │ Comparisons(MEIS)│     │                  │
└──────────────────┘     └──────────────────┘     └──────────────────┘
```
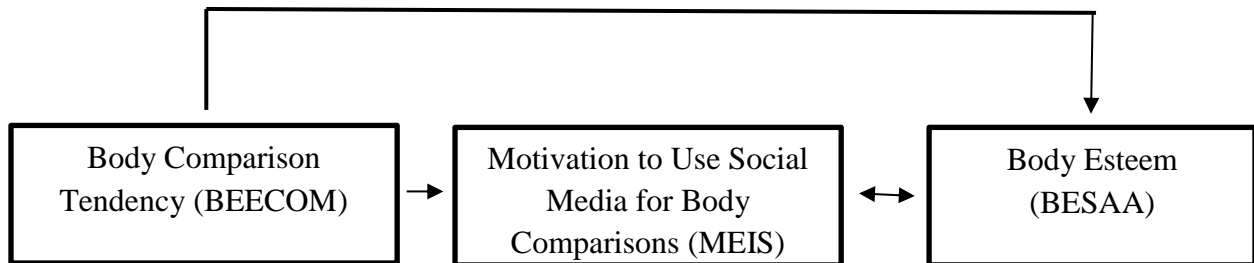
Fardouly et al. (2015) found that women high in comparison tendency had more face, hair, and skin-related discrepancy after Facebook exposure, but not higher body dissatisfaction. The authors hypothesized that this may be due to the types of images found on Facebook as compared to mass media, such as magazines. For example, they argued that there are more portrait and fewer full body photos on Facebook which would make it more difficult to engage in body comparisons. Also, they asserted that there are also more diverse body types being represented on Facebook than in traditional mass media. The authors suggested that image-based social media platforms, like Instagram, should be examined in future studies, as they might show different effects on body satisfaction (Fardouly et al., 2015). In this study, the effects of different social media platforms on body dissatisfaction were examined separately, with the expectation that:

H3: Time spent on visual-based social media platforms will demonstrate a stronger positive correlation with body dissatisfaction than time spent on text-based platforms.

CHAPTER 4: METHODOLOGY

Participants & Procedure

Participants were college women enrolled in psychology courses at a large public university in the southeastern U.S. College women are an especially relevant population to study due to their high rates of social media use (Greenwood et al., 2016) and their high risk of body image concerns and eating disorders (Eisenberg, Nicklett, Roeder, & Kirz, 2011). Participants aged 18 and 19 were recruited as part of a larger study on young women's communication and health. After obtaining informed consent, data were collected from participants via laptop computers. Participants completed a 45-minute survey and were compensated with course credit. After completion of the main survey, participants were then sent a daily survey by email for 9 consecutive nights that included a link to an online Qualtrics survey. Participants received each email at 6pm and had until 1am to complete it. Respondents were instructed to answer the nightly survey questions based on their feelings and experiences from the past 24-hours. Fifty-eight participants completed all 9 surveys and were included in the data analysis of the nightly surveys. All data were collected in Fall 2014 and Spring 2015. All procedures were approved by the University of North Carolina Institutional Review Board.

Measures

Lab Survey

Demographics: Demographic information was gathered in the survey to provide basic information about age, race/ethnicity, and sexual orientation.

Body Comparison Tendency: The tendency to engage in body comparison with same-sex peers was assessed with the 6-item Body Comparison Orientation scale of the Body, Eating, and Exercise Comparison Orientation Measure (BEECOM) (Fitzsimmons-Craft, Bardone-Cone, & Harney, 2012). Sample items include, "I compare my body shape to that of my peers," and "I pay attention to whether or not I am as thin as, or thinner, than my peers." Items were answered on a 7-point scale from 1= never to 7= always, with higher scores indicating more frequent body comparisons. The scale has been shown to have strong reliability and validity in college samples (Fitzsimmons-Craft et al., 2012). The internal reliability in this sample was very high ($\alpha = .96$). A mean score was calculated for each participant by adding the scores for all items in the scale and then dividing by the total number of items. This mean body comparison tendency score was then used for all analyses.

Body Esteem: 14 items from the Body Esteem Scale for Adolescents and Adults (Mendelson, Mendelson, & White, 2001) were used to capture how participants felt about their physical appearance. On a 5-point scale from 1= never to 5= always, participants indicated how frequently in the past six months they agreed with a series of appearance and weight-related items, such as, "I'm proud of my body," and "I'm pretty happy about the way I look." Higher scores indicated more positive body esteem. Items that were phrased as negative questions (i.e. I wish I looked better) were reverse coded. The scale has been shown to have strong reliability and validity in college samples (Jones & Buckingham, 2005), and there was excellent internal reliability in the current sample ($\alpha = .929$). A mean score was calculated for each participant by adding the scores for all items in the scale and then dividing by the total number of items. This mean body esteem score was then used for all analyses.

Motivation to Use Social Media for Body Comparison: The Motivations for Electronic Interaction Scale (MEIS) was designed in order to assess subjects' attitudes and behaviors regarding the use of technology, specifically social media (Nesi & Prinstein, 2015). Social media was defined for participants as including "Facebook, Instagram, and any other website/app that involves social interaction (i.e. Snapchat, Tumblr, MySpace)." The 23-item scale was administered to subjects in the current study, in which subjects endorsed the personal relevance of a number of behaviors on a 5-point scale ranging from 1=Not at all true to 5=Extremely true. Participants' responses to five items relating to body comparisons (i.e., "I use social media to compare the way I look with other people's looks") were used to assess participants' motivation to use social media for body comparisons. This 5-item subscale showed good internal reliability (α=0.832). A mean score was calculated for each participant by adding the scores for the 5 body comparison subscale items and then dividing by the total number of included items. This mean score for the motivation to use social media for body comparisons was then used for all analyses.

Time Spent on Social Media: Participants were asked to indicate, in a free-response format, the average number of hours and minutes they spent using any social media on a typical day. Based on earlier focus group input regarding commonly used sites during the study time period, "social media" was defined for participants as "Facebook, Instagram, Snapchat, Twitter, or any other website/app that involves social interaction." All responses that were entered as minutes were converted to hours for use in the analyses.

