

THE IMPACT OF SOCIAL MEDIA USE ON SOCIAL COMPARISON AND BODY IMAGES
OF YOUNG ADULT MALES

by

Tresa Lynn Hildreth

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

School of Behavioral Sciences

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APPROVED BY:

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ABSTRACT

With the rise of social networking sites, young people are utilizing social platforms as an on-going avenue for comparison, specifically with regard to body image. Although issues of body image are often attributed to females, males struggle to live up to societal ideals of what a man should look like. This study highlights the body image comparisons that exist with young men and provides insight into the detrimental impact and consequences these comparisons can have on young men as they grow into adulthood. The purpose of this study was to investigate the relationship between social media use and body image concerns as it pertains to young adult males. Participants for this study were undergraduate male students ages 18-20 who were recruited from two secular colleges, a Christian university, as well as through a random sampling from a post sent out on Facebook. The sample size is 126 participants. The instrumentation used in this study is the Body Comparison Scale (BCS), Male Body Attitudes Scale (MBAS), and Social Media Intensity Scale (SMIS), a scale derived from the Facebook Intensity Scale (FBI). This study utilized a quantitative, correlational design. The study used multiple predictor variables (social media use, number of friends/followers, and time spent on social media), one criterion variable (body image), and one moderator variable (social comparison). After all of the data was collected through Qualtrics, it was analyzed using a multiple regression analysis to measure the correlation between the social media predictor variables and body image. In addition, three separate multiple regression analyses were conducted in order to examine the moderator effects.

Keywords: social comparison, body image, social media, moderate, young adult males

Copyright Page

Dedication Page

My biggest dedication goes to my Lord and Savior, Jesus Christ. I would never have been able to do this without Him. He paved the way from the very beginning by nudging me to apply to the program at Liberty University and then by opening the doors to being accepted into the program. He has given me the strength, encouragement, and perseverance to work full-time and come home every night to read, study, and complete homework assignments. When classes were tough and I was worn out with exhaustion, He continued to whisper into my ear to keep going. When I ran into roadblocks, He gave me the patience and the strength to navigate through the obstacles and press on toward my goals. He has taught me so much through this process about myself and about His never-ending love and faithfulness. I would not have earned this degree without Him. Thank you, Jesus!

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List of Abbreviations

Body Comparison Scale (BCS)

Body Mass Index (BMI)

Cognitive Behavioral Therapy (CBT)

Facebook Intensity Scale (FBI)

Fear of Missing Out (FOMO)

Institutional Review Board (IRB)

Liberty University (LU)

Male Body Attitudes Scale (MBAS)

Social Media Intensity Scale (SMIS)

Statistical Package for the Social Sciences (SPSS)

Variance Inflation Factor (VIF)

CHAPTER ONE: INTRODUCTION

Overview

Body image concerns and overall body dissatisfaction are topics that have been explored and investigated over time, as they have significant outcomes that can be detrimental to individuals in many ways (Cash & Smolak, 2011; Grogan, 2016). It is no surprise that adolescents can develop concerns related to body image that can potentially have a negative impact on their lives. While the topic of body image is usually attributed to the female population, men and young boys are not exempt from these struggles and as a result, they can experience a variety of consequences. As time has progressed and the technological world has advanced, more avenues have been created for individuals to communicate and share snippets of their life, increasing the possibility for individuals to compare themselves with others. This chapter focuses on the relationship that may exist between social media use and body image in young adult males. A general overview of the history and theoretical background will be included, as well as any current gaps that exist with regard to this particular topic. Finally, the purpose and significance of this study will be included as well.

Background

The topic of body image is one that comprises a wide range of influential factors. Many of these can lead to body dissatisfaction and other detrimental consequences as a result (Follette et al., 2010; Grogan, 2016; Jobsky, 2014). Much of the research conducted within this area is often geared toward women and several studies that do report body image findings related to men appear to be contradicting. Some report a drive for muscularity at the forefront of struggles for men, and a drive for thinness with regard to women (Mills et al., 2012; Stratton et al., 2015). Other studies however, show that men actually do struggle with striving for thinness as well

(Galioto & Crowther, 2013; Grogan, 2016). Adolescents are significantly vulnerable to body image issues due to the physical and psychological changes that accompany puberty (Ricciardelli & Yager, 2015). It is no surprise then, that boys as young as 6 years old can exhibit concerns related to their body that can follow them as they grow into adulthood (McNeill & Firman, 2014; Ricciardelli, 2012). Social comparison is consistently linked with body image dissatisfaction which emphasizes peers, parents, and the media as sources of pressure that influence the internalization of body ideals (Tylka, 2011).

The world is constantly changing with regard to technology and the continuous technological advances that have evolved over time. The Internet has changed the way individuals connect with one another and manage their daily lives. In fact, 20 years ago only half of Americans reported online usage whereas today, 9 out of 10 Americans use the Internet on a regular basis (Pew Research Center, 2018). Studies show that 26% of Americans report using the Internet constantly and 44% report that they are online several times a day (Anderson & Jiang, 2018; Pew Research Center, 2018). While Facebook and YouTube tend to be the dominant sites used across America, more and more adolescents are choosing Snapchat, Instagram, and a variety of other social media sites (Anderson & Jiang, 2018). As a result, it is no surprise that the growth of technology can be accompanied by a variety of positive and negative outcomes. Social media platforms make comparisons more accessible, which in turn put young adolescents at risk for body image dissatisfaction (Kim & Chock, 2015; Salomon & Brown, 2017).

Historical Context

The history of body image as a topic of interest, concern, and on-going research has undergone considerable change over the course of time. In the early 1900s, body image research was viewed through the construct of neuropathology and it was not until 1935 that a neurologist

named Schilder emphasized the need for the topic of body image to be investigated through a neurological, psychological, and sociocultural lens (Cash & Smolak, 2011). Grogan (2016) described the earlier views of body image related to distorted body perceptions caused by damage to the brain. Grogan further emphasized Cash and Smolak's (2011) recognition of Schilder's assertions that body image has a psychological and sociological component and can be impacted by attitudes and interactions with others. As time has progressed, researchers and clinicians have developed a variety of definitions related to body image. Grogan (2016) described a few of these definitions in relation to weight satisfaction, size perception accuracy, body satisfaction, appearance evaluation, body esteem, and body concern to name a few.

Social Context

Sociocultural factors have been widely researched with regard to body image. Tiggemann (2011) described these factors as the societal ideals held within a culture that are transferred through sociocultural channels, and internalized by individuals in that they are either satisfied or dissatisfied with how they measure up to the ideal. Tiggemann (2011) also emphasized that these ideals are transferred through powerful sociocultural influences, specifically media, family, and peers. Historically, cultural ideals of beauty were quite different and have changed over time. For example, in the 1400s and 1700s the beauty ideal for a woman was large breasted and plump. In contrast, the thin ideal has been pervasive for the past thirty years (Cafri et al., 2005). Tiggemann (2011) stated that for men the cultural norm related to the ideal body has become more muscular over time. In addition, Tiggemann asserted that the most powerful transmitter of these ideals are mass media. Given the newer forms of media that are more and more pervasive in our world today, more research continues to be conducted on how these newer forms impact body image.

Theoretical Context

The theoretical framework related to this study is driven by Festinger's theory of social comparison where individuals assess themselves based on comparisons made with others (Festinger, 1954). Whereas researchers in the past have studied social comparisons made within face-to-face contexts, Facebook and other social media platforms have created opportunities for extended research related to social comparison. Social media users have the ability to present outside viewers with their most favorable pictures, status updates, and messages in an effort to present the best version of themselves to the outside world (Cramer et al., 2016). This theoretical framework has therefore evolved over time in terms of the technological progression that has taken place within society.

The tripartite influence model is a model of social influence that has driven past studies related to body image. This model identifies peers, parents, and the media as the three main influencers of body image (Tylka, 2011). Interpersonal relationships have been studied quite extensively with regard to body image dissatisfaction and while many sociocultural theories pertaining to the development of body image issues have been explored, more immediate influences have been examined over time as well. These studies have included parents, family dynamics, peers, romantic partners, and strangers (Thompson et al., 1999). As time has progressed, more studies have followed this theoretical framework in looking at how these influences impact men (Brown et al., 2017; Grogan, 2010; Rodgers et al., 2015; Tylka, 2011; Tylka & Andorka, 2012). Adolescent boys and younger adult males however, are still underrepresented.

Problem Statement

Most studies related to body image focus on the female population or adolescent girls (Andrew et al., 2016; Fardouly & Vartanian, 2016; Holland & Tiggemann, 2016; Tiggemann & Slater, 2017). While more and more studies have started to include the male population, very few tend to incorporate adolescent boys or younger adult males and this is where there appears to be a significant gap. Studies have shown that between 40% and 70% of adolescent boys report dissatisfaction with their body. In addition, this dissatisfaction has shown a consistent linear increase from the ages of 12 through 24 years old (Almeida et al., 2012; Huenemann et al., 1966; Lawler & Nixon, 2011; McCabe & Ricciardelli, 2004; Ricciardelli & Yager, 2015). According to Lewis (2016), body image issues can begin in young children as soon as they are around other children and begin to compare their body shape and size with others. They can also observe behaviors of adults and older children related to body image. Lewis (2016) also emphasized that body dissatisfaction in young children can lead to low self-esteem, eating disorders, and other dangerous behaviors that can lead to shame, secrecy, and poor mental health. While some studies suggest that body ideals and social influences have a less negative effect on boys (Hargreaves & Tiggemann, 2009; Tatangelo & Ricciardelli, 2017), other research shows that boys are indeed impacted by social influences related to body ideals (Holt & Ricciardelli, 2002; Smolak & Stein, 2010; Tatangelo & Ricciardelli, 2017). It is not however, socially acceptable for boys to struggle with body image, and therefore boys do not feel comfortable talking about it or asking for help with this issue (Davison, 2012; Ricciardelli, 2012). Boys and girls of this age group are also living in a time where social media sites such as SnapChat, Instagram, YouTube, and Facebook are becoming increasingly popular. Boys are at risk for making comparisons through these avenues as well with regard to body image. It is not known if a relationship exists between social

media use and body image dissatisfaction related to young adult males specifically, and if social comparison strengthens this relationship.

Purpose Statement

The purpose of this quantitative study is to address this gap in the literature and investigate the possible relationship between social media use and body image concerns as it pertains to young adult males. Given that this particular group is underrepresented within past and current research studies, and more studies have confirmed that males do in fact struggle with body image, this study gleans insight and valuable information related to body image, social media use, and social influence with young adult males. Social comparison is examined as a possible moderator within this relationship to determine if it strengthens the effect of social media use on body image for this particular population. The predictor variables are social media use, number of friends/followers, and hours spent on social media. The outcome variable is body image.

Significance of the Study

This study is significant in that it provides valuable information and data to a body of knowledge and research that is quite scarce. It is already clear that studies related to body image are more often geared toward women and young girls in an attempt to prevent future detrimental consequences related to poor body image (Andrew et al., 2016; Fardouly & Vartanian, 2016; Holland & Tiggemann, 2016; Tiggemann & Slater, 2017). With boys however, the data is more limited, especially with social media use as a variable. Therefore, this study contributes greatly to an area of research that is important but lacking. As emphasized by Drummond and Drummond (2015), our society does not address the needs of young boys in terms of issues surrounding the body, despite evidence suggesting that boys struggle in this area and the

prevalence of eating disorders or other issues are increasingly present. In addition, much research has been conducted on the effects of various forms of media in relation to body image, but with the rise and popularity of various social media sites in our society today, researchers are beginning to examine the possible impact of these forms of media on body image as well (Barlett et al., 2008; Fardouly & Vartanian, 2016; Fardouly & Vartanian, 2015; Kim & Chock, 2015). Therefore, this study contributes to this area of research both theoretically and empirically. Theoretically, we can predict that young men compare themselves through social media outlets based on the theory of social comparison and studies that have been conducted previously with young women. Empirically, this study looks at the experiences of young men and how these experiences relate to social comparison, social media use, and body image issues.

Research Questions

RQ1: Does the use of social media, number of friends/followers, and hours spent on social media as measured by the Social Media Intensity Scale (SMIS) significantly correlate with body image dissatisfaction as measured by the Male Body Attitudes Scale (MBAS) among young adult males?

RQ2: Does social comparison as measured by the Body Comparison Scale (BCS) moderate the relationship between social media use as measured by the Social Media Intensity Scale (SMIS) and body image concerns as measured by the Male Body Attitudes Scale (MBAS) among young adult males?

Definitions

1. *Body dissatisfaction:* A person's negative thoughts or feelings about his or her body.

This includes negative evaluations related to one's body shape, size, muscularity or

- tone, and weight, as well as inconsistency between a person's evaluation of their body in comparison to their ideal body (Grogan, 2016).
2. *Body image*: A person's thoughts, perceptions, and feelings about his or her body. This definition includes psychological attitudes toward the body as well as both positive and negative aspects related to body image (Grogan, 2016).
 3. *Facebook*: A social networking site that was founded in 2004 by Mark Zuckerberg. The mission of this site is to build community and bring people closer together (Facebook Newsroom, 2019).
 4. *Moderator*: A variable that influences the magnitude of the causal effect of (X) on (Y). Moderator is also known as interaction (Hayes, 2013).
 5. *Moderator analysis*: The proper analysis used in an investigation to determine if a certain variable influences, or is related to the size of a variable's effect on another variable (Hayes, 2013).
 6. *Social comparison*: The idea that individuals are driven to assess their own opinions and abilities and in doing so, they tend to compare themselves to others (Festinger, 1954).
 7. *Social media*: Web-based services that allow an individual to create a public profile, integrate a list of users that they share a connection with, and sift through their connections as well as the connections of others within the same site (Boyd & Ellison, 2007).

CHAPTER TWO: LITERATURE REVIEW

Overview

The research presented in this review will provide information that highlights the importance of gaining a deeper understanding of the struggles that young boys face with regard to body image. Pressure to live up to societal ideals of what a man should look like, as well as the tendency to make comparisons with others, afflict adolescent boys as they develop into young men. The rise of social networking sites such as SnapChat, Instagram, YouTube, and Facebook create an on-going avenue for such comparisons to take place. Consequences can have a detrimental impact on the lives of many young boys and can follow them well into their adult years. The purpose of this study is to examine these factors and the relationships that exist among them. In addition, the aim is to add to the growing body of literature that needs to include young men where there currently appears to be a gap.

Theoretical Framework

Festinger's (1954) theory of social comparison is used within this study. This theory is based on the idea that individuals are naturally driven to assess their opinions and abilities and in doing so, they often look to others for comparison (Festinger, 1954). This theory has evolved in looking at social comparisons that involve upward comparisons and downward comparisons depending on an individual's motivation behind the comparison (Halliwel, 2012). In addition, a model of social influence known as the tripartite influence model is examined as it pertains to this study. This model asserts that three main influences impact body image. These include parents, peers, and the media. This model has also been extended to include a fourth source of pressure from a dating partner (Tylka, 2011).

These models lay the foundation for this study. Many studies have been conducted using these theoretical models; however, this study extends what has already been studied with the inclusion of young adult men. In addition, these frameworks aid in the further investigation of social influences with body image concerns and the role social media plays within this relationship.

Related Literature

This review of the literature examines body image and the factors that contribute to the development of body image dissatisfaction as it pertains to the male population. In addition, drive for thinness and drive for muscularity are explored with regard to adolescent boys. Given that social media has become a popular and consistently evolving means of communication and entertainment in our world today, the use of social media among young adolescents is explored, as well as a brief exploration of the various platforms available. This includes an examination of the motivations behind social media use and stressors that evolve as a result. Social comparison theory and the tendency for individuals to compare themselves with others through the use of social media sites is reviewed. Finally, the effects of using social media and engaging in social comparison is analyzed with regard to body image concerns and body image dissatisfaction with adolescent boys. The purpose of this review is to demonstrate the importance of investigating body image concerns within the male population, as well as analyzing the added pressures that are created through the use of social media, and risk factors that can emerge as a result.

Body Image

Body image is a complex topic that encompasses the cognitive, emotional, and behavioral view that an individual has of their body shape and size. It is influenced by a variety of biological, social, cultural, developmental, and individual factors (Follette et al., 2010). Body

image is defined by how an individual experiences their body and physical appearance. This includes the functional capabilities such as health and fitness, as well as appearance-related perceptions and attitudes (Cash, 2012). Body dissatisfaction can occur as these influential factors come together and an individual develops a perceptual awareness of how their body actually is in comparison to how they believe it should be (Jobsky, 2014).

There are many factors that predict body dissatisfaction. Grogan (2016) describes six factors that greatly contribute to the likelihood of an individual developing a negative image of their body. The first factor is self-esteem. Research highlights that individuals who have lower self-esteem also tend to have higher levels of body dissatisfaction. For adolescent boys and girls, body dissatisfaction may precede low self-esteem where the opposite is true for adult men and women (O’Dea, 2012; Paxton et al., 2006; Tiggemann, 2005). Internalization of thin/muscular ideal is the second risk factor. Grogan (2016) asserts that men and women who are exposed to media ideals are susceptible to body dissatisfaction when they do not perceive themselves as measuring up to these ideals. Being exposed to these ideals for even five minutes can cause individuals to be at risk for comparison and higher levels of body dissatisfaction. Social comparison is another risk factor for body dissatisfaction. Making unrealistic comparisons to body ideals increases the likelihood of body dissatisfaction. The fourth factor is self-objectification. The tendency to view the body as an object has been shown to result in lower levels of body satisfaction (Grogan, 2016). This is more associated with women than with men. Next, individuals who feel greater physical self-efficacy are also more satisfied with their body. In a study conducted by Martin-Ginis and colleagues (2005), significant improvement in body image was found for both men and women who participated in a twelve-week strength training program. Martin-Ginis and Bassett (2012) argued that exercise builds increased physical self-

efficacy which in turn increases body image satisfaction. Therefore, those who are less confident in their physical abilities are at a greater risk of body dissatisfaction. Finally, Grogan (2016) argued that focusing more on body appreciation helps to decrease body dissatisfaction.

Male Body Image

Although many studies have focused solely on women when it comes to body image dissatisfaction and the unhealthy behaviors that manifest as a result, men do in fact struggle with body image as well and research continues to grow with the male population in mind (Galioto & Crowther, 2013; Grogan, 2016; McNeill & Firman, 2014). A great deal of on-going research has focused on body image ideals that men are exposed to and how this impacts their perceptions of themselves. Most of the literature explores the slender and muscular body image ideals for men and reports that the drive for muscularity is more prominent among men, whereas the drive for thinness is associated more with women (Mills et al., 2012; Stratton et al., 2015). When looking at the association between body norms and ideal body size perceptions, men showed a more muscular body size ideal when a more muscular norm condition was present (Mills et al., 2012).

Alternative studies have contradicted this view of men striving for a muscular ideal and have found that men also strive for thinness. Men who were exposed to ideal body images, both slender and muscular, were associated with an increased level of body dissatisfaction. This furthers the research already related to men's drive for muscularity, but also points to the idea that men strive for a thin ideal as well, which is generally associated more with women (Galioto & Crowther, 2013). The ideal body shape for men tends to be slender and moderately muscular and studies have shown that men who are dissatisfied with their body are just as likely to want to be thinner as they are to want to be more muscular. The areas of the body that men tend to be most dissatisfied with are the torso, biceps, chest, shoulders, and overall muscle tone (Franko et

al., 2015; Grogan & Richards, 2002; Thompson & Cafri, 2007). It has also been found that men tend to exercise more than dieting as a means of working on their body and men also show a high level of body comparison with other men (Gough, 2007; Grogan, 2016; Grogan & Richards, 2002).

