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Self-Compassion, Body Image Dissatisfaction, and Negative Social Comparisons in Adolescents Utilizing Social Networking Sites

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SELF-COMPASSION, BODY IMAGE DISSATISFACTION, AND NEGATIVE

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Abstract

This quantitative survey study implemented a cross-sectional, correlational design. The present study explored the relationship between self-compassion, body image, and negative social comparisons in a sample consisting of adolescents who use social networking sites. Despite noteworthy limitations, this study elucidates the benefits associated with higher levels of self-compassion in adolescence. In line with previous studies, adolescents reported frequent use of social networking sites, primarily facilitated by smartphones. Although the constant accessibility of social networking sites via smartphones has been associated with negative outcomes, an important finding in this study was the lack of significant relationship between overall time spent on social networking sites, lower levels of self-compassion, negative social comparisons, and negative body image. Nevertheless, a significant relationship was found between negative body image and belonging to more than three social networking sites. These findings highlight the necessity of future research studies which investigate the differential impact of various social networking sites, how certain online behaviors may predispose adolescents to diminished overall psychological well-being, and the influence of preexisting psychopathology. Lastly, preventative measures, such as treatment programs that enhance self-compassion and media literacy campaigns, are suggested to buffer adolescents against the negative consequences associated with maladaptive social networking sites

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Chapter 1: Introduction

Statement of the Problem

Self-compassion is associated with greater psychological well-being, including increased happiness, optimism, personal initiative, and connectedness, as well as decreased anxiety and depression (Neff, 2010). Neff (2003b) proposed that self-compassion consists of self-kindness, common humanity, and mindfulness. Self-kindness entails being nonjudgmental toward oneself rather than self-critical. Common humanity involves recognizing that the difficulties one may encounter are a normal feature of life rather than viewing these events as only happening to certain people. Mindfulness refers to being aware of painful thoughts and feelings rather than allowing oneself to become overwhelmed by troubling emotional states (Neff, 2003b).

Numerous studies have explored the association between self-compassion and overall well-being. A meta-analysis of 14 self-compassion studies conducted with adults revealed a large effect size indicating a negative association between psychopathology and self-compassion (Macbeth & Gumley, 2012). Self-compassion appears to cultivate resilience by helping to regulate people's reactions to negative events (Smeets, Neff, Alberts, & Peters, 2014). Individuals with higher levels of self-compassion are more likely to utilize adaptive coping strategies when they are confronted with distressing events (Neff, 2003b). Avoidance is viewed as a maladaptive response to upsetting experiences because it can exacerbate negative feelings and preclude an individual from gaining meaningful insight into his or her current distress (Neff, 2003b). Self-acceptance and self-kindness can promote fewer harsh judgments when individuals confront disliked aspects of themselves (Smeets et al., 2014). Additionally, self-

compassion enables a person to view his or her experiences in a broader context by acknowledging that social rejection or feelings of inadequacy are common occurrences for all people (Neff & McGehee, 2010).

Research also suggests that self-compassion has important implications for the adolescent and young adult experience (Smeets et al., 2014). Students with high levels of self-compassion appear to handle social and academic struggles more effectively while also experiencing lower levels of depression (Smeets et al., 2014). Additionally, higher levels of self-compassion have been associated with a reduced fear of failure and greater confidence in general ability compared to other students (Smeets et al., 2014). Empirical findings indicate that individuals who are more self-compassionate tend to have more social connectedness and less anxiety, depression, shame, and burnout (Barnard & Curry, 2011).

An area in which self-compassion may be especially relevant to adolescents and young adults concerns their utilization of social networking sites. Social networking sites are an increasingly common part of the adolescent and young adult experience and offer users the ability to create a personal profile, communicate with other people, and share information on various interactive multimedia platforms (Lenhart, 2015). The burgeoning influence of social networking sites, including Facebook, Twitter, and YouTube, reflect an evolving media landscape in which users have unprecedented access to a variety of channels of communication and entertainment (Lenhart, 2015).

Although these opportunities offer users numerous benefits, recent lines of inquiry have investigated the negative outcomes associated with social networking site use, particularly body dissatisfaction, negative self-comparisons, and poor academic

performance (Haferkamp & Kramer, 2011; Ridolfi, Myers, Crowther, & Ciesla, 2011).