Nightly Surveys

Body Satisfaction: 5 items adapted from the validated Body Image States Scale (Cash, Fleming, Alindogan, & Steadman, 2002) were used to assess participants' body satisfaction during the preceding 24-hour period. Items assessing satisfaction with physical appearance, body

size and shape, and weight were scored on a 5-point scale from 1=very dissatisfied to 5=very satisfied. Items assessing feelings about appearance compared to others were scored on a 5-point scale from 1=much worse to 5=much better. Higher scores indicate higher levels of body satisfaction. The internal reliability for this 5-item scale was very good (α=0.934). Responses to this scale were collected daily for 9 consecutive nights, and all responses for that period were averaged to create one body satisfaction score for each participant that was then used for subsequent data analysis.

Time Spent on Social Media: Participants were asked to indicate, in a free-response format, the average number of hours and minutes they spent using each of the listed "social media" sites during the past 24 hours; these included Facebook, Instagram, Snapchat, Twitter, and Other. All responses that were entered as minutes were converted to hours. The number of hours reported over the 9-day study period by each participant were then summed for each platform to create the platform usage measures that were utilized in the data analyses.

Data Analysis

To examine H1 and H2a, correlational analyses were performed to identify associations between body comparison tendency, the motivation to use social media for body comparisons, and body esteem. A mediational analysis was also conducted to investigate H2b, in order to determine whether motivation to use social media for body comparison mediated the relationship between the individual characteristic of body comparison tendency and body esteem outcomes. This analysis was performed using the SPSS PROCESS macro which uses bias-corrected bootstrapping methods to estimate indirect effects (Hayes, 2009).

To examine H3, correlational analyses were performed for the total number of hours spent by participants on each social media platform (Facebook, Instagram, Snapchat, and

22

Twitter) over the 9-day longitudinal survey period and mean body satisfaction scores. A correlational analysis was also performed for mean body satisfaction scores and total social media use. Total social media use was calculated by adding the reported number of hours spent on each social media platform over the 9-day study period.

To further examine the effects of each social media platform on body satisfaction outcomes, social media usage for each platform was dichotomized to form two groups, high and low usage, based on the total reported number of hours spent on that platform over the 9-day study period. There are currently no accepted guidelines for the level of social media usage that is recommended for adults, therefore, users were split into groups based on the median number of hours reported for that platform. This also ensured equally sized groups which was an important consideration due to the small sample size used for the analysis. Users were coded as having "low" usage levels for a platform if they spent less than the median number of hours on that platform over the 9-day period, and were coded as having "high" usage levels if they spent the median number of hours or more on the platform. A series of independent t-tests were then conducted to see if average body satisfaction differed between the high and low usage groups for each social media platform.

All analyses performed in this study were conducted using SPSS version 24.

CHAPTER 5: RESULTS

Lab Survey

The demographic characteristics of the study sample (n=339) are presented in Table 5.1. The participants were all 18 or 19 year-old women, with the mean age of participants being 18.35 (SD=0.48). The majority of the sample was White/Caucasian (67.3%), with 10.9% Black/African American, 4.7% Hispanic/Latino, 10.0% Asian, 5.3% mixed race, and 1.8% reporting other race/ethnicity. The sample was overwhelmingly heterosexual (94.1%), with 0.6% identifying as homosexual, 2.7% bisexual, 0.9% questioning/unsure, and 1.8% other sexual orientation.

Table 5.1. Demographic characteristics of sample, n=39.

	N	Percent	Mean	SD
Age			18.35	0.476
18	222	65.5%		
19	117	34.5%		
Race/Ethnicity				
White/Caucasian	228	67.3%		
Black/African-American	37	10.9%		
Hispanic/Latino	16	4.7%		
Asian	34	10.0%		
Mixed Race	18	5.3%		
Other	6	1.8%		
Sexuality				
Heterosexual/Straight	319	94.1%		
Homosexual/Gay/Lesbian	2	0.6%		
Bisexual	9	2.7%		
Questioning/Unsure	3	0.9%		
Other	6	1.8%		

Bivariate correlations were performed to identify associations between the three key variables in this study; body comparison tendency, motivation to use social media for body comparison, and body esteem. The mean score for body comparison tendency was 4.80 (SD=1.38) out of 7, which indicates that most participants reported engaging in body comparisons "Sometimes" or "Often." The mean score for the motivation to use social media for body comparisons was 2.73 (SD=0.91) out of 5, indicating that most participants felt that the statements regarding the motivation to engage in body comparisons on social media were only "A little bit true" to "Somewhat true" in describing their motivations. The mean score for body esteem was 3.12 (SD=0.70) out of 5.

As seen in Table 5.2, all variables were significantly correlated with one another at the 0.01 level. Body comparison tendency (BEECOM) was negatively associated with body esteem (BESAA) [r = -.564]. This correlation indicates a large effect size using the values outlined by Cohen (1988). The negative correlation observed between body comparison tendency and body esteem supports H1. Motivation to use social media for body comparison (MEIS) was also negatively associated with body esteem (BESAA) [r = -.308]. This correlation value indicates a medium effect size and supports H2a. Body comparison tendency (BEECOM) also showed a large positive association with the motivation to use social media for body comparisons (MEIS) [r = .582].

Table 5.2. Mean scores and correlation matrix for study variables.

	Mean (SD)	BEECOM	MEIS	BESAA
BEECOM	4.80 (1.38)	1.000		
MEIS	2.73 (0.91)	.582**	1.000	
BESAA	3.12 (0.70)	-.564**	-.308**	1.000

**Correlation is significant at the 0.01 level (2-tailed).

Note: BEECOM = body comparison tendency; MEIS = motivation to use social media for body comparison; BESAA = body esteem.

To examine H2b, a mediational analysis was conducted to investigate whether the motivation to use social media for body comparisons mediates the relationship between body comparison tendency and body esteem outcomes in young women. The analysis was performed in SPSS using the PROCESS macro outlined by Hayes (2009) to conduct a mediational bootstrapping analysis. Bootstrapping is a nonparametric resampling procedure where a large number of samples are drawn with replacement from the full data set (Hayes, 2009). In this study, 10,000 samples were drawn for the analysis. This bootstrapping process can be used to examine the indirect effects of one variable on another through a proposed mediating variable. An indirect effect was considered significant if zero was not included in the 95% bias-corrected confidence interval (Hayes, 2009).