Other studies have argued that body dissatisfaction in males is related to the internalization of social ideals for muscularity which leads to body comparisons and a drive for muscularity as a result. The influences of other male peers also lead to comparison and internalization which result in body dissatisfaction (Myers & Crowther, 2009; Stratton et al., 2015). One study conducted by Karazsia and Crowther (2009) found that men were consistently more likely to compare themselves with others who were more like them, such as peers, or those with desirable features such as sports athletes. The internalization of the athletic ideal was a higher predictor of body dissatisfaction than a general ideal. Levels of autonomy moderated the relationship between pressure and the internalization of the muscular ideal in men. Men who exhibited higher levels of autonomy, showed a weaker relationship with regard to pressure and internalization. In addition, men who portrayed lower levels of self-determination, were more likely to accept social messages pertaining to muscularity and internalize these messages (Edwards et al., 2016).

Body Image and Adolescent Boys

Over time more and more attention has been given to body image issues surrounding young boys. A discrepancy in the literature exists with regard to boys and body image concerns. Studies have looked at gender differences in relation to body image among adolescents and have reported that girls showed higher levels of body dissatisfaction than boys (Knauss et al., 2008; Knauss et al., 2007). Research however has often underestimated this issue when it comes to

boys despite the fact that many boys have admitted to body image concerns, but have never felt comfortable talking about it because it hasn't ever been socially acceptable for them to do so. These young boys often feel like body image is a female issue. Almost half of boys reported some sort of concern about body image, or unhealthy eating behavior (Dominé et al., 2009; McNeill & Firman, 2014; Ricciardelli, 2012). The consequences of body image concerns with boys can result in muscle dysmorphia which involves the preoccupation with muscularity and a fear of being small or weak. Other consequences include eating disorders, depression, negative relationships, the use of steroids or other dietary supplements, as well as other supplements to increase size in a short amount of time (Ricciardelli, 2012).

Drive for Muscularity. Research studies suggest that girls and boys can become dissatisfied with their bodies even before they reach adolescence. Girls can begin to attach positive body characteristics to thin ideals as early as age three (Grogan, 2016; Worobey & Worobey, 2014). Research with boys has shown that over 50% of boys as young as eight-years-old are concerned with being lean and muscular. Their body ideals are similar to those of adult men (Almeida et al., 2012; Grogan, 2016; Lawler & Nixon, 2011). A growing number of research studies confirm that between the ages of six and seven, boys begin to develop the preference for a large, muscular body ideal. This ideal increases with age and can follow them into their adolescent and adult years. These boys try to reach a muscular, yet thin ideal (McNeill & Firman, 2014; Ricciardelli, 2012).

In a study with boys ages five to seven, boys gave their perception of what a man should look and act like (Drummond, 2012). They reported that a man should be muscular and strong, powerful and dominant, and should participate in sports using aggression. In addition, they reported that a man should always be a winner. In other words, they believed a man should have

a strong body and play tough sports (Drummond, 2012). McLean and colleagues (2018), conducted a study that assessed six-year-old boys with regard to body image. They found that one-third of the boys were interested in being more muscular than their current body size. In addition, these boys regarded muscularity as being more rewarding than being thin. Both muscularity and thinness-oriented body image concerns were present with young boys; however, this study found that muscularity-related body concerns were more prevalent among boys (McLean et al., 2018). In a study conducted with boys in early childhood up to the age of ten, it was found that the majority of those who participated, viewed the male body as one of muscularity and strength and that this was part of becoming a man. These perceptions of the male body were received from a variety of sources such as the internet, online games, and other sources that portray an unrealistic body ideal (Drummond & Drummond, 2015). These studies clearly portray a strong perception among young boys related to what a man should look like and the physical qualities they should possess. It is also evident through these studies that these impressions develop within the minds of young boys at an early age in their development and set them up for possible body image concerns as a result.

Drive for Thinness. In contrast to the above studies, another study was conducted with boys who reported body image concerns who were either below the 10th percentile or above the 75th percentile for body mass index (BMI). In other words, boys who experienced body dissatisfaction were either approaching overweight or underweight (Calzo et al., 2012). This was not necessarily related to a large, muscular ideal as noted in previous studies. This further adds to the growing information surrounding the possibility that boys may be more concerned with weight, than was previously suggested. When looking at weight and muscularity as predictors of body dissatisfaction, it was found that during the adolescent years for boys, they were more

concerned with weight than they were with a drive for muscularity, and this concern with weight often took away from a positive body image. Given that developmentally boys were more concerned with weight at a younger age, they may be more concerned with muscularity once they get a little older (Jones et al., 2008). Another recent study reiterated this point in that between 27% and 47% of pre-adolescent boys reported wanting a thinner body size, whereas between 15% and 44% of boys reported wanting to have a larger body size (Ricciardelli et al., 2009). This clearly opposes the previous argument that boys are more concerned with muscularity.

Body Image Ideals. As noted previously with men, adolescents too are at risk for on-going pressure to conform to body image ideals. Both boys and girls tend to internalize socio-cultural norms surrounding appearance and feel pressure to live up to these idealized standards. In addition, appearance-related criticism or teasing among adolescents significantly predicts body dissatisfaction. Lawler and Nixon (2011) suggest that girls tend to participate in more appearance conversations with friends than boys. However, peer appearance criticism has an impact on both girls and boys. Internalization of media ideals proved to be the strongest predictor of body dissatisfaction for girls, whereas perceived pressure from media to achieve these ideals was the strongest predictor of body dissatisfaction for boys (Knauss et al., 2007).

Social Comparison Theory

Social comparison theory is derived from Leon Festinger and is based on the idea that individuals are driven to assess their own opinions and abilities. In doing so, they tend to compare themselves to others. Individuals who compare themselves to others who are similar to them will encounter more accurate assessments of their capabilities or opinions (Festinger, 1954). Comparisons can take on the form of upward or downward comparisons. Upward

comparisons involve comparisons among an individual and another person who is viewed as being superior. On the other hand, downward comparisons involve comparisons among an individual and another person who is viewed as inferior in one way or another. An individual's choice of upward or downward comparison depends on the motivation behind the comparison. Downward comparisons can be used to boost self-regard and upward comparisons can be used for self-evaluation and self-improvement purposes. Both however can have a negative impact on an individual (Halliwell, 2012).

Social Comparison and Body Image

Social comparison and body image dissatisfaction are consistently intertwined (Grogan, 2016; Rodgers et al., 2015; Vartanian & Dey, 2013). One model of social influence is known as the tripartite influence model. This model asserts that there are three influences that greatly impact body image in direct and indirect ways. These influences include peers, parents, and the media. In addition, this model asserts that an individual's motive in the process of comparison is to receive information related to one's appearance. However, when one receives feedback that is viewed as negative, body dissatisfaction may occur (Tylka, 2011).

Consistent with this model, a meta-analytic review was conducted by Myers and Crowther (2009), where data from 156 studies was collected in order to examine the relationship between social comparison and body image dissatisfaction. Studies were located using PsycINFO and a set of inclusion criteria was implemented and followed. The dates of the studies ranged from 1983 through 2009. The data confirmed that appearance comparisons were significantly related to body dissatisfaction. In addition, this relationship was stronger for women than for men. This relationship was also stronger for younger participants (Myers & Crowther, 2009). Interestingly, younger men focused on the opinions of their peers and family, which was

reflected in how they viewed their body. Media also influenced younger men's body image, but not to the extent that social comparison did (McNeill & Firman, 2014). In a study aimed at examining the relationship between teasing by peers, parents, or siblings as it relates to body dissatisfaction, it was found that teasing by any family members or peers was associated with body dissatisfaction for girls and drive for muscularity for boys (Schaefer & Salafia, 2014). In other words, girls who were teased about their body by a family member or peer were more likely to experience body dissatisfaction. Boys who were teased by a family member or peer were more likely to strive for a muscular appearance. In addition, boys who were teased by their peers were more likely to engage in social comparison to determine how they didn't measure up. These comparisons then led to body image concerns (Schaefer & Salafia, 2014).

In continuing with the tripartite influence model, one study conducted by Tylka (2011) observed that muscularity dissatisfaction predicted behaviors to enhance muscularity, whereas concerns related to body fat predicted disordered eating behaviors. Family, friend, and media pressures all directly influenced internalization of the mesomorphic ideal, as well as body fat and muscularity dissatisfaction. Interestingly, a fourth source of pressure was added in looking at pressure from a dating partner. It was found that this source of mesomorphic pressure influenced disordered eating behavior (Tylka, 2011).

Research is growing with regard to the role social context plays in relation to body image. There are three specific elements of research that have pointed to the social factors influencing body image. These include social comparison related to appearance, social evaluation of appearance, and social perceptions of the ideal body (Davison, 2012). Stemming from Festinger's (1954) social comparison theory, it has been found that how individuals view their body is directly influenced by how they think their body compares to the bodies of others, which

is the first element described by Davison (2012). The second element involves individuals feeling concerned about others evaluating their body in a negative manner. This is also known as social physique anxiety and specifically relates to exercise and sports. It is interesting that most research on this aspect of social factors has been done with women. Finally, social perceptions of the ideal body involve looking at the perceptions of what the opposite sex views as ideal, but can also involve same-sex perceptions of ideal body shape and size (Davison, 2012).

Social Comparison and Body Image Among Adolescents

A few discrepancies exist within the literature related to social comparison and body image with adolescent boys. One study conducted by Davison (2012) claimed that much of the research on social comparison has looked at adolescent girls in that social comparison appears to be less negative for boys than it does for girls. Comments from other boys related to body shape and size tend to be more positive. In addition, body ideals as seen through the media tend to have a less negative effect on boys than they do on girls (Davison, 2012). Alternatively, it was noted that it has not yet become socially acceptable for boys to have body image concerns (Ricciardelli, 2012). It is questionable whether or not this could have an impact on how studies have examined body image with boys. Adolescence is a critical time where individuals are highly focused on peer relationships and fitting in. Research has shown that peer popularity is important to both boys and girls, but that boys were even more likely than girls to believe that attractiveness and a good physique were critical factors (Davison, 2012; Frisén & Holmqvist, 2010). This clearly contradicts the assertion that social comparison has a less negative effect on boys than girls, as peer influence is important to boys, and physique was noted as a critical factor.

In a study conducted by Tatangelo and Ricciardelli (2017), children were assessed with regard to social comparison as it relates to body image. It was found that appearance-related comparisons were more common among girls. However, sports-related comparisons were more common among boys. With regard to media comparisons, girls showed more negative emotions with media comparisons compared with boys who viewed them as inspiring (Tatangelo & Ricciardelli, 2017).

Although the previous study asserts that body ideals as seen through the media tend to have less of a negative effect on boys, males are still at risk. Peat and colleagues (2011) assert that age has actually been found to be a significant factor with regard to body dissatisfaction in males. Younger males are at a greater risk for body dissatisfaction which may be attributed to the fact that media ideals portray men who are young, muscular, and lean. These ideals may be more comparable for younger men than for older men, therefore putting younger males at a greater risk for dissatisfaction. In addition, social comparison may reflect the tendency for young males to compare their appearance with those who more closely reflect their current physique (Peat et al., 2011). Young adolescent boys who viewed media ideals related to body image in the form of music videos containing attractive, muscular singers, reported lower levels of happiness, lower levels of appearance satisfaction, and higher levels of depressive symptoms compared with those who were not exposed to media-related ideals. These results showed effects in boys as young as 12 years old, which shows the influence media exposure and media ideals have on body image dissatisfaction (Mulgrew et al., 2014).

Social Media

Social media has evolved over time with a range of trends and patterns. Boyd and Ellison (2007) define social network sites as web-based services that allow an individual to create a

public profile, integrate a list of users with whom they share a connection, and sift through their connections, as well as the connections of others within the same site. These social networks are visible to others within the system, which also allows for connections with strangers or others that one would otherwise not come into contact. These sites allow friends, commenting, private messaging, instant messaging, and blogging, depending on the site.

The history of social networking sites began with the first site in 1997 known as sixdegrees.com. The idea behind this site was that individuals are intertwined within six degrees of separation (Kuss & Griffiths, 2017). Next came Ryze.com in 2001, followed by Friendster in 2002. Databases within Friendster were not equipped for its rapid growth and therefore, Myspace made its way into the public eye in 2003, followed by Facebook in 2004 (Boyd & Ellison, 2007). Today, seven out of every ten Americans use social media for various purposes such as entertainment, connecting with others, sharing information, and acquiring news. While social media use began with younger adults as the main users, it has evolved over time and is utilized by older adults as well (Pew Research Center, 2018).

Social Media Use and Young Adults

Social media use is very popular among adolescents. Anderson and Jiang (2018) report that while Facebook and YouTube are the dominant social media platforms across Americans, younger individuals, specifically ages 18-24, have shown frequent use with a variety of social media sites. In a 2014-2015 survey, 71% of teenagers reported using Facebook as their dominant social media platform. Today, only about half of American teenagers utilize Facebook. Instead, other social media platforms have become the norm. In fact, 85% of teenagers report YouTube as one of their top platforms. Instagram is reported as a top site by 72% of teenagers, and SnapChat is a favorite among 69% of teenagers (Anderson & Jiang, 2018). Anderson and Jiang

(2018) noted one reason for this evolution in the use of various social media platforms has to do with access to and ownership of smartphones. They noted that 95% of teenagers reported either having a smartphone or having access to one and 45% of teenagers said they are online almost constantly. When looking at various gender differences related to social media use, Anderson and Jiang (2018) described how girls were more likely to utilize Snapchat compared with boys (42% versus 29%), whereas boys were more likely to utilize YouTube (39% versus 25%). Furthermore, 49% of teenage boys reported using Facebook compared with 53% of girls. Interestingly, lower-income teenagers were found to utilize Facebook more than higher-income teenagers (Anderson & Jiang, 2018).

When looking specifically at motivations surrounding the use of social media, some motivations can be obvious, whereas other purposes behind its use are not so apparent. Most individuals use social media as a means of social presence or as an instant way to communicate and be in contact with friends (Cheung et al., 2011). In addition, individuals use these sites as a means of disseminating information to friends. More time however has been reported being spent observing content than actually posting content (Pempek et al., 2009). More recently, Alhabash and Ma (2017) conducted a study that investigated the motivations behind the use of four different social media platforms, including Facebook, Snapchat, Twitter, and Instagram. They applied the uses and gratification approach to investigate specific motivations and user behaviors in relation to social media platforms. They found that the main motivations behind the use of these four specific platforms was entertainment and convenience. Given that individuals tend to have larger amounts of friends and followers on these sites, it becomes impossible for them to maintain these relationships because of the sheer volume. Therefore, motivations involving social interaction have decreased. Alhabash and Ma (2017) discovered that after entertainment

and convenience, the motivations behind the use of the four different platforms began to vary. With Facebook and Twitter, information sharing was the sixth highest motivation. However, with SnapChat and Instagram, information sharing was the least rated motivation. Medium appeal, passing time, and self-expression were the next highest motivations behind entertainment and convenience with regard to these two social media sites. Finally, this study found that the highest use intensity was equal for both SnapChat and Instagram, followed by Facebook and then Twitter.

The use of social media as a consistent routine in daily life doesn't come without some forms of stress. Five themes surrounding social media stressors have been identified. These include managing annoying or inappropriate content, social comparison and jealousy, lack of control and privacy, relationship tension and conflict, and feeling pressured to stay on social media in order to stay connected with friends (Fox & Moreland, 2015). In addition, Gezgin and colleagues (2017) explored the link between excessive social media use and the development of addictions or undesirable behaviors. One such behavior they explored is known as the fear of missing out (FOMO). This is where individuals continuously follow other individuals or groups on a regular basis in an attempt to see if anything new has been shared. This in turn leads to an extreme preoccupation with not wanting to miss out on anything new pertaining to the group or individual and therefore, a preoccupation with constantly checking online social media platforms. These researchers found that there was a significant relationship with being on social media networks throughout the day and FOMO. In addition, those using Twitter, Instagram, and SnapChat had increased levels of FOMO (Gezgin et al., 2017).

Social Media and Social Comparison

There are various motivations behind the use of social media as a mechanism for comparison. Individuals tend to compare themselves with others when they are presented with ongoing information pertaining to the lives of others. An individual's personality characteristics also play a key role such as self-consciousness, self-esteem, self-doubt or uncertainty, etc. A positive relationship exists between Facebook use and social comparison, as well as social comparison and negative feelings surrounding this comparison (Lee, 2014). In a study conducted on college-aged students both male and female, motivations behind social comparisons were explored as it relates to social media use. This study found that individuals who reported lower self-esteem also reported higher levels of social comparison for the purposes of self-evaluation, self-improvement, self-destructive purposes, and self-enhancement (Cramer et al., 2016). An important underlying motivation behind the use of social media has to do with fictional behavior. This was noted as one dominant reason for social media use. Young adolescents reported using social media as a means of becoming whomever they want. They can role-play and take on a variety of new identities and possible selves (Anderson & McCabe, 2012).

Social Media, Social Comparison, and Body Image Concerns

The use of social media is uniquely connected with body image concerns through the tendency to compare oneself with others. As previously noted, many individuals utilize social media on a daily basis, therefore the tendency to compare is an ongoing temptation. Individuals who utilize social media post pictures with their audience in mind. In other words, the feedback that they receive through comments and likes on social media, predetermines the view they have in regard to their bodies offline. Salomon & Brown (2017) noted that higher levels of social media use promoted higher levels of self-monitoring and therefore predicted an increased risk of

body shaming and body image concerns in adolescents. Boys were equally at risk for body image concerns as girls. Furthermore, Ahadzadeh and colleagues (2017) reported that appearance self-schema was associated with appearance self-discrepancy which suggests a drive for young adults to be involved with appearance-related information. In other words, individuals who pay more attention to their appearance are more likely to notice discrepancies between what they look like and what they desire to look like. This in turn is negatively influenced by social media use. In addition, individuals who possess lower levels of self-esteem tend to be more greatly influenced by the impact of social media use on self-schema (Ahadzadeh et al., 2017). Adolescents also often participate in image retouching. Image retouching for adolescents has been viewed as a form of upward social comparison in that these individuals showed higher levels of perceived attractiveness with the retouched images in comparison to the untouched images (Harrison & Hefner, 2014).

In their study, Kim and Chock (2015) looked at the Facebook activity of young men and women in relation to their drive for thinness and drive for muscularity. They also looked at how appearance comparison mediates this relationship. Their findings show that Facebook use in and of itself was not associated with body image concerns, however social grooming and appearance comparison on Facebook were associated with body image concerns. They also found that social grooming behaviors were associated with the drive for thinness, but not the drive for muscularity. In addition, the number of Facebook friends was related to the drive for thinness and appearance comparison. This could be the result of individuals comparing themselves more when they have a higher amount of Facebook friends (Kim & Chock, 2015).

General Outcomes

Given that social media use is a huge part of our world today and adolescents utilize social media networks for various reasons, it is important to understand the consequences associated with its use. Many studies have examined these outcomes in general, as well as the consequences for adolescents. They have also confirmed that the use of social media sites are associated with a wide range of negative outcomes such as body dissatisfaction, eating disorders, self-harming behaviors, negative life satisfaction, negative self-talk, lower self-esteem, and poor mental health (Ahadzadeh et al., 2017; Chrisler et al., 2013; Cohen & Blaszczynski, 2015; Fardouly & Vartanian, 2016; Frison & Eggermont, 2016; Marengo et al., 2018; Smith et al., 2013; Walker et al., 2015). Negative comparisons on social media were reciprocally related to negative life satisfaction over time with adolescents (Frison & Eggermont, 2016). One study examined comments and tweets posted on Twitter accounts during and after the 2011 Victoria's Secret Fashion Show. These revealed evidence of upward social comparison with the models and included such topics as weight, eating disorders, body image, and even self-harming behavior (Chrisler et al., 2013).