Previous research suggests that online profiles on social networking sites offer a BAS-2is

for engaging in comparisons with peers (Haferkamp & Kramer, 2011). These

comparisons occur automatically and can involve friends, relatives, and even strangers

(Haferkamp & Kramer, 2011). The tendency to relate information to oneself can lead to

negative self-views after making comparisons to others who are perceived to be more

attractive, successful, or socially desirable (Haferkamp & Kramer, 2011). The

commonplace nature of these social comparisons on social networking sites may place

users at greater risk for developing negative self-appraisals and feelings of inadequacy

(Chou & Edge, 2012).

  Due to the frequency of social comparisons on social networking sites, individuals

may develop harsh judgments toward themselves when they encounter images that

facilitate obsessive rumination or pessimistic thoughts and emotions (Barnard & Curry,

2011). As a result, self-compassion may be highly relevant to social networking site

experiences. Self-compassion may enable individuals to be nonjudgmental toward

themselves rather than self-critical when confronted with upsetting situations on social

networking sites (Neff, 2003b). Additionally, users with higher levels of self-compassion

may be able to recognize that they are not likely alone in experiencing distressing

emotions on social networking sites and may be less likely to ruminate about their

perceived shortcomings or inadequacies (Neff, 2003b). Finally, self-compassion may

mitigate troubling emotional states that result from using social networking sites by

facilitating greater awareness of painful thoughts and feelings (Neff, 2003b).

Chapter 2: Literature Review

Adolescent Development: Neurobiological and Psychosocial Transformations

The transition to adolescence is marked by profound changes in cognitive, emotional, and psychosocial domains (Murray, Byrne, & Rieger, 2011). These transformations have important ramifications for adolescents as they contend with unique academic and social stressors while also attempting to forge their own personal identities (Murray et al., 2011).

Adolescence is considered to be a particularly difficult phase in the lifespan due to neurobiological changes that influence emotional and behavioral regulation (Broderick & Jennings, 2012). Adolescent biological development offers insight into behavior during this time period (Hollenstein & Lougheed, 2013). Research on adolescent brains indicates that a reduction in the amount of gray matter relative to white matter takes place over time (Fine & Sung, 2014). This change reflects greater cognitive efficiency and more advanced cognitive and socioemotional processes (Broderick & Jennings, 2012). Nevertheless, this cognitive maturation does not take place until the final stages of adolescence and may explain why adolescents process emotional information differently than adults (Broderick & Jennings, 2012). Research suggests that teenagers display increased sensitivity to threat, an exaggerated startle reflex when confronted with fear-evoking stimuli, and decreased efficiency on tasks featuring emotional content in comparison to adults (Broderick & Jennings, 2012). Lamm and Lewis (2010) found age-related differences in functional magnetic resonance imaging (fMRI) studies examining emotional regulation abilities, thereby indicating that neural and cortical efficiency may help explain why adults process emotional information differently than adolescents.

An additional area in which adolescents demonstrate less efficient cognitive abilities compared to adults is executive functioning (Flook et al., 2010). Executive functions encompass a variety of cognitive processes, including attention, working memory, and inhibitory control, which play a key role in planning and completing goal-directed activities (Flook et al., 2010; Meltzer, 2007). Executive functions also play a critical role in self-regulatory processes, including self-monitoring and emotional control (Meltzer, 2007). Adolescents that exhibit executive functioning deficits, such as concentration difficulties or impulsivity, are more likely to experience poor socioemotional adjustment and academic struggles (Flook et al., 2010). The coordination of multiple dimensions of executive functioning is a challenging undertaking for adolescents with important implications for their socioemotional and academic development.

In addition to being vulnerable to stress due to rapid neurobiological changes, adolescents also face challenging tasks in their psychosocial development. Adolescence is considered to be a period of self-exploration and self-evaluation (Allison & Schultz, 2000), and the establishment of a stable self-concept and identity is a defining task of adolescence (Chulani & Gordon, 2014). Erikson's (1968) theory of psychosocial development views this stage as involving the exploration of different belief systems and behaviors that help adolescents transition into adulthood. As a result, existential concerns pertaining to one's sense of direction or purpose in life becomes increasingly prominent (Berman, Weems, & Stickle, 2006). As adolescents undergo dramatic physical and psychological changes, the uncertainty of this time period can lead to self-doubt regarding competence and worth (Chulani & Gordon, 2014).