Body comparison tendency was entered into the model as the independent factor, body esteem was entered as the dependent factor, and motivation to use social media for body comparison was entered as the mediating factor. The direct negative effect of body comparison tendency on body esteem was found to be significant (B= -.30; SE=.03; p<.001). Body comparison tendency also significantly predicted the motivation to use social media for body comparison (B=.39; SE=.03; p<.01). However, the motivation to use social media for body

comparison did not significantly predict body esteem outcomes in the model (B=.02; SE=.04;

p=.58). The confidence interval for the indirect effect of body comparison tendency on body

esteem through the proposed mediating variable, the motivation to use social media for body

comparison, included zero (B= .01; SE= .02; LCI= -.028; UCI= .046), therefore the

bootstrapping analysis indicated that the motivation to use social media for body comparison was

not a mediator in the relationship between body comparison tendency and body esteem.

Consequently, H2b was not supported. The results of the bootstrapping analysis can be seen in

Figure 5.1.

Figure 5.1. Bootstrapping analysis of the proposed mediational model of the effect of body
comparison tendency on body esteem through the motivation to use social media for body
comparisons.
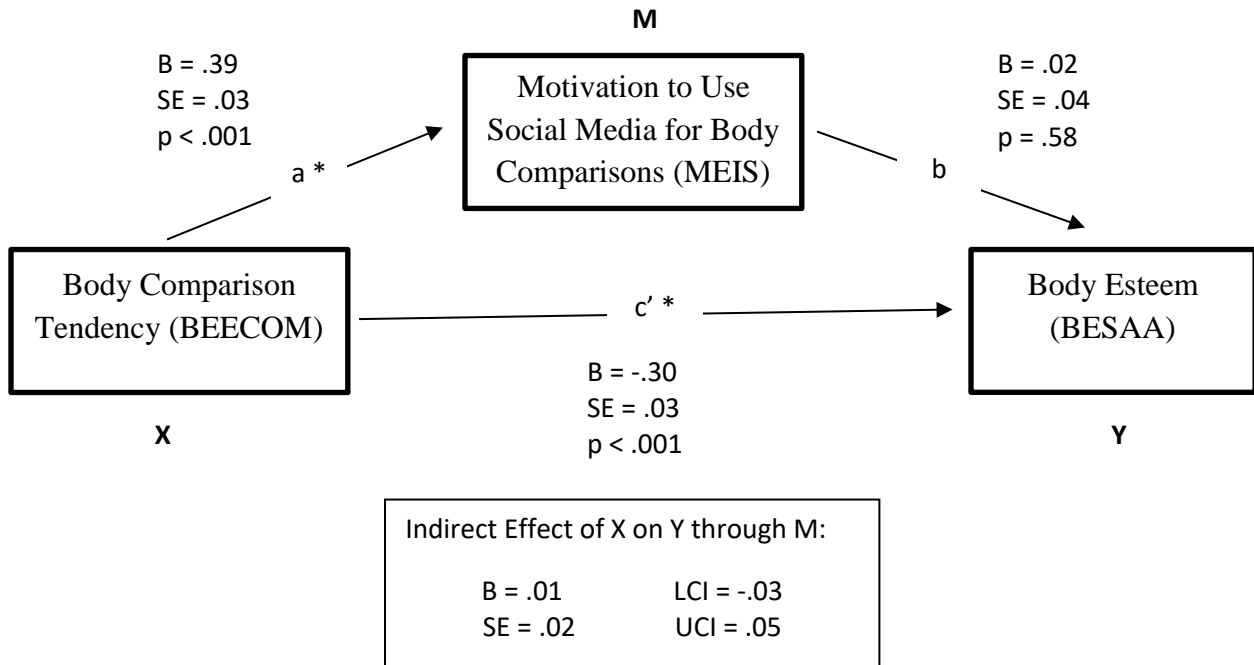
Nightly Surveys

Analysis of the nightly survey data was conducted using only data from participants who had completed all nine of the nightly surveys (n=58). T-tests indicated that there were no significant differences between this subsample and the full study sample for body comparison tendency, motivation to use social media for body comparisons, or body esteem scores (all *p*>.05). The average score for body satisfaction over the 9-day study period was 3.38 (SD=0.59) on a 5-point scale, indicating that the participants in this sub-sample generally felt "neutral" or "somewhat satisfied" regarding their body and physical appearance. The number of hours of social media use by platform can be seen in Table 5.2. Facebook and Instagram had the highest average levels of usage over the 9-day period at 8.74 hours and 8.87 hours respectively, followed by Snapchat at 7.46 hours, and Twitter at 4.16 hours. The amount of time spent on social media was highly variable between participants for all platforms (see Table 5.4).

The results of the correlational analyses conducted with the nightly survey data are reported in Table 5.3. No significant association was found between total reported social media use during the 9-day study period and body satisfaction ($r = -0.087$; $p = 0.52$). However, as seen in Figure 5.3, total social media use appeared to inversely co-vary with body satisfaction over the 9-day study period, with days of lower average social media use showing higher average body satisfaction scores, while days of higher average social media use showed lower average body satisfaction scores among participants. To further examine this relationship, correlations between total social media use and body satisfaction for each day over the 9-day study period were then calculated and are listed in Table 5.3. Only Day 1 of the study showed a significant correlation between social media use and body satisfaction ($r = -.221$; $p < .01$), such that those spending more time using social media more often reported lower body satisfaction.

Figure 5.2. Plot of the trend in total social media use and body satisfaction scores over the 9-day study period.