Adolescents are becoming more and more interested in highly-visual social media sites, such as Instagram and Snapchat. Students who reported consistent use of these social media sites also reported higher levels of internalization and body image concerns compared with those who did not report using these sites. In addition, these individuals exhibited poorer mental health as a result (Marengo et al., 2018).

Outcomes with Facebook

Many studies have looked at Facebook specifically with regard to negative outcomes, given that Facebook is one of the most highly utilized sites among individuals (Pew Research

Center, 2018). The use of Facebook was shown to predict body image dissatisfaction, as well as increase the risk of eating disorders, through appearance comparison when compared to the use of other forms of traditional media (Cohen & Blaszczynski, 2015). In addition, certain activities pertaining to social media use have been linked to body image dissatisfaction and disordered eating behaviors. These include viewing and uploading photos, as well as appearance-based comparisons (Holland & Tiggemann, 2016).

Another study conducted by Smith and colleagues (2013) showed evidence that dysfunctional Facebook usage significantly predicted overeating and bulimic symptoms. In addition, body dissatisfaction mediated the relationship between dysfunctional Facebook use and overeating, as well as partially mediated the relationship between dysfunctional Facebook use and bulimic symptoms (Smith et al., 2013). Correlational studies show that body image issues are continuously associated with social media use, specifically with Facebook (Meier & Gray, 2014; Tiggemann & Slater, 2014). One correlational study explored overall social media use using a combination of social media platforms with men. They found a positive correlation between overall social media use and self-objectification (Fox & Rooney, 2015). Longitudinal studies confirm that this relationship strengthens over time and appearance comparisons play a key role in the link between body image concerns and social media use (de Vries et al., 2016; de Vries et al., 2014; Hummel & Smith, 2015; Smith et al., 2013). Finally, experimental studies have shown that exposure to one's own Facebook account does not have a negative impact on body image concerns (Fardouly et al., 2015; Fardouly & Vartanian, 2016).

The amount of time one spends on Facebook also has implications for negative outcomes. When looking at overall Facebook use including time spent on Facebook, incorporating Facebook into daily life, and the number of Facebook friends, it has been found that comparing

one's appearance to others on Facebook, as well as talking negatively about one's body is associated with disordered eating in college-aged women (Walker et al., 2015). The amount of Facebook time spent on photo activity is associated with weight dissatisfaction, drive for thinness, and self-objectification. In addition, it promotes higher levels of body surveillance and internalization (Cohen et al., 2017; Meier & Gray, 2014). In one study, a positive association existed between the frequency of Facebook use and body image concerns (Fardouly & Vartanian, 2015). Comparisons to close friends and other peers mediated this relationship, as this target group may appear to be a more relevant target as opposed to celebrities or other family members. In addition, upward comparisons which involve viewing one's own appearance as worse than others mediated the relationship as well with distant peers and celebrities (Fardouly & Vartanian, 2015).

Outcomes for Boys

Much of the literature on body image has focused on girls and the impact of social media and social pressure on the eating behaviors and weight concerns of females. Contrary to many other reports pertaining to body image and boys, it has been observed that there has been an increase in unhealthy eating behaviors among boys due to an increase in media pressures pertaining to male ideal body shape (Dominé et al., 2009). Boys too are at risk for disordered eating behaviors and almost half of boys report some sort of concern about body image, or unhealthy eating behavior (Dominé et al., 2009).

A gap in the literature exists however with regard to social media use, social comparison, and body image concerns for young adult males. From the information presented previously, it is clear that boys do struggle with body image issues and appearance comparison in one way or another. It is also clear that boys do in fact utilize social networking sites such as Facebook,

SnapChat, Instagram, YouTube, etc. (Anderson & Jiang, 2018). In looking at the relationship between passive Facebook use and body image dissatisfaction among adolescents, it was found that with boys, passive Facebook use positively influenced comparison and body image dissatisfaction and that in turn, the body dissatisfaction positively influenced passive Facebook use. In other words, these were reciprocally related and young boys who experienced body image dissatisfaction, engaged in comparison on Facebook (Rousseau et al., 2017). It is also clear that body image issues lead to a variety of negative outcomes for boys as they grow older and develop into men. Among adolescent boys, muscularity concerns were related to disordered eating behaviors. Internalization of the media-ideal, as well as appearance comparisons mediated the relationship for both pressure for muscularity and pressure for thinness (Rodgers et al., 2012). Muscle dysmorphia, caused by a preoccupation with a muscular, lean physique among men and young boys is prevalent. McFarland and Kaminski (2009) reported that individuals who exhibit lower levels of self-concept, as well as higher levels of depression and anxiety, are at risk for body image dissatisfaction. In addition, anorexia, bulimia, obsessive-compulsive behaviors, and interpersonal problems were associated with symptoms of muscle dysmorphia. It is clear that these variables each play a role in the development of body image concerns and issues. It is therefore necessary to conduct further research with regard to how these variables interact and affect the lives of adolescent boys as they grow and develop into young men.

Summary

Body image concerns and overall body dissatisfaction are ongoing issues that have significant outcomes that can be detrimental to individuals in many ways (Follette et al., 2010; Grogan, 2016; Jobsky, 2014). Adolescents become aware of their bodies at a young age and can develop concerns that can potentially have a negative impact on their lives throughout their

development and well into their adult years. What was once considered more of an issue for women, has made its way into the limelight with regard to the male population and adolescent boys as well (Galioto & Crowther, 2013; Grogan, 2016). Whether it be a drive for muscularity, a drive for thinness, or striving to live up to an unrealistic societal ideal, boys do in fact struggle in this realm (McFarland & Kaminski, 2009; Rodgers et al., 2012). With the rise in popularity of social media sites such as Facebook, Instagram, SnapChat, YouTube, etc., adolescents and young adults spend more time looking at other profiles of their peers and compare themselves. This review explored these factors in detail with regard to social media use, social comparison, and body image as it relates to adolescent boys and young adult men. Due to a scarcity of research, further studies need to be conducted in order to gain a better understanding of how these variables contribute to body image concerns among young men and the negative outcomes that manifest as a result.

CHAPTER THREE: METHODS

Overview

This chapter addresses the methodology employed in this study. The goal of this correlational study was to investigate the relationship between social media use and body image concerns in adult males, examining social comparison as a possible moderator of this relationship. The participants for this study were undergraduate males ages 18-20 who were recruited from two universities, as well as one community college. In addition, students were randomly recruited from a post on Facebook that asked for participant volunteers who fit the study's criteria. The Social Media Intensity Scale (SMIS), Male Body Attitudes Scale (MBAS), and Body Comparison Scale (BCS) were the instruments used to determine if a relationship exists. The data was analyzed using a multiple regression analysis. The intent is that through this study, valuable information will be gathered that will provide important gains in the topic of body image with regard to young adult males.

Design

This study utilized a correlational research design and consisted of multiple predictor variables, one criterion variable, and one moderator variable. Multiple regression was the statistical method utilized as it fit with the purpose of this study in exploring the relationship between multiple predictor variables and one criterion variable. Hepner and colleagues (2016) describe multiple regression as “a method for studying the separate and collective contributions of one or more predictor variables in the variation of a dependent variable” (p. 297). Hepner et al. (2016), Hayes (2013), and Warner (2013) all suggest using multiple regression for a study with these types of variables. According to Hayes (2013) a moderator analysis is appropriate when determining whether or not a certain variable influences, or is associated with, the size of

one variable's effect on another variable. Moderation analysis tests whether a predictor variable (X), and an outcome variable (Y), depend on the moderator variable (M). This study investigated social comparison as the moderator variable to determine if it strengthened the effect of social media use on body image for young adults. The predictor variables were social media use, number of friends/followers, and hours spent on social media. The criterion variable was body image.

Data was collected using an anonymous survey questionnaire through Qualtrics. The beginning of the questionnaire included demographic information that did not reveal anything related to the identity of the participant. These demographic questions included age, race/ethnicity, religious affiliation, and gender. In addition, a question was included that asked which social media platform the participant uses most often such as SnapChat, Facebook, Instagram, Twitter, and YouTube (Appendix A). There were three main parts to the survey. The first part of the survey included questions from the Social Media Intensity Scale (Appendix B). This scale was derived from the Facebook Intensity Scale (FIS), which was originally developed by Ellison and colleagues (2007). It has been used to measure Facebook usage, as well as a participant's active engagement with Facebook activities. Ellison et al. (2007) noted that this measure was created in order to acquire a more efficient measure of Facebook use than other duration and frequency indicators. Questions on this scale were modified by the researcher to include all social media platforms, not just Facebook. Permission to use and modify this scale were requested and granted (Appendix C).

The next part of the survey included questions from the Male Body Attitudes Scale (Appendix D). This instrument was developed by Tylka and colleagues in 2005 in order to measure men's attitudes toward their body. Throughout the creation of this measure, different

dimensions of male body attitudes were incorporated based on empirical and theoretical research and the number of items related to each dimension is related to the importance of that dimension found within the research. Muscularity and body fat were two dimensions that were found to be important to male body satisfaction and therefore had specific items tailored to these dimensions (Tylka et al., 2005). Permission to utilize this measure within this study was requested and granted (Appendix E).

The final part of the survey included questions from the Body Comparison Scale (Appendix F). This instrument was initially created as the Physical Appearance Comparison Scale, which consisted of a five-item measure to assess the degree by which individuals compare their physical appearance with others (Thompson et al., 1999). This measure evolved into the Body Comparison Scale, which measures the frequency of comparison for a variety of body sites. These include such areas as the back, hips, stomach, thighs, etc. It also includes body shape, tone, and muscle (Fisher et al., 2002). Again, permission to utilize this scale within this study was requested and granted (Appendix G).

Research Questions

RQ1: Does the use of social media, number of friends/followers, and hours spent on social media as measured by the Social Media Intensity Scale (SMIS) significantly correlate with body image dissatisfaction as measured by the Male Body Attitudes Scale (MBAS) among young adult males?

RQ2: Does social comparison as measured by the Body Comparison Scale (BCS) moderate the relationship between social media use as measured by the Social Media Intensity Scale (SMIS) and body image concerns as measured by the Male Body Attitudes Scale (MBAS) among young adult males?

Hypotheses

H01: Social media use, number of friends/followers, and hours spent on social media as measured by the Social Media Intensity Scale (SMIS) will not show a significant correlation with body image dissatisfaction as measured by the Male Body Attitudes Scale (MBAS).

H02: Social comparison as measured by the Body Comparison Scale (BCS) will not significantly moderate the relationship between social media use as measured by the Social Media Intensity Scale (SMIS), and body image as measured by the Male Body Attitudes Scale (MBAS).

H1: Social media use, number of friends/followers, and hours spent on social media as measured by the Social Media Intensity Scale (SMIS) will show a significant correlation with body image dissatisfaction as measured by the Male Body Attitudes Scale (MBAS).

H2: Social comparison as measured by the Body Comparison Scale (BCS) will significantly moderate the relationship between social media use as measured by the Social Media Intensity Scale (SMIS), and body image as measured by the Male Body Attitudes Scale (MBAS).

Participants and Setting

This study was submitted to the Institutional Review Board (IRB) at Liberty University (LU) for approval. Once approved through LU, submissions were also made to the other two colleges. Upon approval from these institutions, participants were recruited from all three colleges. In addition, they were recruited randomly on Facebook through a post asking for participants who met the criteria for the study.

The target group for participants was undergraduate male students ages 18-20. An a priori analysis was conducted in order to determine the number of participants needed for this study.

The minimum required sample size for this multiple regression study, given a probability level of 0.05, an anticipated medium effect size of 0.15, and a desired statistical power level of 0.95, was a sample size of 119 (Faul et al., 2009).

Once IRB approval was received, data was collected through an email hyperlink, which also included information pertaining to informed consent. Participation was voluntary.

Participants also had the opportunity to choose if they wanted their name to be entered into a drawing for an Amazon gift card as an incentive. There were five separate drawings for a \$10 gift card. In order to allow for participant anonymity, individuals had to send a separate email after they completed and submitted the survey, asking to be entered into the drawing. While email addresses were necessary in order to participate in the drawing, they were not linked to participants' identities.

Procedures

Information pertaining to this study was submitted for IRB approval through LU. Once approval was granted, documentation was submitted and approval was granted from the other two institutions as well (Appendix H). Next, deans were contacted within several different departments and schools at LU to acquire permission for possible student participants within that department. Permission was granted through five different departments. The recruiting process began and an email was sent through each of the approved schools and departments at LU, and through administration at the other two institutions. The emails targeted undergraduate male students and informed possible participants of the purposes of the study, the voluntary nature of the study, the right to refuse participation, the risks involved with participation, and the contact information. The recruitment email also contained an anonymous link to enter the survey (Appendix I). No questions on the survey or the demographic questionnaire contained

information that could reveal the identity of the individuals. Demographic questions included age, race/ethnicity, gender, and religious affiliation only. The consent to participate was the first page of the survey (Appendices J and K). Permission was received from the authors of the scales to be used within this study, as well as permission to modify one of the scales (See Appendices C, E, and G). This was done through email correspondence where the authors were given background information on the study and why it was being conducted. Then Qualtrics was utilized as a means of disseminating the measures to the participants. The minimum required sample size for a multiple regression study, given a probability level of 0.05, an anticipated medium effect size of 0.15, and a desired statistical power level of 0.95, was a sample size of 119 (Faul et al., 2009).

This study took into account the most highly utilized social media platforms by this age group based on current research and literature. Therefore, with the demographic questions another question asked participants which social media platform they utilize the most (SnapChat, Facebook, Twitter, Instagram, or YouTube).

Instrumentation

Social Media Intensity Scale (SMIS)

This instrument was used to measure social media use and is derived from the Facebook Intensity Scale (FBIS) that was developed by Ellison et al. (2007). The Facebook Intensity Scale has been used to measure Facebook usage, as well as a participant's active engagement with Facebook activities. The scale has been modified to include all forms of social media, not just Facebook. It consists of two questions related to time spent on social media and how many friends/followers one has on the site. In addition, there are six questions aimed at assessing an individual's emotional connection to social media platforms, as well as how much time is

invested on the site. The first six questions allow participants to indicate their level of agreement using a 5-point Likert-scale. These response categories range from 1 = strongly disagree to 5 = strongly agree. These six questions were scored by summing the totals of the Likert scales to yield an interval level total score. The last two questions are related to time spent on social media and the number of friends/followers one has. These two questions allow for participants to fill in a blank and are not based on a scale. These questions were used as the other predictor variables. For the original version of this instrument, Ellison et al. (2007) found Cronbach's alpha of .83 with this measure for internal consistency. Given that this instrument has been modified for this study, a Cronbach's alpha was run in order to test the reliability of this modified instrument. Warner (2013) refers to the Cronbach's alpha as the most popular form of reliability testing for scales with multiple items. Bonett and Wright (2015) describe Cronbach's alpha as a measure of internal consistency and reliability when used with multiple questionnaire items. They also stress the importance of not only reporting the Cronbach's alpha level, but also reporting a confidence interval as well. A reliability analysis was conducted on this instrument using the Statistical Package for the Social Sciences (SPSS).

Other studies have successfully utilized this measure of instrumentation in its original version. Jenkins-Guarnieri and colleagues (2012) examined the relationship between Facebook use, personality traits, attachment style, and interpersonal competency. Another study conducted by Song et al. (2014) used the Facebook Intensity Scale as one measure to examine the relationship between Facebook use and loneliness.

Male Body Attitudes Scale (MBAS)

This instrument was developed by Tylka et al. in 2005 in order to measure men's attitudes toward their body. This scale reflects items related to male body attitudes continuously

researched within the literature. It contains ten items focused primarily on muscularity, as well as eight items related to body fat. Two items examine men's attitudes toward height and finally, four items were included to assess men's overall attitude toward their body. There are a total of 24 questions within this scale and items are rated using a six-point scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = usually, 6 = always). All items can be averaged to assess for overall body attitude, whereas each of the subscales can be averaged as well to assess for attitudes within the subscale. Higher scores indicate more negative body attitudes. For the purposes of this study, all items were averaged to acquire an overall body attitude score. This scale showed internal consistency and reliability in three studies conducted by Tylka et al. (2005) and has been found to be useful for researchers and clinicians, as well as use with college-aged men or high-school and elementary-aged boys. Other studies have utilized this instrument such as a study conducted by Bergeron and Tylka (2007) that examined body image as it relates to psychological well-being. Lavender and Anderson (2010) also utilized this scale in order to examine the relationship between emotion regulation difficulties and body image dissatisfaction in young men. They found Cronbach's alpha was .90 for the total body score, .93 for the low body fat subscale, and .85 for the height subscale for internal consistency.

Body Comparison Scale (BCS)

This instrument is used to assess the extent to which men and women compare parts of their body to those of others. It was originally developed as the Physical Appearance Scale by Thompson et al. in 1999, but was later revised as the Body Comparison Scale by Fisher et al. in 2002. This scale is made up of 25 items that can be broken down into three subscales. These subscales include weight, muscularity, and general appearance comparisons. Each item is listed with a five-point scale (1 = never, 5 = always). For the purposes of this study, the questions were

scored by summing the totals of the Likert scales to yield an interval level total score and thus to assess for overall body comparison. The Cronbach alpha used for the weight-related scores was .87 for men. For the muscularity-related items the alpha estimate for men was .92 and for the general comparisons-related scores, the alpha estimate for men was .88 (McCreary & Saucier, 2009).

Tylka and Sabik (2010) utilized the Body Comparison Scale within their study in an effort to integrate social comparison theory and self-esteem with objectification theory. Through this study they aimed to predict disordered eating in women. Higher total scores were reflective of greater body comparison. Within this study the alpha was .94 for the scores. Bonett and Wright (2015) refer to the Cronbach's alpha as a measure of internal consistency and reliability when measurements represent multiple questionnaire items. A Cronbach's alpha was conducted for the Body Comparison Scale given that reliability and validity information for this instrument have not been published (Tylka & Sabik, 2010).

Data Analysis

After all of the data was collected through Qualtrics, it was analyzed using two statistical analyses, one for each research question. The first research question aims to determine if social media use, number of friends/followers, and hours spent on social media are significantly correlated with body image dissatisfaction. Given that there are multiple predictor variables within this study, the correlations were assessed using a multiple regression analysis. Multiple regression describes the relationship between more than two predictor variables and one dependent variable. The multiple correlation coefficient R is a measure of how well the predictor scores correspond to the scores of the dependent variable. The square of the multiple correlation coefficient R^2 is the amount of variability of the dependent variable that can be explained by the

independent variable (Hepner et al., 2016). For the second research question, a moderator analysis through multiple regression was used in order to examine the moderator effects.

Given the nature of this study, issues of statistical conclusion validity, as well as internal and external validity were present. In order to minimize threats related to low power, an a priori power analysis was conducted in order to determine the adequate sample size. The minimum required sample size for a multiple regression study, given a probability level of 0.05, an anticipated medium effect size of 0.15, and a desired statistical power level of 0.95, would be a sample size of 119 participants. A Type I error occurs when the researcher rejects the null hypothesis when the null hypothesis is actually correct. Setting the alpha level at .05 or even lower, will reduce the risk of a Type I error. A Type II error occurs when a researcher fails to reject the null hypothesis when the null hypothesis is false. In this study, the sample size and statistical power level are factors that will reduce the risk of a Type II error (Warner, 2013).