Research findings indicate that occurrences of negative affect and depression increase during adolescence (Ciesla, Reilly, Dickson, Emanuel, & Updegraff, 2012). Coupled with major neurobiological changes, the formation of a secure identity can be a stressful undertaking. The effects of stress on adolescents also extend to other domains and can threaten their physical and emotional well-being. Adolescents report high levels of school-related stress due to homework, exams, and college preparations (Broderick & Jennings, 2012). Social stressors related to maintaining friendships, sexual activity, and peer pressure can lead to disengagement from school or feeling alienated from their parents (Broderick & Jennings, 2012). Difficulties during adolescence can lead to the onset of physical, behavioral, and psychological issues that can persist into adulthood (Broderick & Jennings, 2012).

Self-Compassion and Adolescent Development

Self-compassion may be a relevant construct for adolescents because of its potential to affect overall well-being (Bluth & Blanton, 2014a). Neff (2003b) operationalized self-compassion as encompassing three main components: self-kindness, common humanity, and mindfulness (Neff, 2003b). Neff (2003b) has suggested that these components are unique, yet also overlap and are mutually influential of each other.

Self-kindness. Neff and McGehee (2010) contend that societal values stress the importance of being kind and considerate to others but do not place equal emphasis on learning how to adopt a compassionate stance toward oneself. Neff (2003b) highlighted this discrepancy by proposing that many people tend to respond to their own mistakes and imperfections in a much harsher manner in comparison to how they would treat friends who were encountering similar types of adversities. Self-kindness entails being

understanding and empathetic of one's flaws rather than being self-critical (Neff, 2003b). Consequently, self-kindness can promote an inner dialogue which is encouraging and supportive rather than unsympathetic and unforgiving (Neff, 2003b).

      Common humanity. Common humanity involves recognizing that the difficulties one may encounter in life are normal rather than viewing these being indicative of an inherent shortcoming (Neff, 2003b). This aspect of self-compassion encompasses being able to appreciate that all people encounter situations in which they are disappointed with themselves after committing an error or failing to live up to a certain expectation. An additional benefit of this concept is that it fosters a greater sense of connection to others due to acknowledging that other people also must contend with their own imperfections. This can diminish the likelihood and frequency of people forming irrational beliefs about themselves which erroneously assume that they are alone in experiencing any type of hardship or setback (Neff, 2003b). This concept is distinctive from self-pity as it does not involve becoming overly absorbed in one's own problems to an extent where it prevents someone from being able to remember that other people have comparable difficulties (Neff, 2003b).

      Mindfulness. Mindfulness refers to being aware and accepting of painful thoughts and feelings rather than allowing oneself to become overwhelmed by troubling emotional states (Neff, 2003b). An important characteristic of mindfulness is that it involves a degree of intentionality in order to be fully attentive and open to one's experiences (Neff, 2003b). This awareness can enable a person to exercise compassion toward his or her own suffering and recognize the importance of not being judgmental or avoidant of negative thoughts and feelings (Neff, 2003b). Mindfulness is an essential

component of self-compassion, as it can help someone adopt a more balanced perspective of painful thoughts and feelings without resorting to unconstructive self-judgments and further feelings of inadequacy (Neff, 2003b).

The Origins of Self-Compassion

Early childhood experiences exert a powerful effect on the development of self-compassion. Gilbert and Procter (2006) consider a secure attachment to caregivers and having a sense of belonging to be fundamental mechanisms in the development of self-compassion. The sense of security from these relationships instills a sense of worth and security, which creates positive internalized emotional memories (Gilbert & Irons, 2009). The memory of being treated with kindness and warmth may serve as a template for how a person treats himself or herself during difficult times (Gilbert & Irons, 2009). Consequently, the ability to direct kindness inwards may emanate from having access to schema of others as being reassuring and supportive (Gilbert & Irons, 2009).