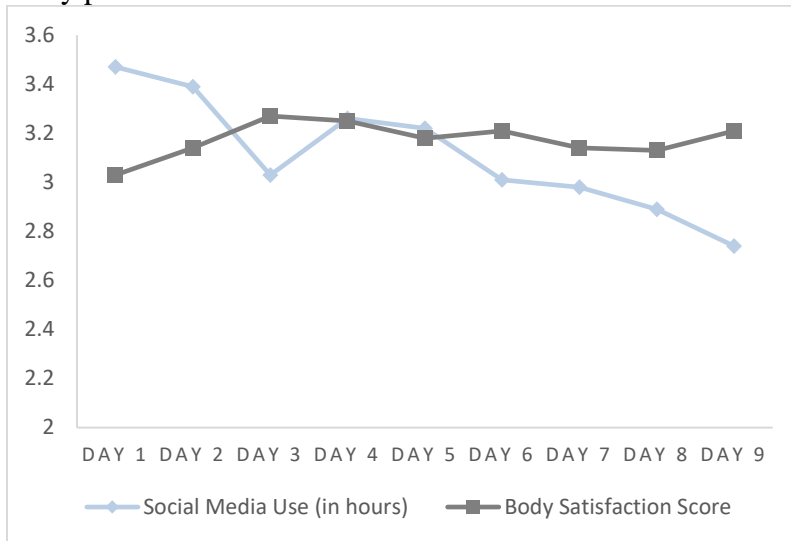
Table 5.3. Correlations between the amount of time spent on social media and body satisfaction for each day of the 9-day study period.

	r			r
Day 1	-.221**	**Day 6**	-.089	
Day 2	.094	**Day 7**	.063	
Day 3	.060	**Day 8**	-.024	
Day 4	-.007	**Day 9**	.051	
Day 5	-.052			

**Correlation is significant at the 0.01 level (2-tailed).

The particular social media platforms that showed the largest correlations with body satisfaction were Facebook and Twitter. The correlation between Facebook use and body satisfaction was -0.204, while the correlation between Twitter use and body satisfaction was 0.230. However, these associations were not statistically significant. Similarly, the association between body satisfaction and Instagram use (-.059) and Snapchat use (-.033) were not

significant and were fairly close to zero. Because no significant associations were detected between particular social media platforms and body satisfaction, H3 was not supported.

Table 5.4. Total hours of social media use over a 9-day period by social media platform.

	Mean	Median	SD
Facebook	8.74	4.50	11.27
Instagram	8.87	4.50	10.34
Snapchat	7.46	3.38	10.09
Twitter	4.16	0.86	7.68
Total Social Media Use	33.43	18.42	36.85

Table 5.5. Correlations between hours spent on each social media platform and body satisfaction over the 9-day study period.

	r
Facebook	-.204
Instagram	-.059
Snapchat	-.033
Twitter	.230
Total Social Media Use	-.087

To further examine the relationship between the use of particular social media platforms and body satisfaction (H3), a series of independent t-tests were conducted. The results of these analyses can be found in Table 5.6. For Facebook, it was observed that the low usage group (less than 4.5 hours over the 9-day study period) had significantly higher average body satisfaction than the high usage group (4.5 hours or more), with a mean difference between the two groups of

0.33 (*p*<0.05). The two usage level groups did not differ significantly in body satisfaction scores

for any of the other social media platforms or for total social media use.

Table 5.6. Results of the independent t-tests performed to examine the difference in body satisfaction scores between high and low usage groups for each social media platform.

	t	p (2-tailed)	Mean Difference	LCI	UCI
Facebook	2.25	.03	0.33*	.04	.62
Instagram	-0.27	.79	-0.04	-.35	.27
Snapchat	0.76	.45	0.12	-.19	.43
Twitter	-0.90	.37	-0.14	-.45	.17
Total Social Media Use	0.26	.80	0.04	-.26	.33

*Correlation is significant at the 0.05 level (2-tailed).

CHAPTER 6: DISCUSSION

Findings

Consistent with the Social Ecological Theory and Tripartite Influence Model (Thompson, 1999), body comparison tendency and body esteem displayed a negative association for the young women in this study. Although this study was correlational and does not allow for causal claims to be made, these results lend support to both the theoretical model and previous research which show negative relationships between social comparison processes and body image outcomes (Fardouly & Vartanian, 2015; Krones et al., 2005; Myers & Crowther, 2009; Ridolfi et al., 2011). Therefore, these results strengthen the argument that engaging in body comparisons has a negative influence on body esteem. Due to the high rates of social media use among young women, it was hypothesized that women who are more motivated to engage in body comparisons would utilize social media for this purpose. This hypothesis was supported in the data with a large correlation being observed between body comparison tendency and the motivation to use social media for body comparison. These findings indicate that those already at risk of negative outcomes due to their tendency to engage in maladaptive body comparison processes in other aspects of their lives, are now facing additional risk by engaging in these processes on social media. Because social media is convenient and always available, vulnerable individuals' motivation to use social media for these processes is of great concern.

Previous work has examined several motivations for social media use including entertainment, information seeking, personal utility and convenience (Al-Menayes, 2015),

however, this study was the first to examine the motivation to use social media for body comparisons, especially as it relates to body esteem outcomes. It was hypothesized that the motivation to use social media for body comparisons would act as a mediator between body comparison tendency and body esteem in young women, with the motivation to use social media for body comparisons being negatively associated with body esteem. It was the case that the motivation to use social media for body comparisons was negatively correlated with body esteem, however, it did not function as a mediator as expected, nor did it significantly predict body esteem outcomes after controlling for body comparison tendency. However, due to the demonstrated relationship between body comparison tendency and body esteem, and the large association between social comparison tendency and the motivation to use social media for body comparisons, the motivation to use social media for body comparisons is still an interesting factor to consider when thinking about the ways in which social media use affects body image in young women.

It is also important to note that this study measured users' self-reported motivation to engage in body comparison on social media and did not measure the frequency with which users engaged in this behavior. However, social media use itself was high and essentially ubiquitous among the study participants, so it is likely that motivated users did engage in these comparison processes fairly frequently since they would have had ample opportunity to do so. It would be interesting to reexamine the relationships outlined in this study by incorporating the directly measured frequency with which users engage in body comparison processes on social media. This relationship deserves further investigation.

Also interesting but in need of further research were the analyses of the relationships between particular platform usage and body satisfaction that were conducted using the nightly

33

survey data. No previous studies have examined these relationships or compared body image

outcomes across multiple social media platforms. Because of the small sample size for the

platform specific data collected in this study (n=58), the data analysis that was performed served

as an exploratory analysis.