Equally important to the statistical validity was to examine and ensure that the assumptions for the statistical test were met. Pertaining to multiple regression the first assumption is that the relationship between the independent and dependent variables are linear. This can be tested with a scatterplot (Kline, 2011). Next, the errors between predicted values and observed values should be normally distributed. Third, multiple regression assumes that multicollinearity does not exist within the data. The last assumption pertains to homoscedasticity. This assumes that the variance of errors remains the same at different values of the predictor variable and this can be assessed using a scatterplot (Kline, 2011). In addition, in order to check for inaccurate effect size estimates, outliers were examined to ensure that the relationship between variables was not inflated (Hepner et al., 2016). Normality, linearity, and homoscedasticity were assessed with a residual scatterplot. Multicollinearity was initially

assessed using a bivariate correlation matrix and then formally assessed from the output of the multiple regression analyses.

Internal validity refers to the ability to infer causal relationships among variables. Correlational studies are lacking in internal validity because nothing is being manipulated or controlled within the study (Price et al., 2017). External validity refers to how well the results of a study can be generalized to the real-world. Correlational research although low with regard to internal validity, are often higher in external validity. Given that nothing is being manipulated or controlled by the researcher, the results have a higher likelihood of being reflective of relationships that exist in the outside world (Price et al., 2017). With regard to the population of participants, demographics were taken into account to accommodate various categories of people such as ethnic background, religion, age, gender, etc. (Hepner et al., 2016). Given that some young men may not have access to the possibility of attending a university, including only men who are attending a university does not allow for the ability to generalize to the outside population. This is why men were also included from a community college. While this will allow for some generalizability, it does not allow us to include those young men who are not able to go to college or who do not desire to do so. In addition, only including men from a Christian college does not allow for generalizability to those who may not be religious or of the Christian religion. This is why participants were included from a secular college.

Hepner et al. (2016) describe the common use of descriptive statistics as a means to compare demographic groups. Furthermore, through the use of inferential statistics, researchers can determine if there are statistically significant differences within these groups. Descriptive statistics were utilized within this study. A descriptive analysis was conducted based on the

demographic information collected such as age, race, religious affiliation, etc. in order to determine if there were statistically significant differences among these groups.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this quantitative study was to investigate the relationship between social media use and body image concerns as it pertains to young adult males. In addition, social comparison was examined as a possible moderator within this relationship to determine if it impacted the effect of social media use on body image for this particular population. This chapter will describe the findings from the current study. The descriptive statistics will be included, as well as the results of the data analyses for each hypothesis.

Descriptive Statistics

All participants for this study were required to be male, undergraduate students between the ages of 18 and 20. If they did not meet these specific requirements, they were not able to proceed with the surveys and were excluded from this study. This study consisted of 126 participants ($N=126$). Participants were asked a series of demographic questions prior to completing the surveys. Table 4.1 shows the demographic characteristics for participants, which include race/ethnicity, as well as religious affiliation. In addition, the frequency of participants within each group are included, as well as percentages of participants per group and cumulative percentages. White or Caucasian participants made up 78.6% of the total number of participants, while Hispanic or Latino made up 13.5%. Asian/Pacific Islander participants made up 4% of the total number of participants. The smallest number of participants were Black or African American at 1.6%, and Native American or American Indian at .8%. One participant specified mixed ethnicity and another selected other, but their specifications were inconclusive. These two participants made up 1.6% of the total number of participants.

The breakdown of religious affiliations for the study participants showed that the overwhelming majority of participants noted that they were of the Christian religion and made up 89.7% of the total number of participants. Muslim and Hindu religions were reported by 1 participant each and each made up .8% of the total. There were 6 who reported that they were atheist, which accounted for 4.8% of the total number of participants. Furthermore, 5 participants specified other and of these 5 participants, 2 specified their religious affiliation as agnostic, 2 specified that they had no religious affiliation, and 1 participant specified Latter-Day Saints as their religious affiliation. This accounted for 4% of the total number of participants.

Table 1

Demographic Characteristics of Participants

	Frequency	Percent	Cumulative
	<i>n</i>	%	%
Race/Ethnicity			
White/Caucasian	99	78.6	78.6
Hispanic/Latino	17	13.5	92.1
Black or African American	2	1.6	93.7
Native American or American Indian	1	.8	94.4
Asian/Pacific Islander	5	4.0	98.4
Other	2	1.6	100.0
Total	126	100.0	

Religious Affiliation

Christian (Catholic, Protestant, or any other Christian denominations)	113	89.7	89.7
Muslim	1	.8	90.5
Hindu	1	.8	91.3
Atheist	6	4.8	96.0
Other	5	4.0	100.0
Total	126	100.0	

Table 2 shows the breakdown of the frequency of social media platforms utilized the most by participants in this study. The social media platform utilized the most by participants was Instagram at 39.7%, followed by SnapChat at 22.2%, and YouTube at 21.4%. Twitter was utilized the least, as only 7.1% of participants reported Twitter as the most frequently used platform. One participant chose other and specified that Reddit was the social media platform he utilized the most. This only accounted for .8%.

Table 2*Participants' Most Frequently Used Social Media Platform*

Social Media Platform	Frequency	Percent	Cumulative
	<i>n</i>	%	%
Snapchat	28	22.2	22.2
Instagram	50	39.7	61.9
Facebook	11	8.7	70.6
Twitter	9	7.1	77.8
YouTube	27	21.4	99.2
Other	1	.8	100.0
Total	126	100.0	

Table 3 shows the descriptive statistics for the study variables utilized within this study. Each variable is listed, along with the total number of cases included for that particular variable. In addition, the minimum and maximum scores for each variable are shown, along with the mean or average score for each variable. Finally, standard deviation scores are included, which reports the typical distance of a randomly chosen score from the mean.

Table 3*Descriptive Statistics for Study Variables*

	<i>N</i>	Minimum	Maximum	Mean	Std. Deviation
Social Media Intensity	124	1.00	4.90	3.1176	.83999
Number of Friends/Followers	124	1.73	44.72	21.9362	12.22236
Time Spent on Social Media	124	2.65	20.49	11.3749	4.82538
Body Comparison Scale	117	25.00	109.00	58.7265	18.83670
Male Body Attitudes Scale	120	1.58	4.96	3.1642	.81409
Valid <i>N</i> (listwise)	117				

Given that this study used a random sample of participants, not all racial groups and religious affiliations were equally represented within the sample. In an attempt to determine if there were statistically significant differences related to race/ethnicity and religious affiliation, a multivariate analysis was conducted. Given that the majority of participants were white and noted Christian as their religious affiliation, two new groups were created and labeled as white and nonwhite, as well as Christian and non-Christian. Nonwhite participants were combined into one group due to the low number of cases. This was done for non-Christian participants as well. A multivariate analysis was then conducted to determine if either of these groups had significant differences on combined dependent variables; time spent on social media, number of friends and followers, social media intensity, body comparison, and body image dissatisfaction. The Wilks' Lambda indicated no statistically significant group differences on combined dependent variables for the white/nonwhite groups or the Christian/NonChristian groups. For the white/nonwhite groups, Wilks' Lambda = .930, $F(5,112) = 1.683$, $p = .145$, partial eta-squared = .07. For the

Christian/NonChristian groups, Wilks' Lambda = .973, $F(5,112) = .628$, $p = .679$, partial eta-squared = .027. It is important to note that this does not mean that there are no significant differences, as the number of participants within each group were significantly uneven. Therefore, it would be important to further investigate whether or not there are significant differences by including an equal number of participants represented within each group.

Research Assumptions

Prior to conducting the statistical analyses for this study, assumption testing was completed in order to ensure that specific criteria were met. First, the data was examined for any scores that were missing. In order to preserve the maximum possible N , pairwise deletion was selected so that for each correlation, all participants would be used who had no missing values for that particular variable instead of excluding that participant's data from all computations (Warner, 2013).

An initial step that was taken before running the assumption tests was to assess for univariate outliers, or extreme values on one variable. This was done by converting scores of the variables into z -scores. A z -score is used to determine how many standard deviations a value in a data set is above or below the mean (Warner, 2013). Once each variable was converted into a z -score, any scores equal to or in excess of ± 3.29 were indicative of univariate outliers. There were not any univariate outliers with regard to the MBAS, BCS, and the SMIS. The variable for time spent on social media was converted to minutes and then both variables for time spent on social media and number of friends/followers were converted to z -scores. Both were severely skewed and had several z -scores in excess of ± 3.29 . Given that these two variables did have univariate outliers, the outliers were excluded. This did not fix the skewness for these two variables and therefore, a data transformation was performed.

One of the assumptions associated with multiple regression pertains to the normality of the distribution of variables. To assess the univariate normality of the variables, skewness and kurtosis were calculated to check that they were close to zero and that the Kolmogorov-Smirnoff tests were nonsignificant. Table 4 shows the normality tests for each of the variables. The normality tests for the MBAS and the BCS were fairly normally distributed and the Kolmogorov-Smirnoff tests were nonsignificant for both ($p > .05$). Skewness and kurtosis were less than +/- 1.00. The SMIS however, was not normally distributed. The skewness for this variable was -.582 and the Kolmogorov-Smirnoff test was .000 ($p < .001$). The variables for time spent on social media, and number of friends or followers were severely skewed even after the outliers were removed. The skewness for time spent on social media was 2.101 and for number of friends or followers the skewness was 3.868. These were both significantly greater than 1.00. Also, the Kolmogorov-Smirnoff tests were .000 ($p < .001$).

Table 4*Tests of Normality for Study Variables*

	Kolmogorov-Smirnov			Shapiro-Wilk			Skewness	Kurtosis
	Statistic	df	Sig.	Statistic	df	Sig.		
SMIS	.121	125	.000	.962	125	.001	-.582	-.002
MBAS	.069	121	.200*	.975	121	.026	.489	-.091
BCS	.042	118	.200*	.983	118	.137	.237	-.387
Time on Social Media	.200	122	.000	.911	122	.000	1.021	.721
Number of Friend/Followers	.151	121	.000	.853	121	.000	1.471	2.113

*This is a lower bound of the true significance.

a. Lilliefors Significance Correction

As a result of the significant departure from normality with the SMIS, a data transformation was conducted. Given that the SMIS was negatively skewed, a reflection transformation was conducted, followed by a square root transformation. The histogram for the transformed variable was fairly normally distributed, the skewness was -.165 as opposed to the -.582 prior to transformation. Also, the Kolmogorov-Smirnov was .015. With regard to the other two variables that were significantly skewed, time on social media and number of friends/followers, a transformation was conducted on these variables as well. First, these variables contained extreme scores. Therefore, the extreme scores were transformed to the next lowest or highest nonextreme score prior to conducting a square root data transformation. Once the data transformation was completed, the variables showed a normal distribution, despite the

significant Kolmogorov-Smirnov test for time spent on social media. Table 5 shows the normality tests for the transformed variables.

Table 5

Tests of Normality for Transformed Variables

	Kolmogorov-Smirnov			Shapiro-Wilk			Skewness	Kurtosis
	Statistic	df	Sig.	Statistic	df	Sig.		
Time Spent on Social Media	.126	125	.000	.967	125	.004	.095	-.627
Number of Friends/Followers	.058	125	.200*	.962	125	.001	.158	-.678

*This is a lower bound of the true significance.

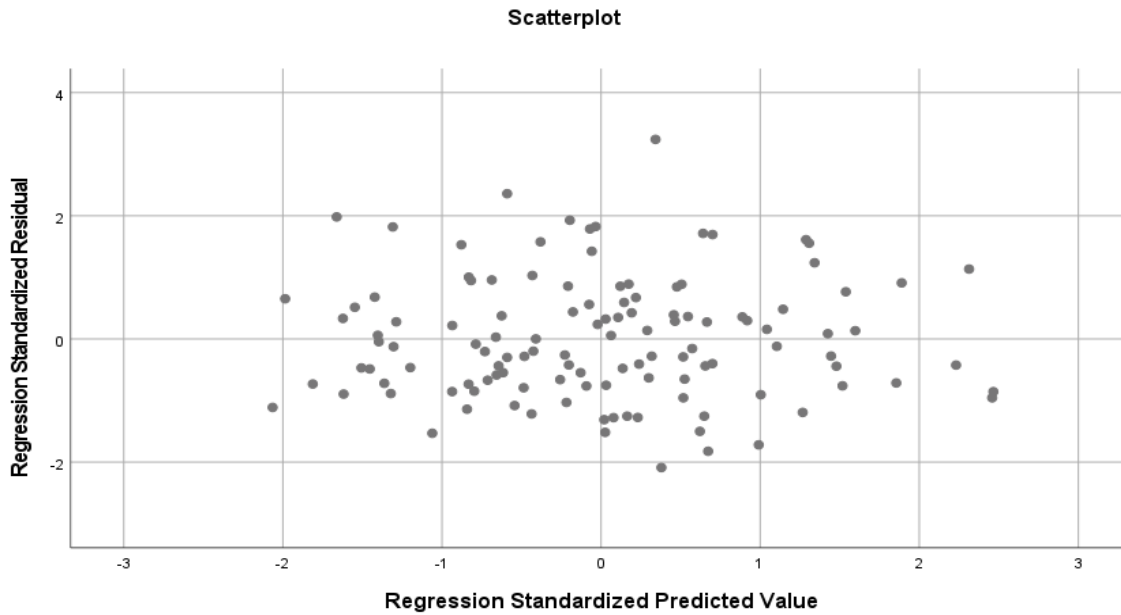
a. Lilliefors Significance Correction

Next, multivariate normality, linearity, and homoscedasticity were assessed using residual scatterplots. Figure 1 and 2 show the residual scatterplots with the values fairly evenly distributed. Both scatterplots do not show any type of curvature or any pattern that suggests a nonlinear relationship. All of the data points on the scatterplot appear to be fairly evenly distributed from left to right, which meets the homoscedasticity assumption that the variance of Y scores are the same at each level of X (Warner, 2013). Figure 1 includes the predictor variables with the moderator variable removed. Figure 2 includes the predictor variables and the moderator variable. In addition, multicollinearity was assessed for by running a collinearity diagnostic and using the tolerance and variance inflation factor (VIF) statistics. Table 6 shows

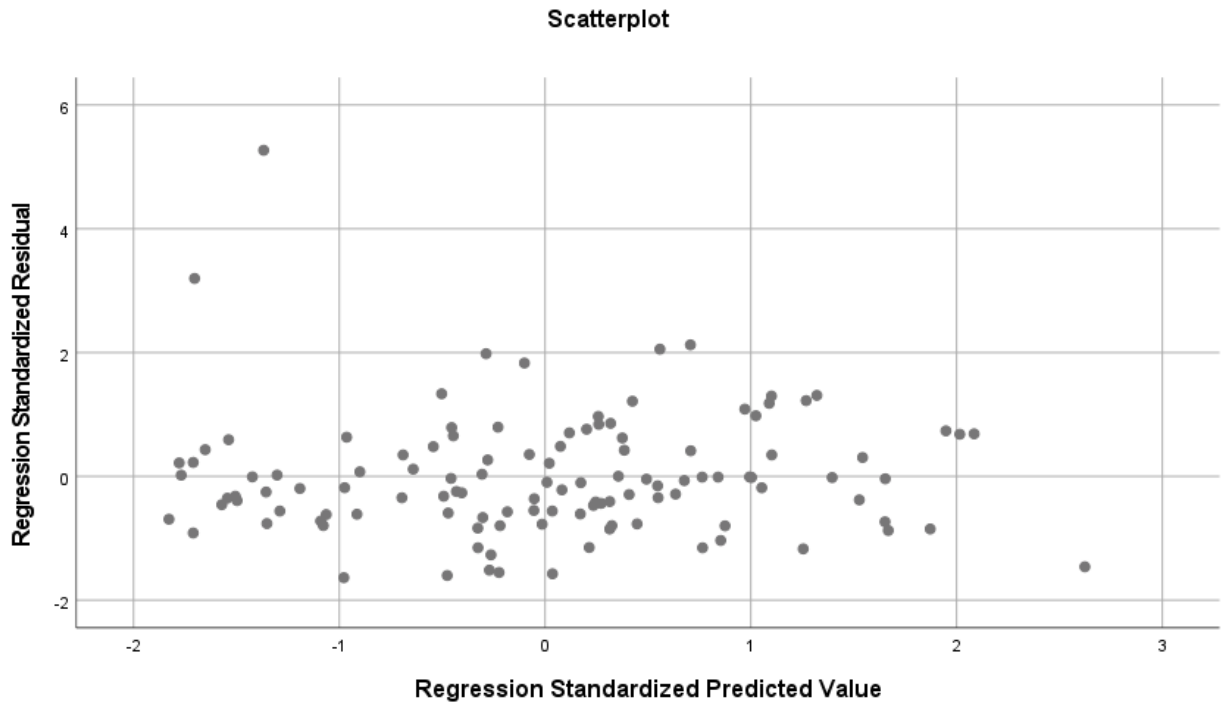
the collinearity statistics for the predictor variables and the moderator variable. Tolerance was greater than .1 for all three variables and VIF was less than 10.

Figure 1

Residual Scatter Plot



Note: This figure shows the residual scatterplot with the moderator variable (BCS) removed.

Figure 2*Residual Scatter Plot*

Note: This figure shows the residual scatterplot with the moderator variable (BCS) included.

Table 6*Collinearity Statistics for Predictor and Moderator Variables*

	Tolerance	VIF
Time Spent on Social Media	.870	1.150
Number of Friends/Followers	.863	1.159
SMIS	.740	1.352
BCS	.898	1.113

Both scatterplots show evidence of possible multivariate outliers. In order to assess for and identify these multivariate outliers, the Mahalanobis distance was utilized. This is a value that indicates the degree to which a score is a multivariate outlier. The Mahalanobis distance measures the distance between variables in terms of the centroid or mean. In other words, the greater the distance is between the variable and the centroid, the larger the Mahalanobis distance will be (Sharma, 2018). The Mahalanobis distance was saved into a new variable (Mah_1) from running a multiple regression. Next, the critical Chi-square value was identified using the Chi-square table. The critical value using 5 degrees of freedom at the .001 level was 20.515. Therefore, any values that exceeded the critical value of 20.515 were considered multivariate outliers. There was only one case that had a value exceeding 20.515 and this case was excluded.

Prior to running the analyses, a Cronbach's Alpha was run for the SMIS, MBAS, and the BCS. Given that the SMIS was modified for this study, and the BCS did not have any reliability data available, the scales needed to be tested for reliability based on internal consistency. Internal consistency refers to the degree to which the items in the scales are interrelated. Confidence intervals were also found. For the SMIS, the Cronbach's Alpha was .814 which shows good reliability and internal consistency. According to Gliem and Gliem (2003), a Cronbach's alpha reliability coefficient ranges between 0 and 1 and the closer the coefficient is to 1, the greater the internal consistency is with regard to the scale. The lower the alpha score is, the poorer reliability and internal consistency become. Gliem and Gliem (2003) also report that an alpha of .8 is a reasonable goal. The confidence intervals for the SMIS at 95% were 2.97 for the lower bound and 3.27 for the upper bound. For the BCS, the Cronbach's Alpha was .941 and the confidence intervals at 95% were 55.00 for the lower bound and 61.92 for the upper bound. For the MBAS, the Cronbach's Alpha was .870 and the confidence intervals at 95% were .834 for the lower

bound and .902 for the upper bound. All scales provided evidence of reliability based on internal consistency.