Conversely, childhood maltreatment and harsh parenting styles have been identified as key factors in potentially impairing one's ability to relate to oneself with compassion and understanding (Gilbert & Procter, 2006). Unsupportive and abusive parenting styles have been linked to greater vulnerability to psychopathology and heightened shame (Gilbert & Irons, 2009; van der Kolk, McFarlane, & Weisaeth, 2007). In contrast to individuals who have warm and supportive caregivers, this parenting style can contribute to negative beliefs about self and relationships, as well as emotion regulation difficulties due to a lack of security in the relationships with caretakers, having low self-worth, and a dearth of positive internalized emotional memories (Gilbert & Irons, 2009; Schynder, 2005). These experiences can alter psychological, biological, and

social equilibrium to such a degree that it can hinder one's ability to view oneself in a positive light (van der Kolk et al., 2007). Self-critical inner dialogues often feel natural for individuals exposed to childhood maltreatment because the process is established at an exceptionally young age and colors the manner in which future events are comprehended (Thompson & Waltz, 2008). This self-critical tendency engenders social isolation and can also result in smaller support networks due to not believing that one is worthy of being treated with warmth and kindness (Terry & Leary, 2011).

Self-Compassion in Adolescence

Self-compassion may provide a means for adolescents to experience positive feelings toward themselves without engaging in harsh self-evaluation (Neff & McGehee, 2010). Since excessive self-criticism is viewed as a transdiagnostic phenomenon that plays a role in the etiology and maintenance of various psychological disorders (Schanche, 2013), it is possible that self-compassion may provide an avenue for adolescents to experience positive feelings toward themselves without engaging in the problematic process of self-judgment (Neff, 2010). Samaie and Ferahani's (2011) research findings denote that self-compassion is correlated negatively with rumination. Individuals who tend to exercise more compassion toward themselves may be able to regulate distressing emotions by diminishing negative rumination related to a perceived shortcoming (Neff, 2010). This is especially important as negative self-judgments are implicated strongly in the high rates of anxiety and depression found in adolescents (Neff, 2003b).

A fundamental facet of self-compassion is being able to understand and recognize that suffering, failure, and disappointment are normal features of life (Neff & McGehee,

2010). Interestingly, research findings suggest that a significant positive correlation exists between self-compassion and age (Neff & Vonk, 2009). Additionally, executive functioning abilities show increases in efficiency with age, further underscoring the unique cognitive, physiological, and emotional changes characteristic of this stage of development (Flook et al., 2010). Less developed executive functioning capacities may pose challenges for adolescents in exercising self-compassion due to behavioral and emotional self-regulation stressors (Flook et al., 2010; Neff & Vonk, 2009). As adolescents contend with academic, social, and family demands during this time, they frequently contemplate their self-worth, competence, and social standing relative to their peers (Bluth & Blanton, 2014a; Neff, 2010). Consequently, adolescents may become overwhelmed by negative self-judgments because of experiencing a high degree of shame, anxiety, or guilt due to uncertainty as to where they might stand in the social hierarchy (Neff, 2010).

Self-compassionate adolescents tend to be less afraid of failure and have more confidence in their abilities than individuals who do not have a self-compassionate mindset (Smeets et al., 2014). In addition, adolescents with high levels of self-compassion appear to handle social and academic stressors more effectively (Smeets et al., 2014). A further benefit of self-compassion in adolescence is that it can thwart obsessive rumination of negative thoughts and feelings, thereby lessening the likelihood of psychological suffering (Neff, 2003b). The common humanity component of self-compassion can lead to greater connectedness to others and allay fears of social rejection by framing one's negative experiences in a more objective light (Neff, 2003b).

Empirical findings indicate that individuals who are more self-compassionate tend to have more social connectedness as well as less anxiety and depression (Barnard & Curry, 2011; Neff & McGehee, 2010). A meta-analysis conducted by Macbeth and Gumley (2012) found a large effect size for the relationship between higher levels of self-compassion and lower levels of mental health symptoms. Self-compassion has also been shown to be associated positively with low perceived stress, high satisfaction with life, and a sense of self-mastery (Neely, Schallert, Mohammed, Roberts, & Chen, 2009). In addition, a negative correlation has been found between self-compassion and social withdrawal and shame (Barnard & Curry, 2011; Leary, Tate, Adams, Allen, & Hancock, 2007). Self-compassion may cultivate resilience and healthy coping by diminishing rumination, thought suppression, and avoidance strategies (Neff, 2003b; Neff, Kirkpatrick, et al., 2007; Raes, 2010). Self-compassion can engender awareness and acceptance of painful thoughts and feelings without leading a person to overly focus on his or her flaws or mistakes (Smeets et al., 2014). As a result, self-compassion can moderate emotional reactivity to distressing events by preventing repetitive forms of thinking that prolong and intensify negative affect (Raes, 2010).