Different social media platforms contain different levels of opportunity to engage in body

comparison, as well as different means to do so. In particular, time spent on image-based social

media platforms was expected to demonstrate a stronger positive correlation with body

dissatisfaction than time spent on text-based platforms due to the higher number of images that

would be available to serve as targets for body comparison. However, no significant correlations

were found between a particular platform and body satisfaction. The results, while non-

significant, were still quite interesting. The correlations with body satisfaction were notably

larger for Facebook (-.204) and Twitter (.230) than they were for the other platforms, and may

even have reached statistical significance with a larger sample size. Facebook, in particular,

appeared to be the most problematic platform in terms of negative body image outcomes. This is

consistent with the negative appearance-related outcomes found in a previous Facebook study

which showed that time spent on Facebook led to more face, hair, and skin-related dissatisfaction

among users high in appearance comparison tendency compared to those who were low in

appearance comparison tendency (Fardouly et al., 2015). In the present study, not only did

Facebook use display one of the largest correlations with body satisfaction, but when women

were dichotomized into high and low usage groups, body satisfaction was significantly lower

among those who engaged in higher levels of Facebook use. This was not the case with the other

social media platforms. In addition, the level of usage that was considered "high" in this study

was 4.5 hours or more over a 9-day period. Theoretically, these findings suggest that even a half

hour of Facebook use per day on average could be problematic for some individuals. Therefore, while the effects of social media on body image deserves further attention generally, Facebook in particular warrants additional investigation based on the findings of this initial exploratory study.

It is unclear why Facebook and Twitter seemed to show stronger associations with body satisfaction than the other platforms examined in this study. It is possible that the type of content posted on each platform has a different level of relevance to body comparison. For example, it may be the case that social media users tend to post more photos of people or more full body photos on Facebook than on other visual-based platforms. This would then allow for more opportunities to engage in body comparisons on Facebook, which could help to explain the larger negative correlation with body satisfaction that was observed. There is prior empirial evidence to suggest that the level of appearance exposure that users have on Facebook does impact resulting body image measures. Higher appearance exposure, operationalized as the use of Facebook photo applications relative to total Facebook use, has been shown to be significantly correlated with body image disturbances, such as weight dissatisfaction and drive for thinness, a relationship that was not significant for overall Facebook usage (Meier & Gray, 2014).

Additionally, it is interesting to note that the correlation between the primarily text-based platform, Twitter, and body satisfaction was positive in this study, and almost the direct opposite of the association seen for Facebook. While it was hypothesized that text-based platforms would have a smaller negative impact on body satisfaction than image-based platforms, it is unclear why this platform may have had a slight beneficial effect. However, it is important to remember that different social media platforms have different types of users. Therefore, one potential explanation for these results is that people who utilize Twitter may be less likely to be appearance motivated or may have fewer body image concerns than those who use other social

media platforms, such as Facebook. But again, these findings should be interpreted with caution since the study sample for this analysis was small and none of the observed correlations were significant. It would be valuable to test these relationships again using larger sample sizes, while also adding an assessment of the number and types of images that users are exposed to on each platform, in order to better elucidate why the body satisfaction outcomes may vary in response to the usage of different social media platforms.

Implications for Health Communication

This study illustrates that social media is acting as a new avenue for at-risk individuals to engage in maladaptive processes such as body comparisons. Therefore, it may be important to encourage young women, especially those who are already high in predisposing individual factors like social comparison tendency, to reduce their use of social media. With further research, it may be possible to differentiate the riskiest social media platforms in terms of body image outcomes, and specifically discourage the use of those platforms. It may also be beneficial to design interventions which aim to reduce users' engagement in maladaptive processes on (and off) social media, or to help at-risk users to engage in more adaptive processes in the hopes of mitigating some negative effects. In addition, because individuals who are at higher risk for body image disturbances due to predisposing individual factors are motivated to use social media for body comparison processes, social media platforms may be ideal places to reach particularly vulnerable populations with future health communication and behavior change interventions.

CHAPTER 7: LIMITATIONS AND FUTURE RESEARCH

Although levels of social media use have stayed fairly constant among young adults since the data for this study were collected (Perrin, 2015), the social media landscape is constantly changing. The functionality of existing platforms may shift, usage trends for the various platforms may change, new platforms may be introduced, and users may discontinue or reduce their use of older platforms. Therefore, studies that examine the use of social media platforms should be reexamined periodically to examine the validity of findings in the current social media environment and to assess any changes that occur. In addition, although adolescents and young adults are currently the primary users of social media platforms, older adults are also beginning to adopt social media at much higher rates (Perloff, 2014). Therefore, samples which include older age groups should be examined in the future.

This study examined a subset of the relationships outlined in the Tripartite Influence Model, however, not all of the constructs included in the full model were measured in this study. In particular, thin-ideal internalization was not assessed and, therefore, its additional influence on body esteem could not be examined. This study added a new factor to the relationships outlined in the Tripartite Influence Model (the motivation to use social media for body comparison) and this factor should be examined in the context of the full theoretical model in future studies.

This study did not assess whether the processes that motivated users' social media use, such as body comparisons, were actually conducted by users while they were engaged in social media use. These processes should be directly measured in future studies to better elucidate the

mediational processes influencing attitudinal and behavioral outcomes. For example, the number of body comparisons made, as well as the amount and valence of feedback received by users are all important factors to examine in order to gain a clearer understanding of the processes and factors involved.

Future studies should also explore additional motivations that were not assessed in this study (i.e. social support, identity construction, social influence, popularity, etc.). In addition, further studies are needed to examine the reasons why motivations for social media use differ between users and to investigate ways to promote adaptive uses of social media to reduce the negative effects associated with maladaptive use. Similarly, further research should also be done to identify positive/protective processes (e.g., social support) and effects resulting from social media use that can then be bolstered in order to help offset the associated negative effects.

This study is correlational in nature, so there is also a need, where ethically possible, for controlled experimental studies to be conducted that examine the processes outlined in this study, as well as the differing effects of the various social media platforms. Longitudinal studies with longer follow-up periods and larger, more representative samples would also provide valuable insight into the introductory examination presented in this study.