Results

Two important research questions that were answered are whether the use of social media, number of friends/followers, and hours spent on social media were significantly correlated with body image dissatisfaction. In addition, it was determined if social comparison moderated the relationship between social media use and body image concerns. Based on the literature review and past studies, it was hypothesized that social media use, number of friends/followers, and hours spent on social media would show a significant correlation with body image dissatisfaction. It was also hypothesized that social comparison would significantly moderate the relationship between social media use and body image. The null hypotheses are that social media use, number of friends/followers, and hours spent on social media will not show a significant correlation with body image dissatisfaction. The second null hypothesis states that social comparison will not significantly moderate the relationship between social media use and body image dissatisfaction.

Research Question 1

The total N for this particular analysis was 119. Several cases were excluded due to missing data and outliers were removed. In order to preserve the maximum possible N , pairwise deletion was selected. Preliminary data screening was conducted on all variables as previously described and all needed transformations were completed prior to running this analysis. After performing the multiple regression analysis on the dependent variable, body image dissatisfaction, and the predictor variables, social media use, time on social media, and number of friends/followers, the results show that the regression model was a significant predictor of

body image dissatisfaction, $F(3, 116) = 4.265, p = .007$. The model summary is summarized in table 7. This displays information about how the variables relate to one another. The R value tells the strength of the relationship between the predictor variables combined and the criterion variable. In this case, $R = .315$ and $R^2 = .099$. This means that .099 or 9.9% of the variance in the data can be explained by the predictor variables. This is a relatively low effect size and indicates that while the predictor variables are correlated with the criterion variable, they do not explain much of the variability in the criterion variable.

Table 7

Model Summary to Predict Body Image Dissatisfaction from Social Media use, Number of Friends/Followers, and Time Spent on Social Media

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	$df1$	$df2$	Sig. F Change
1	.315 ^a	.099	.076	.77906	.099	4.265	3	116	.007
a. Predictors: (Constant), SMIS, Time Spent on Social Media, Number of Friends/Followers									

An ANOVA was performed as part of the regression analysis to show the significance of the regression model. The results are summarized in table 8.

Table 8

Results of Regression Model to Predict Body Image Dissatisfaction from Social Media use, Number of Friends/Followers, and Time Spent on Social Media

		ANOVA				
Model		Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.
1	Regression	7.766	3	2.589	4.265	.007 ^b
	Residual	70.405	116	.607		
	Total	78.171	119			

a. Dependent Variable: MBAS

b. Predictors: SMIS, Time Spent on Social Media, Number of Friends/Followers

While the ANOVA show whether or not the overall model is a significant predictor of the criterion variable, Table 9 shows the extent to which the individual predictor variables contribute to the model. One of the three predictors was significantly predictive of body image dissatisfaction, which was social media intensity, $B = -.314$, $t(119) = -3.22$, $p = .002$. The other two predictor variables, however, were not significantly predictive of body image dissatisfaction. These include time spent on social media, $B = .008$, $t(119) = .52$, $p = .60$, and number of friends and followers, $B = -.009$, $t(119) = -1.33$, $p = .19$. The unstandardized coefficients or B values show the relationships between the criterion variable, body image dissatisfaction, and all predictors, social media intensity, number of friends and followers, and time spent on social media. Given that the values for SMIS and number of friends and followers are negative, so are the relationships. In other words, lower levels of social media intensity resulted in lower levels of body image dissatisfaction. In addition, a decrease in number of friends and followers resulted in

lower levels of body image dissatisfaction as well (higher scores on the MBAS indicate more negative body attitudes). Time spent on social media had a positive value and therefore a positive relationship with the outcome variable. In other words, as time spent on social media increased, body image dissatisfaction increased as well.

Table 9

Coefficients

		Unstandardized Coefficients		Standardized Coefficients		95% Confidence Interval for <i>B</i>		
Model		<i>B</i>	Std. Error	Beta	<i>t</i>	Sig.	Lower Bound	Upper Bound
1	Constant	4.236	.460		9.214	.000	3.325	5.146
	SMIS	-.314	.097	-3.25	-3.219	.002	-.507	-.121
	Time on Social Media	.008	.016	.049	.522	.602	-.023	.039
	Number of Friends/Followers	-.009	.006	-.129	-1.332	.186	-.021	.004
a. Dependent Variable: MBAS								

Finally, Table 10 shows the correlation results between the predictor variables and the criterion variable. This tables establishes that the variables are correlated and was used as a preliminary assessment for multicollinearity as well.

Table 10*Correlation Results Between Predictor Variables and Criterion Variable*

		Correlations			
		MBAS	SMIS	Number of Friends/ Followers	Time on Social Media
Pearson Correlation					
	MBAS	1.00	-.290	.012	.137
	SMIS	-.290	1.00	-.406	-.341
	Number of Friends/ Followers	.012	-.406	1.00	.178
	Time on Social Media	.137	-.341	.178	1.00
Sig. (1-tailed)					
	MBAS	.	.000	.447	.068
	SMIS	.001	.	.000	.000
	Number of Friends/ Followers	.447	.000	.	.024
	Time on Social Media	.068	.000	.024	.
<i>N</i>					
	MBAS	120	120	120	120
	SMIS	120	124	124	124
	Number of Friends/ Followers	120	124	124	124
	Time on Social Media	120	124	124	124

A post-hoc power analysis test was conducted in order to determine the level of power that was achieved for this particular analysis. Given that some of the variables were close to being significant within the analysis, the post-hoc power analysis was conducted in order to determine if there was adequate power. The software package; GPower was utilized. The sample

size of 119 was used and 3 predictor variables were included. The alpha level used for this analysis was .05 and the effect size was .099. The post hoc analysis revealed that the power was 0.82 indicating more than adequate power for this analysis.

Research Question 2

The second research question looked at body comparison as a possible moderator between social media use, number of friends/followers, and time spent on social media, with body image dissatisfaction. The total *N* for this particular analysis was 117. Several cases were excluded due to missing data and outliers were removed. In order to preserve the maximum possible *N*, pairwise deletion was selected for this particular analysis. Preliminary data screening was conducted on all variables as previously described and all needed transformations were completed prior to running these analyses. To test the moderation model, Hayes' (2020) Conditional Process Analysis PROCESS macro version 3.5 for SPSS was used. Model one used social media use, number of friends/followers, and time spent on social media as the predictor variables. Body image dissatisfaction was the criterion variable and body comparison was the proposed moderator variable. Figure 3 illustrates the theoretical model for this analysis and Figure 4 represents the statistical model for this analysis.

Figure 3

Theoretical Model for Moderation Analysis

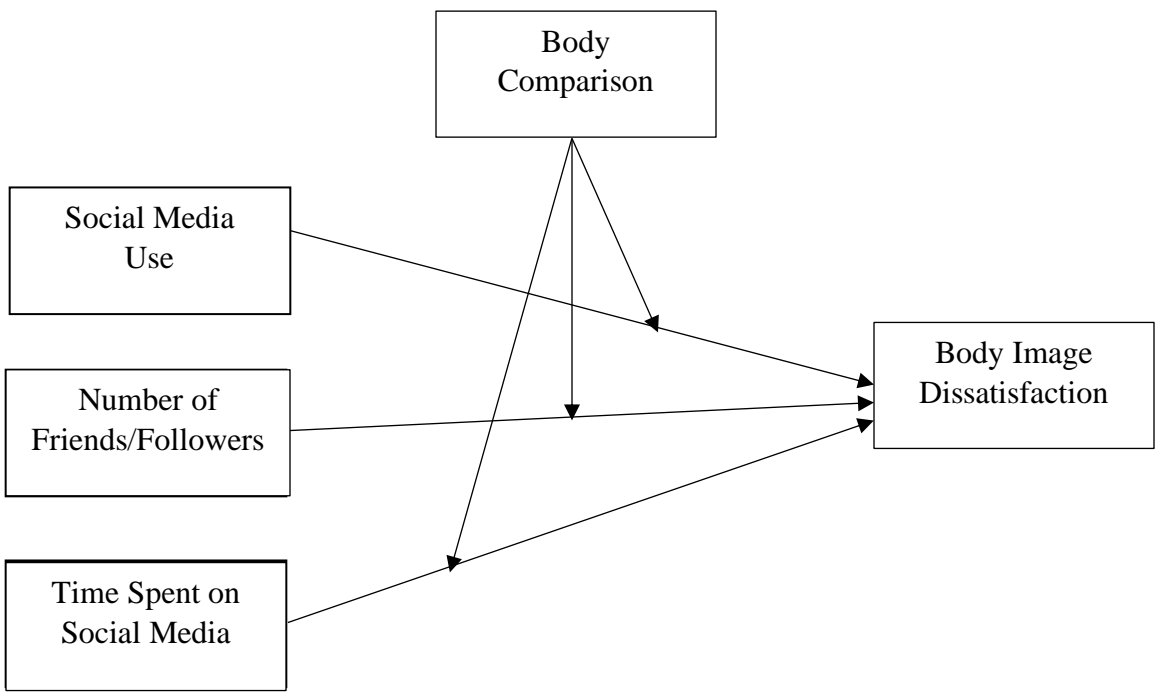
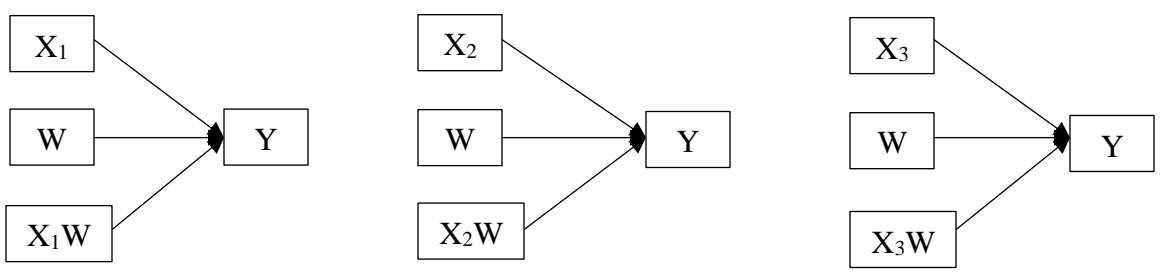


Figure 4

Statistical Models for Moderation Analyses



For the moderation analyses, all predictor variables were included even though social media intensity was the only significant predictor in the overall regression model. The reason for this is that the moderation analysis is a separate analysis which is examining the interactions

between the predictor variables and the moderation variable. While a predictor variable may not be significant in the regression model, it may be significant in its interaction with the moderator variable and therefore, significant in the new model. With regard to the first predictor variable, time spent on social media, the overall model was statistically significant $F(3, 113) = 41.65, p < .05, R^2 = .53$. This means that the predictor and its interaction account for about 53% of the variance in body image dissatisfaction. This is a relatively high effect size and signifies that the model explains a good portion of the variability in the criterion variable. Table 11 shows the overall model summary and Table 12 shows the regression output with the unstandardized coefficients and moderation effect. For the predictor time spent on social media, $\beta = .002, t(117) = .172, p = .863$. Time spent on social media was not a significant predictor of body image dissatisfaction. For body comparison, $\beta = .030, t(117) = 10.79, p = .000$. Body comparison is a statistically significant predictor of body image dissatisfaction. The interaction between time spent on social media and body comparison was statistically significant ($\beta = .001, t(117) = 2.38, p = .019$). This suggests that by itself, time spent on social media is not a significant predictor of body image dissatisfaction. However, body comparison is a significant predictor of body image dissatisfaction. In addition, when body comparison and time spent on social media interact, they are both significant predictors of body image dissatisfaction.

Table 11

Model Summary for Model One – Time Spent on Social Media as Predictor

<i>R</i>	<i>R-Squared</i>	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
.725	.525	.314	41.649	3	113	.000

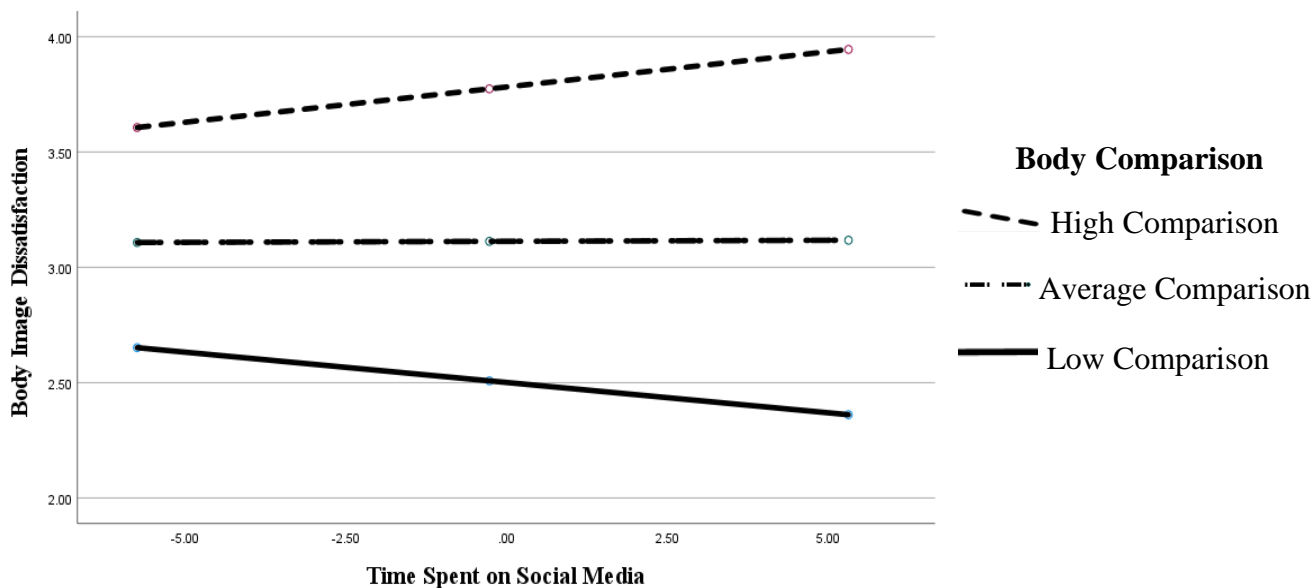
Table 12*PROCESS Results for Model One – Time Spent on Social Media as Predictor*

	<i>Coefficient (β)</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>LLCI</i>	<i>ULCI</i>
Constant	3.135	.053	59.415	.000	3.030	3.240
Time on Social Media	.002	.011	.172	.863	-.020	.024
Body Comparison	.030	.003	10.788	.000	.025	.036
Interaction	.001	.001	2.383	.019	.000	.003

Figure 5 shows the visual representation for the interaction of the moderator variable with time spent on social media and body image dissatisfaction. This figure illustrates how higher levels of body comparison, in addition to more time spent on social media, are associated with higher levels of body dissatisfaction. Inversely, lower levels of social comparison, in addition to higher levels of time spent on social media are associated with lower levels of body image dissatisfaction. This showed an enhancing effect that as time spent on social media and social comparison increased, body dissatisfaction increased as well. Therefore, body image dissatisfaction at varying levels of time spent on social media will be different at varying levels of body comparison. There is a moderating relationship between these three variables.

Figure 5

Visual Representation of the Interaction Between Time Spent on Social Media and Body Comparison on Body Image Dissatisfaction



A post-hoc power analysis test was conducted in order to determine the level of power that was achieved for this particular analysis. Given that some of the variables were close to being significant within the analysis, the post-hoc power analysis was conducted in order to determine if there was adequate power. The software package; GPower was utilized. The sample size of 117 was used and 2 predictor variables were included. The alpha level used for this analysis was .05 and the effect size was .525. The post hoc analysis revealed that the power was 1.0 indicating more than adequate power for this analysis.

With regard to the second predictor variable, number of friends and followers, the overall model was statistically significant $F(3, 113) = 39.61, p < .05, R^2 = .51$. This means that the predictor and its interaction account for about 51% of the variance in body image dissatisfaction. This is a relatively high effect size and signifies that the model explains a good portion of the

variability in the criterion variable. Table 13 shows the overall model summary and Table 14 shows the regression output with the unstandardized coefficients and moderation effect. For the predictor number of friends and followers, $\beta = -.003$, $t(117) = -.550$, $p = .583$. Number of friends and followers was not a significant predictor of body image dissatisfaction. For body comparison, $\beta = .030$, $t(117) = 10.68$, $p = .000$. Body comparison was a statistically significant predictor of body image dissatisfaction. The interaction between number of friends and followers, and body comparison was not statistically significant ($\beta = .000$, $t(117) = 1.53$, $p = .13$). This suggests that by itself, number of friends and followers is not a significant predictor of body image dissatisfaction. However, body comparison is a significant predictor of body image dissatisfaction. In addition, the interaction between body comparison and number of friends and followers was nonsignificant.

Table 13

Model Summary for Model One – Number of Friends and Followers as Predictor

<i>R</i>	<i>R-Squared</i>	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
.716	.513	.323	39.607	3	113	.000

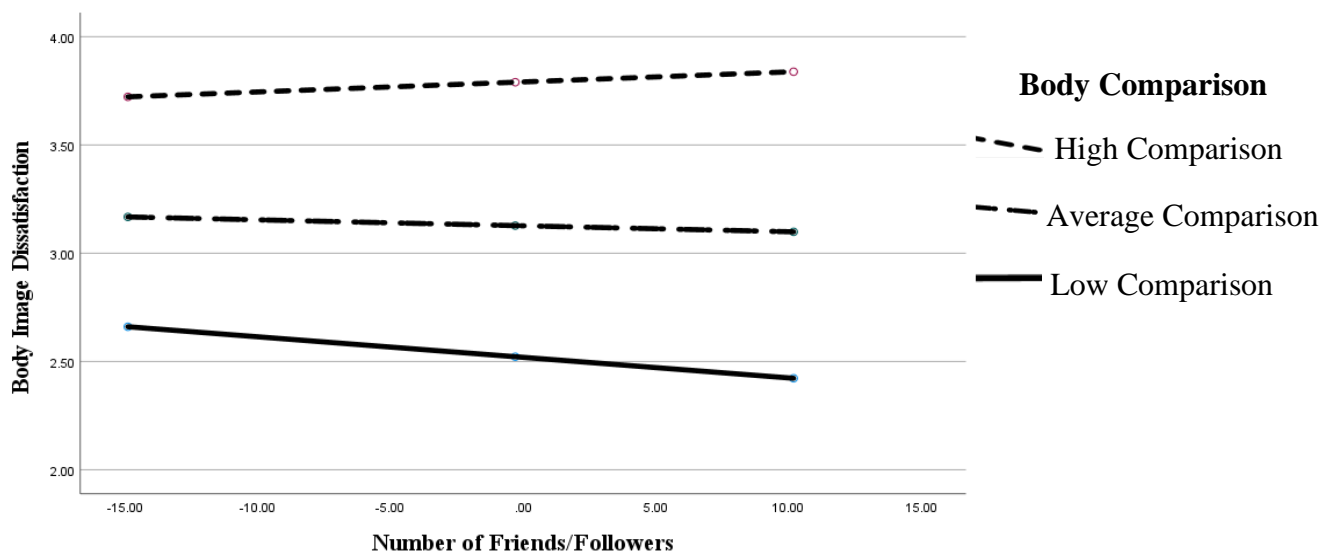
Table 14*PROCESS Results for Model One – Number of Friends and Followers as Predictor*

	<i>Coefficient (β)</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>LLCI</i>	<i>ULCI</i>
Constant	3.149	.053	59.545	.000	3.044	3.254
Number of Friends/Followers	-.003	.005	-.550	.583	-.012	.007
Body Comparison	.030	.003	10.682	.000	.025	.036
Interaction	.000	.000	1.534	.128	-.000	.001

Figure 6 shows the visual representation for the interaction of the moderator variable with number of friends and followers and body image dissatisfaction. This figure illustrates how higher levels of body comparison is associated with higher levels of body image dissatisfaction. However, an increase in number of friends and followers does not show a significant increase in body image dissatisfaction. There was a slight enhancing effect that as the number of friends and followers, as well as social comparison increased, body dissatisfaction slightly increased as well; however, not enough to be significant. Therefore, body comparison does not strengthen the relationship between number of friends and followers and body image dissatisfaction within this model. Body image dissatisfaction at varying levels of friends and followers will be the same at varying levels of body comparison.