The Relationship of Social Comparisons to Body Image Dissatisfaction

Festinger's (1954) social comparison theory postulates that individuals engage in social comparisons with others to determine their relative standing on a particular attribute. Upward social comparisons entail comparing oneself to someone perceived to be superior on the trait of interest while downward social comparisons occur when a comparison is made to someone deemed to be inferior (Festinger, 1954). Although research findings suggest that upward social comparisons can enhance motivation for

self-improvement, negative affect and feelings of inadequacy can also be triggered when

individuals do not believe that they are capable of reaching their goals (Buunk & Ybema,

1997). Conversely, downward social comparisons can improve self-esteem, as a person

may evaluate himself or herself in a positive light (Festinger, 1954).

An extensive body of research findings suggest that the media conveys a distorted

picture of reality in which people are depicted as rich, powerful, successful, and attractive

(Haferkamp & Kramer, 2011). A consequence of this misrepresentation is that people

may feel discontented with their own personal qualities and life circumstances due to

experiencing a negative contrast effect during social comparisons (Haferkamp & Kramer,

2011). Dijkstra and Barelds (2011) described social comparisons as being "typically

mindless and automatic judgments" (p. 220). The implication of this is that social

comparison takes place on a regular BAS-2is because people are presented frequently

with information about others (Lee, 2014). Technological advancements and the

proliferation of wireless technology allow adolescents to obtain information of others

more effortlessly than ever before (Lee, 2014).

Social comparison is theorized to be one of the processes by which individuals

evaluate their own physical attractiveness (Myers & Crowther, 2009). Body image

includes affective, attitudinal, and cognitive components and is an important element of

self-worth in adolescence, as comparisons are made with peers and media images (Jones,

2001). Research findings suggest that dysfunctional evaluations of the body peak during

adolescence and are associated with lower self-esteem and depression (Murray et al.,

2011). A negative consequence of appearance-BAS-2ed social comparisons is body

dissatisfaction, which occurs when an individual has negative beliefs and feelings about

his or her weight, size, or shape (Myers & Crowther, 2009). Groesz, Levine, and Murnen (2002) found that younger individuals may be more vulnerable to the influence of media images and ideals. Their research implicates that adolescents under the age of 19 experience greater body dissatisfaction when exposed to media images than adults (Groesz, Levine, & Murnen, 2002). Tiggemann and Polivy (2010) propose that when adolescents compare themselves to images in the media, the direction of the comparison tends to be upward. When a person finds that he or she does not compare favorably to the target of comparison, negative mood and body dissatisfaction are common outcomes (Tiggemann & Polivy, 2010). Further research has implicated that students who report more frequent social comparisons with others experience greater body dissatisfaction (Myers & Crowther, 2009).

Gender, Body Dissatisfaction, and Social Comparisons

An extensive variety of studies have explored the media's effect on women's body dissatisfaction (Barlett, Vowels, & Saucier, 2008; Hargreaves & Tiggemann, 2004; Hargreaves & Tiggemann, 2009; Tiggemann, 2006). These findings suggest that a principle cause of body dissatisfaction in adolescent females emanates from unrealistic standards of beauty which emphasize unattainable thinness (Hargreaves & Tiggemann, 2004). Adolescent females who read more magazines, watch more television, and spend more time on the Internet tend to experience more body image concerns (Tiggemann & Slater, 2013). Additional negative consequences associated with body dissatisfaction in adolescent females are disordered eating and depression (Hargreaves & Tiggeman, 2009). Experimental studies have demonstrated that adolescent females experience immediate negative effects after brief exposure to idealized media images which can persist for a

period of time, thus illuminating the damaging consequences related to appearance-focused social comparisons (Tiggemann, 2006).