CHAPTER 8: CONCLUSION

The prevalence of social media use, especially among young women, makes it imperative to study the ways in which these individuals are using social media, and the impacts that this media form may have on users. Effects of social media on young women's body image are of particular concern since this population is already at higher risk for negative outcomes. The results of this study support previous empirical evidence indicating that a significant correlation does not exist between users' *overall* time spent on social media and negative impacts on outcomes such as body image and disordered eating behaviors (Meier & Gray, 2014). In this study the correlation between overall social media use and body satisfaction was not significant (-.087), therefore it is likely that the effects of social media use on young women are probably not a direct result of the overall amount of time spent using these sites, but rather on factors such as predisposing individual characteristics, users' motivations for using these sites, the specific experiences that young women have on social media, and the psychosocial processes that they engage in while spending time on these platforms. It is important to note that social media is not necessarily creating new problems, but may simply be functioning as a new outlet that people can use to engage in maladaptive processes such as body comparisons. Therefore, further work should be done to examine the factors that influence how young women utilize social media, and the ways in which these factors ultimately influence body esteem on various social media platforms.

PART 1: Lab Survey

Demographics

1. Age (in years): 18 / 19 / 20 **(Age)**

2. Year in school: (**SchoolYr**)
   1) Freshman/1st year
   2) Sophomore/2nd year
   3) Junior/3rd year
   4) Senior/4th year

3. Race/Ethnicity: **(Race)**
   1) White/Caucasian
   2) Black/African-American
   3) Hispanic/Latino
   4) Asian
   5) Mixed race (specify: _____) (**Race_text**)
   6) Other

4. Sexual Orientation: **(SexOrient)**
   a) Heterosexual/Straight
   b) Homosexual/Gay/Lesbian
   c) Bisexual
   d) Questioning/Unsure
   e) Other: _____ (**SexOrient_text**)

Motivation to Use Social Media for Body Comparison (MEIS)

Below is a list of statements about your use of technology, such as social media or text messaging. Note: "Social Media" includes **Facebook, Instagram,** and any other website/app that involves social interaction **(i.e. Snapchat, Tumblr, MySpace)**

Please read each statement below and decide how characteristic it is of you.

1=Not at all true 2=A little bit true 3=Somewhat true 4=Very true 5=Extremely true

1. I use social media to check out what others look like. **(MEIS1)**
2. I use social media to compare the way I look with other people's looks. **(MEIS2)**
3. I use social media to see what others think about how I look. **(MEIS7)**
4. I use social media to compare by body/shape with other people's bodies/shapes. **(MEIS9)**
5. I use social media to see what others think about my photos. **(MEIS12)**

Body Comparison Tendency (BEECOM)

Please rate each of the following items regarding how often you compare yourself to your <u>same-sex peers</u>. Remember, there are no right or wrong answers, so please be as honest as possible.

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

1. I pay attention to whether or not I am as thin as, or thinner, than my peers. **(BEECOM1)**
2. In social situations, I think about how my figure "matches up" to the figures of those around me. **(BEECOM2)**
3. I notice how I compare with my peers in terms of specific parts of the body (e.g., stomach, hips, breasts, etc.). **(BEECOM3)**
4. I compare my body shape to that of my peers. **(BEECOM4)**
5. When I see a peer who is wearing revealing clothing, I have thoughts of how my own body compares. **(BEECOM5)**
6. I pay attention to whether or not I am as toned as my peers. **(BEECOM6)**

Body Esteem Scale (BESAA)

The following statements describe how some people feel about their appearance. Please read each statement and use the scale below to indicate how often you have felt this way/agreed in the PAST SIX MONTHS:

1=Never 2=Rarely 3=Sometimes 4=Often 5=Always

1. I like what I look like in pictures. **(BESAA1)**	1	2	3	4	5
2. I'm proud of my body. **(BESAA2)**	1	2	3	4	5
3. I like what I see when I look in the mirror. **(BESAA3)**	1	2	3	4	5
4. I am satisfied with my weight. **(BESAA4)**	1	2	3	4	5
5. I wish I looked better. **(BESAA5)**	1	2	3	4	5
6. I really like what I weigh. **(BESAA6)**	1	2	3	4	5
7. My looks upset me. **(BESAA7)**	1	2	3	4	5
8. I'm as nice looking as most people. **(BESAA8)**	1	2	3	4	5
9. I'm pretty happy about the way I look. **(BESAA9)**	1	2	3	4	5
10. I feel I weigh the right amount for my height. **(BESAA10)**	1	2	3	4	5
11. Weighing myself depresses me. **(BESAA11)**	1	2	3	4	5
12. I worry about the way I look. **(BESAA12)**	1	2	3	4	5
13. I think I have a good body. **(BESAA13)**	1	2	3	4	5
14. I'm looking as nice as I'd like to. **(BESAA14)**	1	2	3	4	5

PART 2: Nightly Survey (administered online nightly for 9 consecutive days)

Body Satisfaction (BISS)

Please answer these questions about the past 24 HOURS.

In the past 24 hours…

1. …how satisfied did you feel with your physical appearance? **(BISS1)**

1	*2*	*3*	*4*	*5*
Very dissatisfied.	*Somewhat dissatisfied.*	*Neutral*	*Somewhat satisfied.*	*Very satisfied.*

2. …how satisfied did you feel with your body size and shape**? (BISS2)**

1	*2*	*3*	*4*	*5*
Very dissatisfied.	*Somewhat dissatisfied.*	*Neutral*	*Somewhat satisfied.*	*Very satisfied.*

3. … how satisfied did you feel with your weight? **(BISS3)**

1	*2*	*3*	*4*	*5*
Very dissatisfied.	*Somewhat dissatisfied.*	*Neutral*	*Somewhat satisfied.*	*Very satisfied.*

4. … how did you feel your looks compared to usual? **(BISS4)**

1	*2*	*3*	*4*	*5*
Much worse.	*Somewhat worse.*	*Neutral*	*Somewhat better.*	*Much better.*

5. …how did you feel your looks compared to an average person's looks? **(BISS5)**

1	*2*	*3*	*4*	*5*
Much worse.	*Somewhat worse.*	*Neutral*	*Somewhat better.*	*Much better.*

Time Spent on Social Media

Please estimate the following in hours and minutes:

In the past 24 hours....