Figure 6

Visual Representation of the Interaction Between Number of Friends and Followers and Body Comparison on Body Image Dissatisfaction



A post-hoc power analysis test was conducted in order to determine the level of power that was achieved for this particular analysis. Given that the interaction was close to being significant within the analysis, the post-hoc power analysis was conducted in order to determine if there was adequate power. The software package; GPower was utilized. The sample size of 117 was used and 2 predictor variables were included. The alpha level used for this analysis was .05 and the effect size was .513. The post hoc analysis revealed that the power was .999 indicating more than adequate power for this analysis.

With regard to the third predictor variable, social media intensity, the overall model was statistically significant $F(3, 113) = 41.40, p < .05, R^2 = .52$. This means that the predictor and its interaction account for about 52% of the variance in body image dissatisfaction. This is a relatively high effect size and signifies that the model explains a good portion of the variability

in the criterion variable. Table 15 shows the overall model summary and Table 16 shows the regression output with the unstandardized coefficients and moderation effect. For the predictor social media intensity, $\beta = -.098$, $t(117) = -1.48$, $p = .140$. Social media intensity was not a significant predictor of body image dissatisfaction. For body comparison, $\beta = .029$, $t(117) = 10.089$, $p = .000$. Body comparison was a statistically significant predictor of body image dissatisfaction. The interaction between social media intensity and body comparison was not statistically significant ($\beta = -.006$, $t(117) = -1.863$, $p = .065$). This suggests that social media intensity is not a significant predictor of body image dissatisfaction in this model. Body comparison is a significant predictor of body image dissatisfaction, however, when body comparison and social media intensity interact, they are nonsignificant predictors of body image dissatisfaction.

Table 15

Model Summary for Model One – Social Media Intensity as Predictor

<i>R</i>	<i>R-Squared</i>	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
.724	.524	.315	41.399	3	113	.000

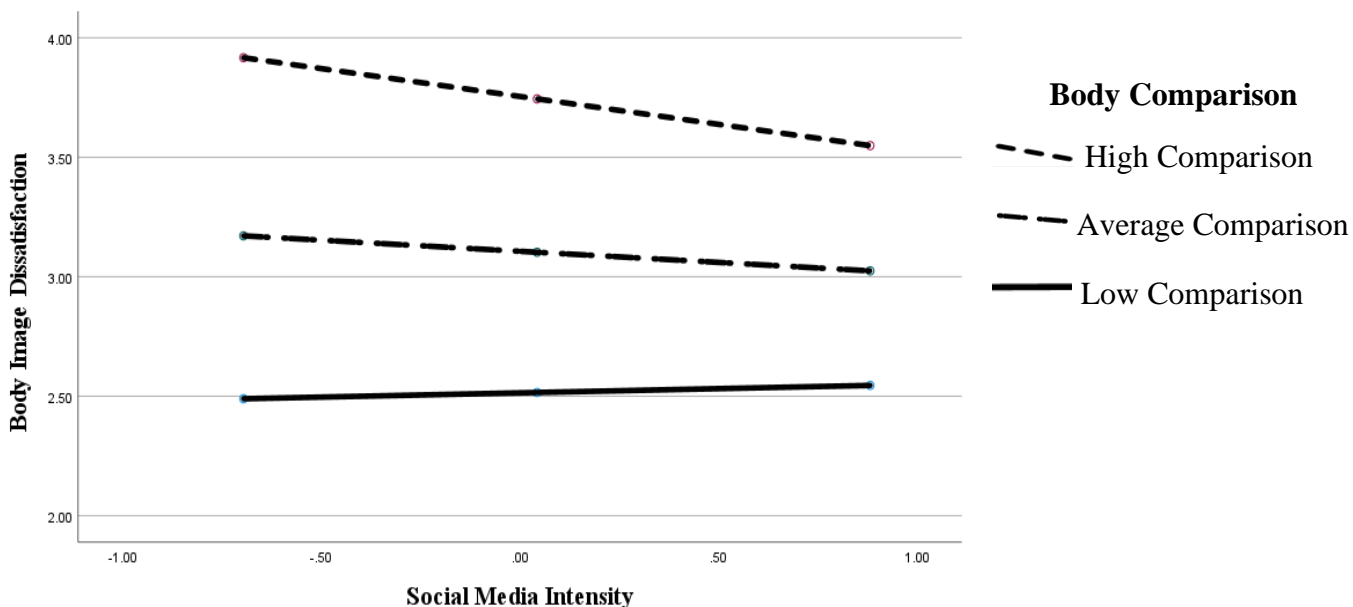
Table 16*PROCESS Results for Model One – Social Media Intensity as Predictor*

	<i>Coefficient (β)</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>LLCI</i>	<i>ULCI</i>
Constant	3.128	.054	57.470	.000	3.020	3.236
Social Media Intensity	-.098	.066	-1.485	.140	-.228	.033
Body Comparison	.029	.003	10.089	.000	.024	.035
Interaction	-.006	.003	-1.863	.065	-.013	.000

Figure 7 shows the visual representation for the interaction of the moderator variable with social media intensity and body image dissatisfaction. This figure illustrates how higher levels of body comparison is associated with higher levels of body image dissatisfaction; however, an increase in social media intensity does not show an increase in body image dissatisfaction, in fact it shows a slight decrease. There was a buffering effect that as social media intensity and body comparison increased, body image dissatisfaction showed a decreased. Therefore, increasing the moderator decreased the effect of the predictor on criterion.

Figure 7

Visual Representation of the Interaction Between Social Media Intensity and Body Comparison on Body Image Dissatisfaction



A post-hoc power analysis test was conducted in order to determine the level of power that was achieved for this particular analysis. Given that the interaction was close to being significant within the analysis, the post-hoc power analysis was conducted in order to determine if there was adequate power. The software package; GPower was utilized. The sample size of 117 was used and 2 predictor variables were included. The alpha level used for this analysis was .05 and the effect size was .524. The post hoc analysis revealed that the power was 1.0 indicating more than adequate power for this analysis.

CHAPTER FIVE: CONCLUSIONS

Overview

Research on body image with regard to the male population has expanded over time. What once was thought to be primarily a female issue has proven to greatly impact males as well (Galioto & Crowther, 2013; Grogan, 2016; Mills et al., 2012; Stratton et al., 2015). This study extended the body of literature with regard to body image dissatisfaction and the male population, while exploring the role that social media and social comparison play within this relationship. This chapter will highlight key aspects of the findings from this study in relation to past studies conducted. In addition, implications for counseling will be examined along with Christian worldview aspects related to the topic. Finally, limitations of this study will be discussed and recommendations for future research related to this topic will be examined.

Discussion

This study investigated the relationship between social media use and body image concerns in young adult males, examining social comparison as a possible moderator within this relationship. The participants for this study were undergraduate males ages 18-20 who were recruited from two universities, as well as one community college. In addition, students were randomly recruited from a post on Facebook that asked for participant volunteers who fit the study's criteria. The intent is that through this study, valuable information will be gathered that will provide important gains in the topic of body image with regard to young adult males.

The first research question investigated whether there was a correlation between social media use, time spent on social media, and number of friends and followers, and body image dissatisfaction. Because of the past research focused on body image dissatisfaction that is present within the male population (Dominé, et al., 2009; McNeill & Firman, 2014; Ricciardelli, 2012),

as well as the link between social media use and body image dissatisfaction with males (Ahadzadeh et al., 2017; Chrisler et al., 2013; Cohen & Blaszczynski, 2015; Fardouly & Vartanian, 2016; Frison & Eggermont, 2016; Harrison & Hefner, 2014; Kim & Chock, 2015; Marengo et al., 2018; Salomon & Brown, 2017; Smith et al., 2013; Walker et al., 2015), it was hypothesized that there would be a correlation between social media use, time spent on social media, and number of friends/followers, with body image dissatisfaction. In other words, higher levels of social media intensity, more time spent on social media, as well as more friends or followers on social media, would be associated with higher levels of body image dissatisfaction.

One of the hypotheses associated with this research question was supported. Social media intensity was a significant predictor of body image dissatisfaction, while time spent on social media and number of friends and followers were not. The questions on the SMIS examined each participant's emotional connection with social media. Questions examined an individual's daily routine with social media as well as how the individual feels if they are not connected on a social media platform. The results for this predictor variable showed a negative relationship with the criterion variable. In other words, lower levels of social media intensity were associated with lower levels of body image dissatisfaction. The current study adds to the past literature with regard to social media use and body image dissatisfaction in that much of the past literature shows a correlation between these two variables as well (de Vries et al., 2016; de Vries et al., 2014; Fox & Rooney, 2015; Hummel & Smith, 2015; Meier & Gray, 2014; Smith et al., 2013; Tiggemann & Slater, 2014).

Smith and colleagues (2013) conducted a study that showed evidence that dysfunctional Facebook usage significantly predicted overeating and bulimic symptoms. In addition, body dissatisfaction mediated the relationship between dysfunctional Facebook use and overeating, as

well as partially mediated the relationship between dysfunctional Facebook use and bulimic symptoms (Smith et al., 2013). Correlational studies show that body image issues are continuously associated with social media use, specifically with Facebook (Meier & Gray, 2014; Tiggemann & Slater, 2014). One correlational study explored overall social media use using a combination of social media platforms with men. They found a positive correlation between overall social media use and self-objectification (Fox & Rooney, 2015). Longitudinal studies confirm that this relationship strengthens over time and appearance comparisons play a key role in the link between body image concerns and social media use (de Vries et al., 2016; de Vries et al., 2014; Hummel & Smith, 2015; Smith et al., 2013). Rutledge and colleagues (2013) found in their study that an individual who is more emotionally connected to Facebook tended to be more focused on their appearance due to the highly visual nature of this particular social media platform.

One final finding is that experimental studies have shown that exposure to one's own social media account does not have a negative impact on body image concerns (Fardouly et al., 2015; Fardouly & Vartanian, 2016). In other words, it is the interaction individuals have with other people's social media platforms that correlate with body image issues. In the current study, a couple of questions on the SMIS asked participants about their feelings pertaining to connectedness and community on social media. Many participants noted that they feel disconnected or out of touch when they are not logged into social media. In addition, they feel a sense of community on social media. This further supports the idea that it is not simply having social media that impacts individuals as much as the interactions associated with social media. Pempek and colleagues (2009) noted that more time has been reported being spent observing content than actually posting content. This supports the claim that exposure to social media by

itself is not a predictor of body image dissatisfaction. The current study adds to this body of literature when looking at overall social media intensity in that it showed a significant correlation with body image dissatisfaction. In other words, higher levels of social media intensity resulted in higher levels of body dissatisfaction. The more invested and connected an individual is with a social media platform, specifically those that are highly visual in nature, resulted in higher levels of body dissatisfaction.

With regard to time spent on social media, past studies have shown that significant associations are dependent on what an individual is doing during that time on social media. In other words, time isn't necessarily a contributing factor as much as what an individual is doing with that time (Cohen et al., 2017; Fardouly & Vartanian, 2015; Meier & Gray, 2014; Walker et al., 2015). For example, the amount of time someone spends on photo activity within a social media platform has shown to increase body image dissatisfaction. This is due to the fact that it promotes higher levels of body surveillance and internalization, as well as comparison (Cohen et al., 2017; Meier & Gray, 2014). One particular study conducted by Rutledge and colleagues (2013) found that individuals who actually spent less time on social media tended to be more concerned with their appearance. They suggested that these individuals spent less time on social media in order to avoid having to post pictures that may appear to others as unattractive. In addition, they spent less time looking at the photos of others in an attempt to avoid social comparison and protect their own self concerns related to attractiveness. This is consistent with the current study in that an increase in time on social media did not significantly correlate with body image dissatisfaction. Time by itself does not correlate with body image issues. It is also worth noting that several participants in the current study mentioned that they have YouTube running in the background constantly. While this increases their time spent on social media

drastically based on the data, they are not actively engaging with the social media site in looking at pictures or being presented with opportunities to make comparisons. This could account for some of the results in the data where time and body image issues did not correlate.

With regard to number of friends and followers, this variable was not a significant predictor of body image dissatisfaction. In other words, when an individual has a large number of friends or followers on social media, this does not mean they have an increased risk of body image concerns. It is more important how they interact with these friends or followers on any given social media platform. A previous study by Kim and Chock (2015) explored number of friends on Facebook with body image and found that it was related to drive for thinness and appearance comparison. In other words, it is not necessarily just having more friends or followers that is associated with body image dissatisfaction, but comparing oneself with these friends and followers is associated with body image issues. Rutledge and colleagues (2013) conducted a study where they found that individuals who had more friends or followers on Facebook tended to have more positive views of their appearance. It was noted that this could be explained by an individual receiving more “likes” for their photos from more friends that they have on Facebook. Having more friends or followers allowed them to receive more positive feedback and comments on their photos which in turn allowed them to have a more positive view of their appearance. This supports the current study as to why there was not a significant correlation between number of friends or followers and body image dissatisfaction.

In contrast, in a study conducted on females by Tiggemann and Slater (2017), number of friends and followers predicted an observed increase in drive for thinness and a precursor to internalization two years later. They noted that with females, an increase in the number of friends or followers allows for more opportunities for social comparison, which results in body image

dissatisfaction over time. This particular study did not examine the male population. In light of the current study, having more friends and followers by itself, does not increase body image dissatisfaction. It is the interaction with these friends and followers that can be attributed to either an increase or a decrease in body image dissatisfaction.

The second research question looked at the possible moderating effect that social comparison has with regard to social media use, time spent on social media, and number of friends and followers, and body image dissatisfaction. In other words, does body comparison strengthen the relationship between the three predictor variables and the criterion variable? Based on past research related to the impact of social comparison on body image dissatisfaction, it was hypothesized that social comparison would significantly moderate the effect between social media use, number of friends and followers, and time spent on social media, with body image dissatisfaction. One of the hypotheses with regard to this research question was supported. While the overall models for all three predictor variables were significant, and body comparison by itself was a significant predictor of body image dissatisfaction, the interactions of all three predictor variables with the moderator variable were not all significant. Based on past research, we know that body comparison is a significant predictor of body image dissatisfaction and that the influences of other male peers lead to internalization and comparisons that result in body image dissatisfaction (Grogan, 2016; Myers & Crowther, 2009; Stratton et al., 2015). The tripartite influence model, which is a model of social influence, has been consistently studied with regard to body image. Findings have confirmed the link between appearance comparisons and body image dissatisfaction (Grogan, 2016; McNeill & Firman, 2014; Myers & Crowther, 2009; Rodgers et al., 2015; Schaefer & Salafia, 2014; Tylka, 2011; Vartanian & Dey, 2013).

While social comparison is a significant predictor of body image dissatisfaction by itself, this study is interested in the possible moderating effects of social comparison. The interaction between time spent on social media and body comparison was a significant predictor of body image dissatisfaction. In other words, there was an enhancing effect that as social comparison and time spent on social media increased, body image dissatisfaction increased as well. This finding is supported by past research confirming the link between time on social media, social comparison, and body image dissatisfaction (Ahadzadeh et al., 2017; Harrison & Hefner, 2014; Kim & Chock, 2015; Salomon & Brown, 2017). Higher levels of social media use promote higher levels of self-monitoring and therefore, predict an increased risk of body shaming and body image concerns (Salomon & Brown, 2017). When individuals spend more time on social media interacting with visual content, such as pictures, reading comments or feedback from peers regarding their own photographs, retouching images based on perceived attractiveness, etc., body image dissatisfaction is increased. As noted previously, it is not just the time spent on social media that results in body image issues, but what individuals are doing with that time. In this case, having more opportunities to make comparisons with others is what ultimately leads to body image issues.

The interaction between number of friends and followers, and body comparison was not a significant predictor of body image dissatisfaction. Lower levels of body comparison combined with higher levels of friends or followers showed a slight decrease in body image dissatisfaction. Conversely, higher levels of body comparison combined with higher levels of friends or followers showed a slight increase in body image dissatisfaction. In other words, there was a slight enhancing effect that as the number of friends and followers, as well as social comparison increased, body dissatisfaction slightly increased as well; however, not enough to be significant.

This finding is supported by studies conducted on the relationship between number of friends and followers, social comparison, and body image. Rutledge and colleagues (2013) found in their study that individuals with more friends and followers actually had more positive views of their appearances. This was thought to be a result of individuals receiving a lot of “likes” or positive comments from their friends. In addition, past research has suggested that individuals judge a user’s attractiveness based on the attractiveness of their friends or followers. This in turn can extend to oneself in the idea that having a large number of friends on social media that are attractive in turn gives an individual a more positive portrayal of their own attractiveness (Rutledge et al., 2013, Walther et al., 2008). Other studies suggest a negative correlation between number of friends or followers, social comparison, and body image. Outcomes included an increase in body surveillance, an increase in appearance comparisons leading to negative body image, internalization of unrealistic ideals, and ultimately a drive for thinness (Holland & Tiggemann, 2016; Kim & Chock, 2015; Tiggemann & Slater, 2013; Tiggemann & Slater, 2014).

The interaction between social media intensity and body comparison was not a significant predictor of body image dissatisfaction. In fact, higher levels of body comparison combined with higher levels of social media intensity actually decreased body image dissatisfaction. Lower levels of body comparison combined with higher levels of social media intensity resulted in a slight increase of body image dissatisfaction. There was a buffering effect that as social media intensity and body comparison increased, body image dissatisfaction showed a slight decrease. As noted previously in a study conducted by Rutledge and colleagues (2013), social media sites such as Facebook are highly visual in nature and allow users greater opportunities to interact with images. Findings in this study have shown that increased social media use actually resulted in individuals’ positive views of their appearances. They suggested that on such sites where users

know their friends or followers in real life, it is possible that they are less likely to make appearance evaluations because they can distinguish between positive virtual presentations of selves and real selves. This can be further supported through an underlying motivation for social media related to fictional behavior. Anderson and McCabe (2012) noted fictional behavior as a dominant reason for social media use in that individuals can become whomever they want. They can determine what others see and can portray themselves however they would like. Harrison and Hefner (2014) noted image retouching as a consistent behavior that allowed individuals to have an increased level of perceived attractiveness with the retouched images in comparison to the untouched images. This in turn could explain why higher levels of social media intensity and social comparison resulted in lower levels of body dissatisfaction. These individuals are putting their best selves out for the world to see.