Although previous lines of inquiry have focused predominantly on the media's effect on female's body dissatisfaction, increased attention has been devoted to investigating body dissatisfaction in adolescent males. Recent research proposes that the most likely cause of body dissatisfaction among adolescent males is also associated with unrealistic appearance ideals (Hargreaves & Tiggemann, 2009). In contrast to women, men are more likely to be dissatisfied with their appearance on the BAS-2is of not having enough muscle size or tone (Hargreaves & Tiggemann, 2009). Correlational studies have demonstrated that males' media usage is connected to poorer body image (Schooler & Ward, 2006), and individuals who viewed media images depicting muscular models felt less satisfied with their appearance afterward (Hargreaves & Tiggemann, 2009). Body image dissatisfaction has become increasingly common among males and has been connected to an extensive number of negative consequences, including disordered eating, excessive exercise, and depression (Hargreaves & Tiggemann, 2009). Overall, the media's impact on adolescent males' body image is less prevalent, normative, and severe in comparison to adolescent females, but still causes significant distress (Hargreaves & Tiggemann, 2009).

Social Networking Sites: A Novel Environment for Social Comparisons

A recent study reported that adolescents spend an average of 7 hours per day using various forms of media (Strasburger, Jordan, & Donnerstein, 2010). An increasingly common part of adolescents' engagement in media consumption entails participating in social networking sites, including but not limited to Facebook, Twitter,

YouTube, and Instagram (Lee, 2014). Social networking sites differ in terms of their

format, layout, and type of interaction with other users (Lee, 2014).

Facebook, Instagram, and Snapchat are several of the most popular social

networking sites for adolescents. Facebook is the most popular social networking site,

with 71% of adolescents reporting that they use this site (Lenhart, 2015). Facebook

allows users to create a personal profile, post pictures or videos, comment on others'

profiles, post messages about their current activities, and subscribe to the public profiles

of celebrities, companies, and other general interests (Lenhart, 2015). Instagram is

utilized by 52% of adolescents (Lenhart, 2015). This social networking site enables users

to share photos and videos with other users. Instagram also allows users to subscribe to

the accounts of other people and view their photos and videos. Snapchat is used by 41%

of adolescents (Lenhart, 2015). Snapchat allows users to share images and videos that

are deleted automatically after several seconds (Lenhart, 2015).

Twitter, Google+, and Vine are also popular websites among adolescents. Twitter

is used by roughly 33% of adolescents (Lenhart, 2015). This social networking site

imposes a character limit on messages that users can post and allows users to upload

pictures to share with others (Lenhart, 2015). Users are able to follow the others' profiles

and these posts can be read on a timeline, which is a feed that can be updated whenever

the user wishes. An additional feature of Twitter is that the most popular topics being

discussed by users are listed as "trending topics." Trending topics enable people to read

other users' posts that are discussing this theme and facilitates interaction if one user

wishes to communicate with another. The increasing number of schools that have

integrated Gmail and other Google tools for students have contributed to adolescent use

of Google+ (Lenhart, 2015). This social networking site is linked to a user's e-mail

address and enables users to create "circles" of friends, family, and acquaintances to keep

in touch with other people, post pictures or videos, and follow other users' posts

(Lenhart, 2015). Google+ is used by 33% of adolescents. Vine is a video-sharing social

networking site that is used by 24% of adolescents. This social networking site allows

users to create short videos that last for a total of 6 seconds (Lenhart, 2015). These

videos play in a continuous loop and can be viewed directly on a user's Twitter profile

page or embedded onto another social networking site (Lenhart, 2015).

Online pinboards, discussion boards, and Tumblr are also used commonly by

adolescents. Online pinboards allow users to create, post, or view images (Lenhart,

2015). These images comprise a user's online profile on this social networking site.

Pinterest and Polyvore are the two most common online pinboards, which are used by

22% of adolescents. The Pew Research study found that 17% of adolescents belong to

online discussion boards. Digg and Reddit are the most commonly used discussion

boards, which allow users to read and comment on an extensive variety of topics

(Lenhart, 2015). Tumblr is used by 14% of adolescents (Lenhart, 2015). Tumblr enables

users to maintain a profile and share posts with others (Lenhart, 2015). Users can create

content or find images or videos from the Internet to post to their profiles for others to

view (Lenhart, 2015).