1. …how much time did you spend on the following "social media" sites
  Facebook_____
  Instagram_____
  Snapchat_____
  Twitter_____
  Other_____

REFERENCES

Al-Menayes, J. J. (2015). Motivations for using social media: An exploratory factor analysis. *International Journal of Psychological Studies, 7*(1), 43. doi:10.5539/ijps.v7n1p43

Birkeland, R., Thompson, J. K., Herbozo, S., Roehrig, M., Cafri, G., & van den Berg, P. (2005). Media exposure, mood, and body image dissatisfaction: An experimental test of person versus product priming. *Body Image, 2*(1), 53-61. doi:10.1016/j.bodyim.2004.11.002

Cash, T. F., Fleming, E. C., Alindogan, J., & Steadman, L. (2002). Beyond body image as a trait: The development and validation of the body image states scale. *Eating Disorders, 10*(2), 113; 113.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed. ed.). GB: Routledge Ltd. doi:10.4324/9780203771587

Cramer, E. M., Song, H., & Drent, A. M. (2016). Social comparison on facebook: Motivation, affective consequences, self-esteem, and facebook fatigue. *Computers in Human Behavior, 64*, 739-746. doi:10.1016/j.chb.2016.07.049

Davila, J., Hershenberg, R., Feinstein, B. A., Gorman, K., Bhatia, V., & Starr, L. R. (2012). Frequency and quality of social networking among young adults: Associations with depressive symptoms, rumination, and corumination. *Psychology of Popular Media Culture, 1*(2), 72-86. doi:10.1037/a0027512

Eisenberg, D., Nicklett, E. J., Roeder, K., & Kirz, N. E. (2011). Eating disorder symptoms among college students: Prevalence, persistence, correlates, and treatment-seeking. *Journal of American College Health : J of ACH, 59*(8), 700-707. doi:10.1080/07448481.2010.546461

Fallon, E. A., Harris, B. S., & Johnson, P. (2014). Prevalence of body dissatisfaction among a united states adult sample. *Eating Behaviors, 15*(1), 151-158. doi:10.1016/j.eatbeh.2013.11.007

Fardouly, J., Diedrichs, P. C., Vartanian, L. R., & Halliwell, E. (2015). Social comparisons on social media: The impact of facebook on young women's body image concerns and mood. *Body Image, 13*, 38-45. doi:10.1016/j.bodyim.2014.12.002

Fardouly, J., & Vartanian, L. R. (2015). Negative comparisons about one's appearance mediate the relationship between facebook usage and body image concerns. *Body Image, 12*, 82-88. doi:10.1016/j.bodyim.2014.10.004

Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7*(2), 117-140. doi:10.1177/001872675400700202

Fichter, M. M., Quadflieg, N., & Hedlund, S. (2006). Twelve-year course and outcome predictors of anorexia nervosa. *International Journal of Eating Disorders, 39*(2), 87-100. doi:10.1002/eat.20215

Fiske, L., Fallon, E. A., Blissmer, B., & Redding, C. A. (2014). Prevalence of body dissatisfaction among united states adults: Review and recommendations for future research. *Eating Behaviors, 15*(3), 357-365. doi:10.1016/j.eatbeh.2014.04.010

Fitzsimmons-Craft, E. E., Bardone-Cone, A. M., & Harney, M. B. (2012). Development and validation of the body, eating, and exercise comparison orientation measure (BEECOM) among college women. *Body Image, 9*(4), 476. doi:10.1016/j.bodyim.2012.07.007

Fredrickson, B. L., & Roberts, T. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly, 21*(2), 173-206. doi:10.1111/j.1471-6402.1997.tb00108.x

Gilbert, D. T., Giesler, R. B., & Morris, K. A. (1995). When comparisons arise. *Journal of Personality and Social Psychology, 69*(2), 227-236. doi:10.1037//0022-3514.69.2.227

Gonzales, A. L., & Hancock, J. T. (2011). Mirror, mirror on my facebook wall: Effects of exposure to facebook on self-esteem. *Cyberpsychology, Behavior, and Social Networking, 14*(1-2), 79-83. doi:10.1089/cyber.2009.0411

Grabe, S., Shibley Hyde, J., & Ward, L. M. (2008). The role of the media in body image concerns among women: A meta-analysis of experimental and correlational studies. *Psychological Bulletin, 134*(3), 460-476. doi:10.1037/0033-2909.134.3.460

Greenwood, S., Perrin, A., & Duggan, M. (2016, Nov 11,). Social media update 2016. Retrieved from http://www.pewinternet.org/2016/11/11/social-media-update-2016/

Groesz, L. M., Levine, M. P., & Murnen, S. K. (2002). The effect of experimental presentation of thin media images on body satisfaction: A meta-analytic review. *International Journal of Eating Disorders, 31*(1), 1-16. doi:10.1002/eat.10005

Haferkamp, N., & Krämer, N. C. (2011). Social comparison 2.0: Examining the effects of online profiles on social-networking sites. *Cyberpsychology, Behavior, and Social Networking, 14*(5), 39-314. doi:10.1089/cyber.2010.0120

Harris, E. C., & Barraclough, B. (1998). Excess mortality of mental disorder. *The British Journal of Psychiatry, 173*(1), 11-53. doi:10.1192/bjp.173.1.11

Harrison, K., & Cantor, J. (1997). The relationship between media consumption and eating disorders. *Journal of Communication, 47*(1), 40-67. doi:10.1111/j.1460-2466.1997.tb02692.x

Hayes, A. F. (2009). Beyond baron and kenny: Statistical mediation analysis in the new millennium. *Communication Monographs, 76*(4), 408-420. doi:10.1080/03637750903310360

Johnson, J. G., Cohen, P., Kasen, S., & Brook, J. S. (2002). Eating disorders during adolescence and the risk for physical and mental disorders during early adulthood. *Archives of General Psychiatry, 59*(6), 545-552. doi:10.1001/archpsyc.59.6.545

Keery, H., van den Berg, P., & Thompson, J. K. (2004). An evaluation of the tripartite influence model of body dissatisfaction and eating disturbance with adolescent girls. *Body Image, 1*(3), 237-251. doi:10.1016/j.bodyim.2004.03.001