The theory of social comparison that was utilized within this study emphasizes the need for individuals to compare themselves to others in an attempt to assess their own abilities and opinions. Halliwell (2012) noted that comparisons can take the form of upward or downward comparisons. In other words, upward comparisons involve comparisons with someone who is viewed as superior and downward comparisons involve comparisons with someone who is viewed as inferior. The type of comparison a person makes is totally dependent upon their motivation behind the comparison. Downward comparisons can be used to boost self-regard and confidence (Halliwell, 2012). Individuals may participate in downward comparisons as a way to feel better about one's own appearance, especially on social media. Tylka (2011) noted that an individual's motive in the process of comparison is to receive information related to one's appearance. What better place to receive positive feedback on appearance than on a highly visual social media platform where images can be retouched and one can determine what the outside

world sees. In addition, comments and “likes” from friends or followers further affirms one’s view of their body. These findings further support why social media intensity and body comparison showed a decrease in body image dissatisfaction.

As previously mentioned, based on the SMIS questions, many participants within this study noted an emotional connection with social media through feeling a sense of community when connected with others through various sites. Gezgin and colleagues (2017) described FOMO as a significant motivator for individuals to be connected on social media platforms. Allen and colleagues (2014) emphasized some positive outcomes related to social media use with regard to adolescents and young adults. They noted a sense of belonging among users of social media and an opportunity to connect with peers. In addition, they described how lonely or socially anxious individuals have a better opportunity to connect with others and broaden their friendship groups. Another outcome involved satisfying social identity needs and developing a positive self-image through personal expression as well as social identity gratification or seeking out experiences that affirm their preexisting social identities. This sense of belonging and opportunity to connect while developing a positive self-image may further support the findings in the current study with regard to social media intensity and lower levels of body image dissatisfaction.

In contrast, there are a plethora of studies out there that would contradict these findings. The use of social media on a regular basis gives individuals more opportunity to interact with visual content and make comparisons (Ahadzadeh et al., 2017; Cramer et al., 2016; Lee, 2014; Salomon & Brown, 2017). Kim and Chock (2015) noted social grooming as a primary activity on social media. They refer to social grooming as, “The process of forging and displaying bonds, affirming relationships, and asserting and learning about hierarchies and alliances” (p.333). It is

seen as both a bonding and competitive activity where individuals have the opportunity to grow their network of friends. This in turn leads to more opportunities to participate in social comparison for the purposes of self-evaluation. This clearly contradicts the current study's findings in which higher levels of social comparison and higher levels of social media intensity actually decreased body image dissatisfaction.

Implications

This particular study has great implications for the field of counseling. As shown throughout previous studies, men do in fact struggle with body image issues, but have not felt comfortable expressing their feelings because body image issues are often attributed to females (Dominé et al., 2009). Through this study we see that young men are impacted by the use of social media and the opportunity to make social comparisons resulting in body image dissatisfaction. In addition, the outcomes surrounding body image concerns with boys and young men can result in muscle dysmorphia, eating disorders, depression, negative relationships, the use of steroids or other dietary supplements, as well as other supplements to increase size in a short amount of time (Ricciardelli, 2012). In other words, there are devastating consequences for young men if nothing is done in recognizing that this is an issue for young men. Intervention needs to be a priority in helping this population of individuals.

First and foremost, there needs to be a greater awareness surrounding the topic of body image with regard to the male population. Bringing an awareness of its prevalence, statistics, and consequences both short-term and long-term is essential. Research studies suggest that girls and boys can become dissatisfied with their bodies even before they reach adolescence (Grogan, 2016; Worobey & Worobey, 2014). Research with boys has shown that over 50% of boys as young as eight-years-old are concerned with being lean and muscular. Their body ideals are

similar to those of adult men (Almeida et al., 2012; Grogan, 2016; Lawler & Nixon, 2011). Given that these body image issues begin to develop at a very young age, educational preventative measures are crucial.

Psychoeducational groups are groups where the primary focus is to educate individuals about a psychological topic. An emphasis is given to increasing members' knowledge pertaining to a certain topic and these groups incorporate both educational and prevention goals within the group (Brown, 2011). A psychoeducational group for parents of young boys would give this group of individuals a chance to become aware of the issues that young boys face with regard to body image, social comparison, and social media use. This will also allow members to come up with a prevention plan that aims to support young boys as they develop in this technologically advanced world. Parents can learn ways to talk with their child about the dangers associated with overusing social media and making unrealistic comparisons. Ideas can be created on how to limit social media use and promote healthier forms of social interaction. For professionals, such as counselors and educators, trainings and presentations surrounding the topic of body image with young boys would be greatly beneficial in providing more information on the topic. In addition, professionals can develop prevention plans and interventions to help young boys. For those wanting a Christian perspective, the psychoeducational group could incorporate ideas for incorporating a Christian view of social media use and body image while working to encourage young boys to grow in their relationship with God and learn their identity in Christ.

Psychoeducational groups or counseling groups for children, adolescents, and young adults are another option for boys to participate in who are struggling with body image concerns. This type of group usually only consists of 5 group members when working with children and children are expected to be active participants (Brown, 2011). This type of group would allow

for young boys to express their feelings while having the support of others around them who are experiencing the same things. This group would also give them an opportunity to explore issues surrounding social comparison, social media use, and body image so that the boys are educated about why they may be struggling. Treatment exercises and further prevention plans can be implemented within this group. A Christian perspective can be implemented as well, while incorporating Bible reading and teachings about Jesus and His plan for our lives. In addition, body image can be looked at through a Biblical perspective in order to bring awareness to how God wants us to view our bodies.

Grogan (2016) emphasized the importance of implementing interventions that focus on various aspects of body appreciation. This includes looking at the function and purpose of the body as a means of gaining appreciation and a positive view of the body. In addition, this intervention focuses on certain body parts which allowed individuals to appreciate these different aspects of their body. In addition, they focus on such topics as health, physical capacities, senses, and creative endeavors, in contrast to viewing the body as an object. This helps to promote a greater appreciation for the body as well (Alleva et al., 2015; Grogan, 2016).

While early prevention and education are important ways to get ahead of the game with body image issues, many young boys have developed a preoccupation with their body and already struggle with devastating consequences surrounding these issues. Bringing an awareness and education to counselors, teachers, parents, or anyone in contact with these young men, will help individuals to better know what to look for with regard to body image struggles and how to proceed when issues are identified. When working with children or adolescents, assessing through play therapy, drawing, or games may be necessary as some children and adolescents are often reluctant to open up and talk about their feelings or struggles (Williams et al., 2011).

Various therapy models and interventions can be used when working with young boys or young adult men who struggle with body image issues. Although a thorough review of various approaches for treating body image dissatisfaction is beyond the scope of this paper, Alleva and colleagues (2015) gave a brief overview and stressed the incorporation of cognitive behavioral therapy (CBT) in the treatment of body image issues in an effort to help individuals modify dysfunctional thoughts, feelings, and behaviors that contribute to body image issues. A variety of techniques can be used within the CBT framework as well. Other interventions include fitness training to focus on body functionality, self-esteem enhancement interventions, and psychoeducational groups as previously described. One final model incorporates media literacy interventions. These types of interventions teach individuals how to critically think about and challenge the images and messages they are bombarded with through the media. They can learn to challenge societal standards and biases, as well as how to reduce exposure to appearance-related media (Alleva et al., 2015). These types of interventions are crucial for teaching young minds how to recognize content that is adding to body image pressures and unrealistic expectations. Individuals then learn how to modify their thought processes and create a more positive image of their body.

Christian Worldview Considerations

In light of the current findings related to this study, it is important to consider Christian worldview aspects related to the topic of body image and social comparison. First and foremost, we must consider the creation of man in Genesis. God uniquely created man in His image with a specific purpose in mind. Yarhouse and Sells (2008) described man as the image bearer of God who holds responsible dominion through our callings, as well as our ability to be relational beings and show ourselves as stewards of God. This is how we bear His image. Psalm 139:13-14

tells us, “For you created my inmost being; you knit me together in my mother’s womb. I praise you because I am fearfully and wonderfully made; your works are wonderful, I know that full well” (New International Version). God carefully created each of us to be uniquely our own person, not to be compared with others.

Shirlaw-Ferreira (2020) discussed several pitfalls to comparison. First, comparison breeds complacency. In other words, when we are constantly trying to be like someone else, we completely miss moving forward in the plans that God has for us. We are so focused on the lives of others, we miss what God wants to be doing in our own lives. Comparison also destroys our ability to remain content. When we compare ourselves with others, we are essentially saying to God that we are not grateful for who God made us to be and the blessings He has given to us. Comparison kills our confidence in that we are looking for approval from others rather than the approval of God. Finally, comparison can create contempt in making us ungrateful for our blessings (Shirlaw-Ferreira, 2020). Bevere (2016) described it so thoughtfully in that comparison has a pull to it. It pulls you away from your true self and the person that God made you to be. It can also pull you to a place of overwhelming pride or a place of constant insecurity. You can never experience the true joy that the Lord intended for you if you are constantly involved in comparisons. That is why Theodore Roosevelt said it best when he said, “Comparison is the thief of joy!” (Bevere, 2016).

As a young boy grows up and develops in a world where he is constantly surrounded by various forms of media, telling him what he should look like and who he should be, it is imperative that he understands where his identity rests and who he belongs to. Romans 12:2 says, “Do not conform to the pattern of this world, but be transformed by the renewing of your mind. Then you will be able to test and approve what God’s will is – his good, pleasing, and

perfect will” (New International Version). The Lord instructs us to guard our minds and shield our minds from those things that bring about anxiety and confusion. Through the renewing of our mind, we can hear the Lord’s will more clearly. Proverbs 4:23 says, “Above all else, guard your heart, for everything you do flows from it” (New International Version). God warns us to be careful what we let into our mind and heart because if we allow the wrong thoughts and ideas to enter our mind, this will greatly impact how we live. Our identity is found in Christ and Christ alone. Having this as the foundation in the hearts of so many young boys is what will help them to fight off the temptation to look to others and the world for validation instead of to Jesus for guidance in order follow His will for our life.

Limitations

There are a few limitations that emerged throughout this study that are important to highlight. First, it was difficult to gather enough participants for this study based on the needed sample size. There are several reasons for this. Data collection for this study began right when many colleges were moved to remote learning based on the COVID-19 pandemic. This factor slowed the process of data collection considerably. The community college participants were pooled based on the criteria for the study and a mass email was sent out through the registrar’s department. At one university, email addresses that fit the criteria had to be purchased and then sent out. Some of the students ended up not being active students and others may not have clicked into their email. At the other university, the study information was posted on a department’s announcement board and an issue arose where several females were trying to click in and take the survey. Over time, more departments had to be added through this university in order to reach the minimum number of participants needed for this study. More email addresses had to be purchased through the other university and the community college had to send out a

mass email to the summer semester as well. Finally, the decision was made to try to recruit participants through a Facebook post asking for participants who met the criteria for the study. All of these changes were approved by the IRB. While the minimum number of participants needed was 119, there were some participants who had missing data throughout the surveys. In order to preserve the minimum number of participants, pairwise deletion was selected. Most of the analyses met the minimum number, however, there were a couple analyses that were two cases short. The post hoc power analyses conducted showed that there were adequate amounts of power in each of the analyses.

Another weakness of this study is that it only captured one particular group across a vast number of individuals. All participants for this study were college students. Some of these individuals attended community college and some attended a university, but no participants were included that did not attend college. Therefore, the data in this study does not take into account anyone outside of a collegiate environment and therefore, cannot be generalized to this other population. Furthermore, the majority of students who participated in this study were Caucasian and noted Christianity as their religious affiliation. Although a multivariate analysis was conducted to compare the white/nonwhite and Christian/Non-Christian groups, and there were no significant differences found, it would be more beneficial to have an equal number of participants represented from each racial group and religious affiliation to glean more in-depth data pertaining to these various groups. It is also important to note that just because the multivariate analysis conducted showed that there were no significant differences between these groups, that does not mean that there are in fact no differences. These two groups (white/non-white and Christian/Non-Christian) were greatly uneven with regard to the number of participants represented, which make it difficult to conclude that there are in fact no differences.

Therefore, a more in-depth analysis would need to be conducted with equal numbers of participants represented within each group in order to accurately determine if there are significant differences.

Longitudinal studies give researchers the ability to observe changes in data over an extended period of time. According to Caruana and colleagues (2015), longitudinal studies allow for a more comprehensive approach to research allowing for a better understanding with regard to the degree and direction of specific changes over time. Caruana and colleagues (2015) also noted advantages of longitudinal studies, which include an establishment of sequence and events, the ability to identify and relate certain events to particular exposures, the ability to exclude recall bias in participants, and the ability to allow for the analysis of individual time components. The current study only portrays a snapshot related to male body image dissatisfaction at one point in time. It would be significantly beneficial to explore changes in social media use, social comparison, and body image issues over an extended period of time. This is another limitation related to this study.

Another limitation of this study has to do with self-report measures. All the surveys conducted within this study were self-reported through an email hyperlink and therefore, conducted on the internet. Self-report measures are at risk for the possibility of distortions by the participant (Hepner et al., 2016). For example, Hepner and colleagues (2016) noted that participants may feel inclined consciously or unconsciously to respond in a biased way based on different aspects of the study, or to respond in a way that makes them look more desirable. In addition, participants must have enough insight into their own experiences that they can objectively report out through the self-report survey. Finally, self-report measures disseminated through the internet have to enable a sense of trust that the person taking the test is in fact who

they say they are and those conducted on the internet can only include individuals who have access to the internet. This in turn rules out an entire subgroup of individuals.

Finally, correlational studies are lacking in internal validity due to the fact that nothing is being manipulated or controlled within the study. In other words, the ability to infer causal relationships among variables is limited (Price et al., 2017). Therefore, this study is lacking in internal validity and causal relationships cannot be inferred.

Recommendations for Future Research

Future research should continue to explore body image dissatisfaction with regard to young men growing and developing in an increasingly technological society. Given that much of the current literature focuses on the female population within this topic, there is a huge opportunity to expand and contribute to research with regard to young males. One important recommendation is to explore and investigate the topic with a more specialized group of participants. This would allow for a variety of racial groups to be represented. Having a random sample of participants limited the ability to specifically examine various groups of individuals. This was a limitation of the current study. Another recommendation would be to include participants from various backgrounds, income levels, religious affiliations, etc. in order to determine if there are statistically significant differences within these various groups.

Another possible recommendation would be to make a small change to one of the questions on the SMIS pertaining to time spent on social media. As previously mentioned, many participants noted that they constantly have YouTube playing in the background which increases their time spent on social media drastically. However, the time spent is more passive than active. The SMIS could include a question that inquires about the amount of passive time spent on social media versus active time. This would help to hone in on participants that are actively

interacting with a social media platform versus those who just have it running in the background. This could be included as a covariate and controlled for in the analysis. In turn, this would clarify the data related to time spent on social media.

Another possible recommendation would be for this topic and population of individuals to be studied through a qualitative approach. Hammersley (2013) defines qualitative research as, “A form of social inquiry that tends to adopt a flexible and data-driven research design, to use relatively unstructured data, to emphasize the essential role of subjectivity in the research process, to study a small number of naturally occurring cases in detail, and to use verbal rather than statistical forms of analysis” (p. 12).

In other words, qualitative designs follow a more flexible approach in studying what normally happens in the real world. It emphasizes the importance of observation, rather than relying on self-report measures through questionnaires. Individuals’ distinct perspectives are embraced through interviews and ordinary settings are explored with a smaller number of cases (Hammersley, 2013). Hepner and colleagues (2016) emphasize how qualitative research allows researchers to understand the specifics of individual cases and allow these individuals to share their points of view through observations and interviews. In addition, researchers can better understand the phenomenon being studied through rich descriptions, as well as to better understand the context where the phenomenon is taking place in order to make the findings more applicable to everyday life and various cultures (Hepner et al., 2016).

A qualitative study following a phenomenological design related to social media use, social comparison, and body image would give researchers a better opportunity to understand various thought processes, contexts, and points of view surrounding this population of individuals over an extended period of time. This design would allow researchers to identify

participants who have struggled with body image, as well as those willing to share their lived experiences. Interviews would be conducted on an ongoing basis where participants can share their own perspectives and provide insight. This would also allow researchers to pinpoint specific changes in body image dissatisfaction at various times and through a variety of experiences within the participant's life.

Finally, as previously mentioned, it is recommended that this topic be studied over a longer period of time and with a variety of racial groups being represented. A longitudinal study, taking into account the experiences of young adolescent boys as they grow into adulthood would allow experiences to be explored and examined at a deeper level throughout pivotal points of development. It would allow for the examination of the degree and direction of specific changes over time, as well as the ability to identify and relate certain events to particular exposures (Caruana et al., 2015). It would also allow researchers to investigate core differences with regard to specific cultural groups. This would bring about a better awareness of challenges different groups face and put school counselors and other mental health professionals in a better place to provide interventions and preventative measures where and when it is needed the most.

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Appendix A

Demographics Questionnaire

1. I am between 18 and 20 years old:
 - Yes
 - No

2. My gender is:
 - Female
 - Male
 - Transgender Male
 - Transgender Female
 - Gender Variant/Non-Conforming
 - Not Listed
 - Prefer Not to Answer

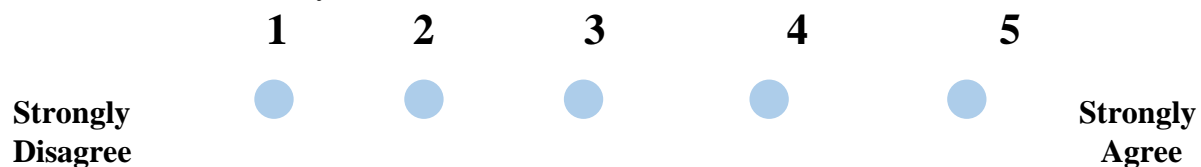
3. My current status is:
 - Undergraduate
 - Graduate

4. I frequently use the following social media platform the most:
 - SnapChat
 - Instagram
 - Facebook
 - Twitter
 - YouTube
 - Other (please specify) _____
 - None

5. The race/ethnicity that best describes me is:
 - White/Caucasian
 - Hispanic or Latino
 - Black or African American
 - Native American or American Indian
 - Asian/Pacific Islander
 - Other (Please Specify) _____

6. My current religious affiliation is:
- Christian (Catholic, Protestant, or any other Christian denominations)
 - Jewish
 - Muslim
 - Hindu
 - Buddhist
 - Atheist
 - Other (please specify) _____

6. I would be sorry if social media shut down



7. Approximately how many TOTAL friends/followers do you have? _____

8. In the past week, on average, approximately how much time PER DAY have you spent actively using social media? _____

The Social Media Intensity score is computed by summing the scores for questions 1-6. Questions 7-8 will be used as the other predictor variables.

(Ellison, Steinfield, & Lampe, 2007)

Appendix C

Re: Request for Permission

Nicole Ellison

Tue 7/30/2019 8:22 AM

To: Hildreth, Tresa

Thank you for your interest in our measures. Information about the Facebook Intensity Scale is available here: <http://www-personal.umich.edu/enicole/scale.html>
Note we've updated the measures we use for FB use and are instead using minutes, number of friends, and number of 'actual' friends. .

You are welcome to use any of the measures as long as proper attribution is used. Adjusting them as needed is fine too, just note that it is a modified version.

Please let me know if you have any questions. Good luck with your project!

Nicole

Nicole
Ellison
School of Information
University of Michigan

[External] Re: Request for Permission

Nicole Ellison

Mon 11/23/2020 1:26 PM

To:

- Hildreth, Tresa

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

Hi, Congratulations! I don't think you need permission from me to publish your dissertation, but yes, you have permission to use and publish our FBI scale.