Tiggemann and Slater (2013) reported that youth spend more than 90 minutes per

day on social networking sites. This evolving media landscape enables adolescents to

stay connected with friends, exchange information, share pictures, pursue unique avenues

of entertainment, and form new relationships by creating an online profile (O'Keeffe &

Clarke-Pearson, 2011). Further benefits of adolescents utilizing social networking sites emanate from forming a more diverse social network and being exposed to unique artistic, musical, and cultural endeavors (O'Keeffe & Clarke-Pearson, 2011). Additionally, social networking sites facilitate identity development by providing adolescents with opportunities for personal expression and self-exploration (O'Keeffe & Clarke-Pearson, 2011).

Although social networking sites provide adolescents with substantial benefits, other research findings indicate that adolescents may encounter negative consequences when utilizing this medium. An area of particular interest related to adolescent well-being involves social comparisons made on social networking sites. Social networking sites provide adolescents with numerous opportunities for social comparison using information from the electronic profiles and pictures of other people (Vogel, Rose, Roberts, & Eckles, 2014). Vogel and colleagues (2014) propose that a majority of social comparisons are made in an upward direction, as users are able to depict themselves in a favorable light by selectively controlling content, pictures, and information about themselves on their electronic profiles. Chou and Edge's (2012) research corroborates this notion, as frequent social networking site users were found to believe that other people were happier and more successful than themselves. This can lead to people comparing themselves to an unrealistic, idealized online profile of another person, which may elicit harsh self-evaluations (Vogel et al., 2014).

A study conducted by Ridolfi and colleagues (2011) examined whether appearance-focused social comparisons was associated with disturbed image and affect in a variety of domains. In their study, 93 participants with a mean age of 19 years old,

carried a personal digital assistant (PDA) and were instructed to complete a questionnaire whenever an alarm sounded. Participants were asked to report on the frequency and type of appearance-focused social comparisons they made since the previous alarm. The researchers' hypothesis that social comparisons to media images, regardless of the direction of the comparison, would be associated with negative affect and guilt, were supported by their research findings. Social comparisons to media images were associated with more frequent body checking to assess one's own weight and shape, which contributed to negative feelings such as guilt (Ridolfi et al., 2011). Social comparisons to peers were also associated with more frequent body checking and feelings of guilt (Ridolfi et al., 2011). This analysis has notable ramifications for adolescents, as social networking sites may trigger damaging social comparisons, potentially leading to harsh self-evaluations and poor self-esteem.

Social comparison processes are believed to contribute to body image dissatisfaction due to the transmission of unrealistic ideals through the media (Dijkstra & Barelds, 2011). Cash and Deagle (1997) describe body image as a multidimensional concept that includes cognitive-affective and behavioral domains. Research findings propose that individuals become less satisfied with their bodies due to frequent comparisons with media images of beauty (Dijkstra & Barelds, 2011). A meta-analysis of 156 studies found that appearance-focused social comparisons were correlated significantly with body dissatisfaction (Myers & Crowther, 2009). Other research indicates that social comparisons to media images are associated with more frequent body checking and feelings of guilt (Ridolfi et al., 2011; Spurr, Berry, & Walker, 2013; Tiggemann & Slater, 2013). Leone and colleagues (2011) emphasize that the

accessibility of electronic media serves as a gateway to sociocultural influences and plays a role in negative body affect.

A study by Tiggemann and Slater (2013) explored the relationship between Internet exposure and body image concern in a sample of 1,087 adolescent females with a mean age of 13.7 years. Participants reported how long, on average, they spend on the Internet each day and indicated which sites they use most frequently. Internet exposure was correlated significantly with internalization of the thin ideal, body surveillance, and drive for thinness (Tiggemann & Slater, 2013). In this study, participants reported that social networking sites were among their most frequented websites. Facebook was reported to be the most popular social networking sites utilized by the participants (Tiggemann & Slater, 2013). Tiggemann and Slater's (2013) study demonstrates that a connection exists between the use of the Internet—especially social networking sites— and body image disturbances in adolescent females.