Knauss, C., Paxton, S., & Alsaker, F. (2008). Body dissatisfaction in adolescent boys and girls: Objectified body consciousness, internalization of the media body ideal and perceived pressure from media. *Sex Roles, 59*(9), 633-643. doi:10.1007/s11199-008-9474-7

Krones, P. G., Stice, E., Batres, C., & Orjada, K. (2005). In vivo social comparison to a thin-ideal peer promotes body dissatisfaction: A randomized experiment. *International Journal of Eating Disorders, 38*(2), 134-142. doi:10.1002/eat.20171

Lindberg, S. M., Hyde, J. S., & McKinley, N. M. (2006). A MEASURE OF OBJECTIFIED BODY CONSCIOUSNESS FOR PREADOLESCENT AND ADOLESCENT YOUTH. *Psychology of Women Quarterly, 30*(1), 65-76. doi:10.1111/j.1471-6402.2006.00263.x

Manago, A. M., Graham, M. B., Greenfield, P. M., & Salimkhan, G. (2008). Self-presentation and gender on MySpace. *Journal of Applied Developmental Psychology, 29*(6), 446-458. doi:10.1016/j.appdev.2008.07.001

McKinley, N. M., & Hyde, J. S. (1996). The objectified body consciousness scale. *Psychology of Women Quarterly, 20*(2), 181-215. doi:10.1111/j.1471-6402.1996.tb00467.x

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

Mitchell, J., & Crow, S. (2006). Medical complications of anorexia nervosa and bulimia nervosa. *Current Opinion in Psychiatry, 19*(4), 438-443. doi:10.1097/01.yco.0000228768.79097.3e

Myers, T. A., & Crowther, J. H. (2009). Social comparison as a predictor of body dissatisfaction. *Journal of Abnormal Psychology, 118*(4), 683-698. doi:10.1037/a0016763

National Institute of Mental Health. (2016). Eating disorders. Retrieved from http://www.nimh.nih.gov/health/topics/eating-disorders/index.shtml#part_145415

Nesi, J., & Prinstein, M. (2015). Using social media for social comparison and feedback-seeking: Gender and popularity moderate associations with depressive symptoms. *Journal of Abnormal Child Psychology, 43*(8), 1427-1438. doi:10.1007/s10802-015-0020-0

Perloff, R. (2014). Social media effects on young women's body image concerns: Theoretical perspectives and an agenda for research. *Sex Roles, 71*(11), 363-377. doi:10.1007/s11199-014-0384-6

Perrin, A. (2015, Oct 8,). Social media usage: 2005-2015. Retrieved from http://www.pewinternet.org/2015/10/08/social-networking-usage-2005-2015/

Prieler, M., & Choi, J. (2014). Broadening the scope of social media effect research on body image concerns. *Sex Roles, 71*(11), 378-388. doi:10.1007/s11199-014-0406-4

Products. Retrieved from https://newsroom.fb.com/products/

Reas, D. L., Williamson, D. A., Martin, C. K., & Zucker, N. L. (2000). Duration of illness predicts outcome for bulimia nervosa: A long-term follow-up study. *The International Journal of Eating Disorders, 27*(4), 428-434. doi:AID-EAT7>3.0.CO;2-Y

Ridolfi, D., Myers, T., Crowther, J., & Ciesla, J. (2011). Do appearance focused cognitive distortions moderate the relationship between social comparisons to peers and media images and body image disturbance? *Sex Roles, 65*(7), 491-505. doi:10.1007/s11199-011-9961-0

Rodgers, R. F., McLean, S. A., & Paxton, S. J. (2015). Longitudinal relationships among internalization of the media ideal, peer social comparison, and body dissatisfaction: Implications for the tripartite influence model. *Developmental Psychology, 51*(5), 706-713. doi:10.1037/dev0000013

Rodin, J., Silberstein, L., & Striegel-Moore, R. (1984). Women and weight: A normative discontent. *Nebraska Symposium on Motivation, 32*, 267-307.

Sagioglou, C., & Greitemeyer, T. (2014). Facebook's emotional consequences: Why facebook causes a decrease in mood and why people still use it. *Computers in Human Behavior, 35*, 359. doi:10.1016/j.chb.2014.03.003

Smith, A. R., Hames, J. L., & Joiner, J., Thomas E. (2013). Status update: Maladaptive facebook usage predicts increases in body dissatisfaction and bulimic symptoms. *Journal of Affective Disorders, 149*(1-3), 235-240. doi:10.1016/j.jad.2013.01.032

Stefanone, M. A., Lackaff, D., & Rosen, D. (2011). Contingencies of self-worth and social-networking-site behavior. *Cyberpsychology, Behavior, and Social Networking, 14*(1-2), 41-49. doi:10.1089/cyber.2010.0049

Stice, E. (2002). Risk and maintenance factors for eating pathology: A meta-analytic review. *Psychological Bulletin, 128*(5), 825-848. doi:10.1037//0033-2909.128.5.825

Stice, E., & Shaw, H. E. (2002). Role of body dissatisfaction in the onset and maintenance of eating pathology: A synthesis of research findings. *Journal of Psychosomatic Research, 53*(5), 985-993. doi:10.1016/S0022-3999(02)00488-9

Thompson, J. K. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance*. Washington, DC: American Psychological Assoc.

Tiggemann, M., & Kuring, J. K. (2004). The role of body objectification in disordered eating and depressed mood. *The British Journal of Clinical Psychology / the British Psychological Society, 43*(Pt 3), 299-311. doi:10.1348/0144665031752925

Tiggemann, M., & Miller, J. (2010). The internet and adolescent girls' weight satisfaction and drive for thinness. *Sex Roles, 63*(1-2), 79-90. doi:10.1007/s11199-010-9789-z

van den Berg, P., Thompson, J. K., Obremski-Brandon, K., & Coovert, M. (2002). The trivariate influence model of body image and eating disturbance. *Journal of Psychosomatic Research, 53*, 1007– 1020.

Want, S. C., & Saiphoo, A. (2017). Social comparisons with media images are cognitively inefficient even for women who say they feel pressure from the media. *Body Image, 20*, 1-6. doi:10.1016/j.bodyim.2016.10.009