Take care,

Nicole Ellison

On Mon, Nov 23, 2020 at 12:50 PM Hildreth, Tresa wrote:

Good morning Dr. Ellison,

Hope you are doing well. I reached out to you awhile back to utilize your testing instrument in my dissertation. I have now completed my dissertation and need to follow copywrite before I can publish within the school library. I was wondering if I have permission from you to publish my dissertation that utilized your testing instrument? Thank you for your help. 😊

Tresa

Appendix D

MBAS

Please indicate whether each question is true about you always, usually, often, sometimes, or never.

1. I think I have too little muscle on my body. (M)

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

2. I think that my body should be leaner. (BF)

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

3. I wish that my arms were stronger. (M)

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

4. I feel satisfied with the definition in my abs (i.e., stomach muscles). ® (BF)

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

5. I think that my legs are not muscular enough. (M)

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

6. I think my chest should be broader. (M)

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

7. I think my shoulders are too narrow. (M)

1	2	3	4	5	6
---	---	---	---	---	---

Never Rarely Sometimes Often Usually Always

8. I am concerned that my stomach is too flabby. (BF)

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

9. I think that my arms should be larger (i.e., more muscular). (M)

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

10. I feel dissatisfied with my overall body build.

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

11. I think that my calves should be larger (i.e., more muscular). (M)

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

12. I wish I were taller. (H)

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

13. I think that I have too much fat on my body. (BF)

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

14. I think that my abs are not thin enough. (BF)

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

15. I think my back should be larger and more defined. (M)

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

16. I think my chest should be larger and more defined. (M)

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

17. I feel satisfied with the definition in my arms. ® (M)

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

18. I feel satisfied with the size and shape of my body. ®

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

19. I am satisfied with my height. ® (H)

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

20. Has eating sweets, cakes, or other high calorie food made you feel fat or weak? (BF)

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

21. Have you felt excessively large and rounded (i.e., fat)? (BF)

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

22. Have you felt ashamed of your body size or shape?

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

23. Has seeing your reflection (e.g., in a mirror or window) made you feel bad about your size or shape?

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

24. Have you been so worried about your body size or shape that you have been feeling that you ought to diet? (BF)

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

® = reverse scored item

M = muscularity subscale

BF = body fat subscale

H = height subscale

Total score = average all 24 items

(Tylka, Bergeron, & Schwartz, 2005)

Appendix E

From: Tylka, Tracy
Sent: Wednesday, June 12, 2019 4:00 PM
To: Hildreth, Tresa
Subject: RE: Request for Permission

Dear Tresa,

Yes, you have my permission to use the MBAS in your research. Thanks for considering it for your research! You can find the scale on my website (see link below my signature) under the scales developed category.

Warmly,

Tracy



Tracy L. Tylka, Ph.D., FAED

Professor

Department of Psychology

The Ohio State University

Editor-in-Chief, Body Image: An International Journal of Research

For scales, publications, and vita, visit my website:

[External] RE: Request for Permission

Tylka, Tracy

Wed 11/25/2020 12:43 PM

To:

- Hildreth, Tresa

Hi Tresa,

Congratulations on finishing your dissertation---how exciting!

You have my permission, but you may have to go through Elsevier, who owns the copyright of the article the items were published in. They should grant you permission without cost. Here is the link. <https://www.elsevier.com/about/policies/copyright/permissions>

Warmly,
Tracy

[External] Re: Male Body Attitudes Scale [201125-023478]

Permissions Helpdesk

Thu 11/26/2020 10:52 AM

To:

- Hildreth, Tresa

Dear Tresa,

We hereby grant you permission to reprint the material below at no charge **in your thesis** subject to the following conditions:

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Roopa Lingayath

Sr Copyrights Coordinator – Copyrights Team

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Appendix F

Body Comparison Scale (BCS)

(Fisher, Dunn, & Thompson, 2002)

For the items below, use the following scale to rate how often you compare these aspects of your body to those of other individuals of the same sex. NOTE: Please be sure that you read and respond to all of the questions according to how you would compare yourself to your same sex peers.

	Never	Seldom	Sometimes	Often	Always
	1	2	3	4	5
			Never		Always
1. Ears	1	2	3	4	5
2. Nose	1	2	3	4	5
3. Lips	1	2	3	4	5
4. Hair	1	2	3	4	5
5. Teeth	1	2	3	4	5
6. Chin	1	2	3	4	5
7. Shape of face	1	2	3	4	5
8. Cheeks	1	2	3	4	5
9. Forehead	1	2	3	4	5
10. Upper arm	1	2	3	4	5
11. Forearm	1	2	3	4	5
12. Shoulders	1	2	3	4	5
13. Chest	1	2	3	4	5
14. Back	1	2	3	4	5
15. Waist	1	2	3	4	5
16. Stomach	1	2	3	4	5

17. Buttocks	1	2	3	4	5
18. Thighs	1	2	3	4	5
19. Hips	1	2	3	4	5
20. Calves	1	2	3	4	5
21. Muscle tone of upper body	1	2	3	4	5
22. Overall shape of upper body	1	2	3	4	5
23. Muscle tone of lower body	1	2	3	4	5
24. Overall shape of lower body	1	2	3	4	5
25. Overall body	1	2	3	4	5

Appendix G

From: Erik Fisher
Sent: Monday, June 17, 2019 8:48 PM
To: Hildreth, Tresa

Subject: Re: Request for
Permission

Greetings Tresa,

I would feel honored for you to use the Body Comparison Scale. I think you have a brilliant use of the scale, and I wish you much success with your Dissertation. If you need any additional information, I would contact Kevin Thompson. I don't have any of the information on the scales and reliability, Best,

Erik A. Fisher,
Ph.D., aka, Dr.
E...TM
Emotional
Dynamics
Expert

NOTICE: I am required to provide this notice by new federal legislation [the Health Information Portability and Accountability Act ("HIPAA")]. The privacy of information sent via email cannot be guaranteed. I encourage you to consider this fact before communicating anything to me that you would prefer to keep confidential. I cannot communicate with you via email about anything that would be considered Protected Health Information (PHI), that is, information that may identify you and that relates to your past, present, or future physical or mental health or condition and related physical or mental health care services. This message is automatically attached to all emails I send. Please excuse if our correspondence is personal rather than professional. If you have received this communication in error, please immediately notify the sender by replying to this email, and then delete the original message and attachments.

[External] Re: Request for Permission

Erik Fisher

Mon 11/23/2020 12:03 PM

To:

- Hildreth, Tresa

Absolutely. I'd love to hear what your results were. Congratulations!!!

Erik A. Fisher, Ph.D, aka, Dr. E...TM
Licensed Psychologist, Author, Media Consultant

Sent from my iPhone

On Nov 23, 2020, at 12:51 PM, Hildreth, Tresa wrote:

Good morning Dr. Fisher,

Hope you are doing well. I reached out to you awhile back to utilize your testing instrument in my dissertation. I have now completed my dissertation and need to follow copywrite before I can publish within the school library. I was wondering if I have permission from you to publish my dissertation that utilized your testing instrument?

Thank you for your help. 😊

Tresa

Appendix H

LIBERTY UNIVERSITY

INSTITUTIONAL REVIEW BOARD

March 12, 2020

Tresa Hildreth
 IRB Exemption 4108.031220: The Impact of Social Media Use on Social Comparison and Body Images of Young Adult Males

Dear Tresa Hildreth,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under exemption category 46.101(b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46.101(b):

(2) Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if . . . the following criteria is met:

(i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;

Please note that this exemption only applies to your current research application, and any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
 Research Ethics Office

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Human Subjects Protection Program (HSPP)

*Metropolitan State University of Denver
P.O. Box 173362, Campus Box 48, Denver, CO 80217-3362
303-605-5282 – hspp@msudenver.edu – www.msudenver.edu/irb/*

EXTERNAL RESEARCH APPROVAL LETTER

March 3, 2020

Dear Tresa Hildreth:

On March 3, 2020, the MSU IRB reviewed and approved the following protocol:

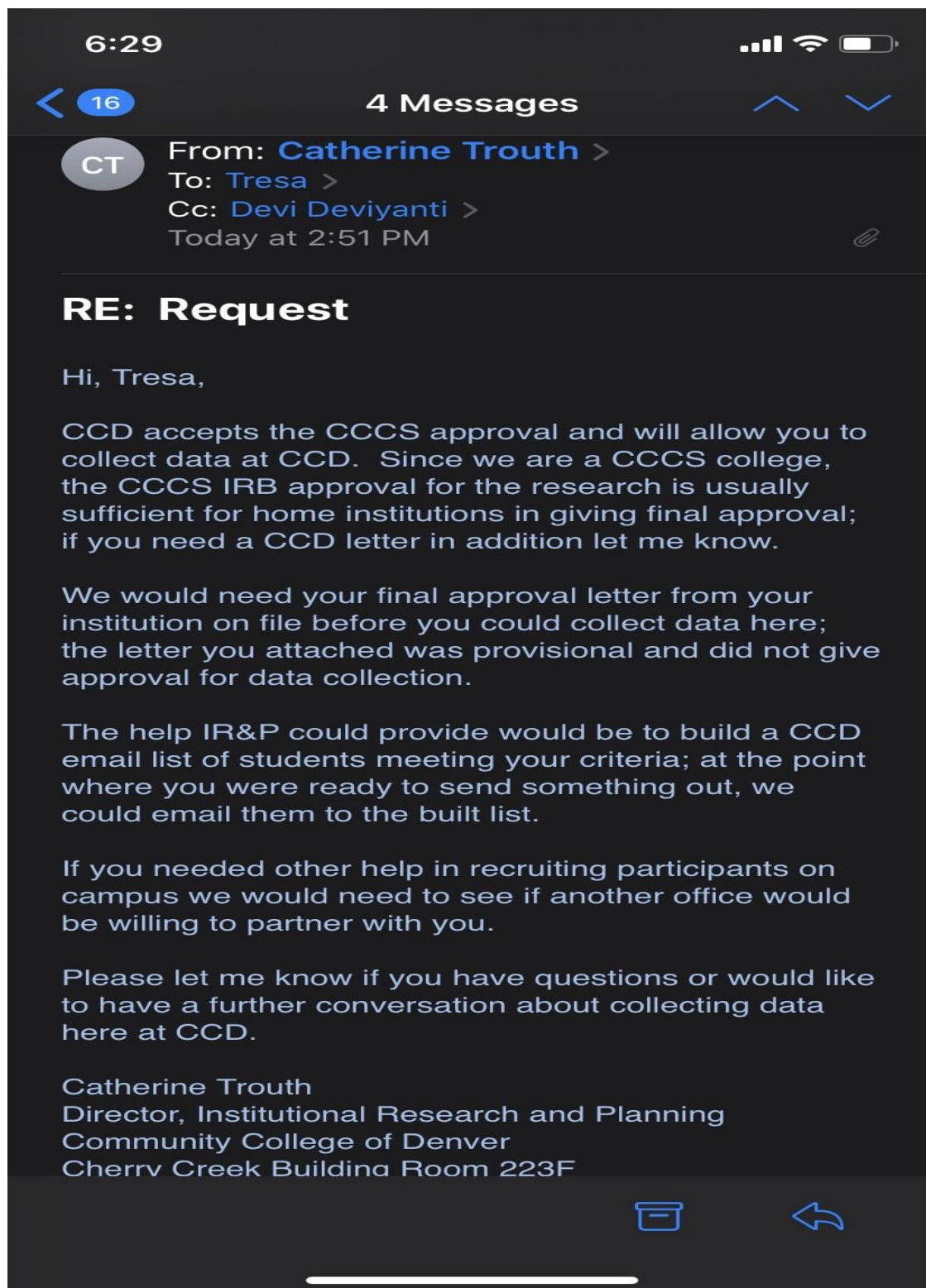
Title:	The Impact of Social Media Use on Social Comparison and Body Images of Young Adult Males
Principal Investigator:	Tresa Hildreth
Institution(s):	Liberty University

While you have been authorized to recruitment/enroll MSU Denver staff and students, you remain responsible to comply with your home institution's IRB requirements.

Thank you very much for your interesting in conducting research at Metropolitan State University of Denver.

Sincerely,

MSU Denver's Institutional Review Board



Appendix I

November 9, 2019

Dear Student,

As a graduate student in the School of Behavioral Sciences (Community Care and Counseling) at Liberty University, I am conducting research as part of the requirements for a Doctor of Education Degree. The purpose of this study is to address the gap in the literature that exists with young males and investigate the possible relationship between social media use and body image concerns as it pertains to this population. Given that this particular group is underrepresented within past and current research studies, and more studies have confirmed that males do in fact struggle with body image, this study will glean insight and valuable information related to body image, social media use, and social influence. Through this study I am hoping to answer two specific research questions. First, is the use of social media, number of friends/followers, and time spent on social media related to body image dissatisfaction among young adult males? Second, does social comparison moderate (influence the magnitude of) the relationship between social media use and body image concerns among young adult males? I am writing to invite you to participate in my study.

If you are a male between the ages of 18 and 20, currently an undergraduate student, use social media, and are willing to participate, you will be asked to complete three anonymous surveys. It should take approximately 15-20 minutes for you to complete the surveys. Your participation will be completely anonymous, and no personal, identifying information will be collected.

To participate, click on the link provided and complete the survey: [survey link].

A consent document is provided as the first page you will see after you click on the survey link. The consent document contains additional information about my research. Please click on the survey link at the end of the consent information to indicate that you have read the consent information and would like to take part in the survey.

If you choose to participate, you may voluntarily enter your name into a drawing for an Amazon gift card upon completion of the survey. There will be five separate drawings for a \$10 gift card. In order to allow for participant anonymity, you may send me a separate email after you have completed and submitted the survey, asking to be entered into the drawing. While email addresses will be necessary in order to participate in the

drawing, they will not be linked to participants' identities.

Sincerely,
Tresa Hildreth
Liberty University

Appendix J

CONSENT FORM

The Impact of Social Media Use on Social Comparison and Body Images of Young Adult Males

Tresa Hildreth

Liberty University

School of Behavioral Sciences – Community Care and Counseling

You are invited to be in a research study that will investigate the relationship between social media use and body image concerns as it pertains to young adult males. In addition, social comparison will be examined as a possible moderator within this relationship. This study will provide valuable data to a body of research that is scarce given that body image research tends to be geared more towards women than men, and girls rather than boys. You were selected as a possible participant because you are an undergraduate male, active on social media, and between the ages of 18 and 20. Please read this form and ask any questions you may have before agreeing to be in the study.

Tresa Hildreth, a doctoral candidate in the School of Behavioral Sciences (Community Care and Counseling) at Liberty University, is conducting this study.

Background Information: The purpose of this study is to address the gap in the literature that exists with younger males and investigate the possible relationship between social media use and body image concerns as it pertains to this population. Given that this particular group is underrepresented within past and current research studies, and more studies have confirmed that males do in fact struggle with body image, this study will glean insight and valuable information related to body image, social media use, and social influence. This study aims to answer two specific research questions. First, is the use of social media, number of friends/followers, and hours spent on social media related to body image dissatisfaction among young adult males? Second, does social comparison moderate (influence the magnitude of) the relationship between social media use and body image concerns among young adult males?

Procedures: If you agree to be in this study, I would ask you to do the following:

1. Complete a set of anonymous surveys. This should take approximately 15-20 minutes.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

Benefits: This study does not provide direct benefits to the participant. However, data collected through this study might benefit researchers in the future who are studying the relationship between social media use, body image, and social comparison.

Compensation: Participants will not be compensated for participating in this study. However, if you wish, you may voluntarily enter your name into a drawing for an Amazon gift card upon completion of the survey. There will be five separate drawings for a \$10 gift card. In order to allow for participant anonymity, you may send Tresa Hildreth a separate email after you have completed and submitted the survey, asking to be entered into the drawing. While email addresses will be necessary in order to participate in the drawing, they will not be linked to participants' identities.

Confidentiality: The records of this study will be kept private. Your participation in this study is anonymous. Data will be stored on a password-locked computer. After three years, all electronic records will be deleted. The researcher, dissertation chair, dissertation reader, and statistical consultant are the only ones that will have access to the records.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University or the Community College of Denver. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Contacts and Questions: The researcher conducting this study is Tresa Hildreth. If you have questions, **you are encouraged** to contact her at _____ or _____. You may also contact the researcher's faculty chair, Dr. Susanna Capri Brooks at _____.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board. The contact information is:

Liberty University - 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Appendix K

CONSENT FORM

The Impact of Social Media Use on Social Comparison and Body Images of Young Adult Males

Tresa Hildreth

Liberty University

School of Behavioral Sciences – Community Care and Counseling

You are invited to be in a research study that will investigate the relationship between social media use and body image concerns as it pertains to young adult males. In addition, social comparison will be examined as a possible moderator within this relationship. This study will provide valuable data to a body of research that is scarce given that body image research tends to be geared more towards women than men, and girls rather than boys. You were selected as a possible participant because you are an undergraduate male, active on social media, and between the ages of 18 and 20. Please read this form and ask any questions you may have before agreeing to be in the study.

Tresa Hildreth, a doctoral candidate in the School of Behavioral Sciences (Community Care and Counseling) at Liberty University, is conducting this study.

Background Information: The purpose of this study is to address the gap in the literature that exists with younger males and investigate the possible relationship between social media use and body image concerns as it pertains to this population. Given that this particular group is underrepresented within past and current research studies, and more studies have confirmed that males do in fact struggle with body image, this study will glean insight and valuable information related to body image, social media use, and social influence. This study aims to answer two specific research questions. First, is the use of social media, number of friends/followers, and hours spent on social media related to body image dissatisfaction among young adult males? Second, does social comparison moderate (influence the magnitude of) the relationship between social media use and body image concerns among young adult males?

Procedures: If you agree to be in this study, I would ask you to do the following:

1. Complete a set of anonymous surveys. This should take approximately 15-20 minutes.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life. However, the questions in the set of surveys may trigger some distress for certain individuals. For example, several questions will ask you to indicate whether a statement is true based on a 6-point scale such as, “I think that my body should be leaner,” or “I am concerned that my stomach is too flabby.” Other questions require you to use a scale in order to rate how often you compare certain aspects of your body to those of other individuals of the

same sex, such as your stomach, chest, waist, or back. The contact information for the counseling centers of each school are provided as a resource should any distress arise while participating in this study.

For Liberty University participants: Student Counseling Services

Benefits: This study does not provide direct benefits to the participant. However, data collected through this study might benefit researchers in the future who are studying the relationship between social media use, body image, and social comparison.

Compensation: Participants will not be compensated for participating in this study. However, if you wish, you may voluntarily enter your name into a drawing for an Amazon gift card upon completion of the survey. There will be five separate drawings for a \$10 gift card. In order to allow for participant anonymity, you may send Tresa Hildreth a separate email after you have completed and submitted the survey, asking to be entered into the drawing. While email addresses will be necessary in order to participate in the drawing, they will not be linked to participants' identities.

Confidentiality: The records of this study will be kept private. Your participation in this study is anonymous. Data will be stored on a password-locked computer. After three years, all electronic records will be deleted. The researcher, dissertation chair, dissertation reader, and statistical consultant are the only ones that will have access to the records.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University or Metropolitan State University of Denver. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Contacts and Questions: The researcher conducting this study is Tresa Hildreth. If you have questions, **you are encouraged** to contact her at _____ or _____. You may also contact the researcher's faculty chair, Dr. Susanna Capri Brooks at _____.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board.

For Liberty University participants the contact information is: 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

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