Smith, Hames, and Joiner (2013) used a sample of 232 undergraduate female students to examine the possible relationship between Facebook usage and body dissatisfaction. In this study, participants were asked to complete questionnaires on two occasions separated by 2 to 4 weeks (Smith, Hames, & Joiner, 2013). Facebook usage predicted increases in eating disorder symptomatology, even when controlling for other variables (Smith et al., 2013). Additionally, Facebook usage predicted statistically significant increases in body dissatisfaction and shape concern from BAS-2eline to 4-week follow-up (Smith et al., 2013). The researchers postulated that Facebook provides a platform to engage in social comparison and receive negative social evaluations, thereby leading to increased levels of body dissatisfaction (Smith et al., 2013). An interesting

implication of this research is that individuals might engage in social comparison on

social networking sites by browsing the photos and status updates of their peers and may

experience body image disturbances when they are presented with photos of attractive

peers.

Feinstein and colleagues (2013) explored the link between negative social

comparison on Facebook and depressive symptoms. A sample of 286 participants

completed online questionnaires assessing social comparison, rumination, and depressive

symptoms (Feinstein et al., 2013). To assess change over time, participants completed a

follow-up online survey 3 weeks later (Feinstein et al., 2013). Facebook social

comparison was significantly and positively associated with rumination and depressive

symptoms at both time points (Feinstein et al., 2013). The researchers found that

negatively comparing oneself with others while using Facebook predicted increases in

rumination, which was associated with increases in depressive symptoms. Similarly,

Pantic and colleagues (2012) found a statistically significant correlation between

depression and time spent on social networking sites for high school students. These

findings suggest that social networking sites, such as Facebook, may intensify the

harmful consequences linked to social comparison.

Although most of the research on social networking sites and social comparison

has focused on the use of Facebook due to its popularity, emerging research reveals that

negative outcomes related to social comparison are also present on Twitter. Chrisler,

Fung, Lopez, and Gorman (2013) examined the content of tweets sent out by Twitter

users about the *Victoria's Secret Fashion Show*. The researchers note that commenting

about a television show on Twitter is a "way of watching television with friends who are

not present," as this social networking site enables immediate reactions and sharing of ideas (Chrisler, Fung, Lopez, & Gorman, 2013, p. 650). Content analysis was conducted on 977 tweets related to the Victoria's Secret Fashion Show (Chrisler et al., 2013). Common themes included the models, body image, eating disorders, weight, urges to commit self-harm, and a desire for food or alcohol (Chrisler et al., 2013). Out of the messages posted related to body image, nearly 90% suggested upward social comparisons to the models (Chrisler et al., 2013). This unique study supports social comparison theory and demonstrates the fluid interaction between media images and social networking sites. An additional implication of this study may be that individuals who consume a significant amount of idealized images are at greater risk for body image dissatisfaction due to unfavorable upward social comparisons.

Other research findings indicate that social networking sites may contribute to users evaluating themselves in a critical light (Haferkamp & Krämer, 2011). A qualitative study by Haferkamp and Krämer (2011) presented 12 participants with fictitious online profiles. One group of participants were randomly assigned to view very attractive users and another group looked at profiles featuring photographs of less attractive users. Participants who viewed attractive profile photographs reported having fewer positive emotions than people who viewed unattractive profile photographs (Haferkamp & Krämer, 2011). This suggests that looking at attractive profiles may highlight a discrepancy between a person's objective self and ideal self (Haferkamp & Krämer, 2011). This contrast effect seems to be a common consequence of upward social comparison and further elucidates how this process could unfold for adolescents utilizing social networking sites.

The tendency to engage in frequent social comparisons on social networking sites and the potential to experience depressive symptoms was explored by Steers, Wickham, and Acitelli (2014). This research featured two studies. The first study utilized a cross-sectional design with 180 college students. Time spent on Facebook was related positively to depressive symptoms for males and females. In the second study, a 14-day interval-contingent diary focused on how much time participants spent on Facebook and what types of social comparisons they made. A noteworthy finding of the second study, featuring 154 college-aged participants, was that even downward social comparisons were associated positively with depressive symptoms (Steers, Wickham, & Acitelli, 2014). This result contradicts past studies which have usually substantiated a link between downward social comparisons and positive emotions (Steers et al., 2014). The significance of this finding is that engaging in frequent social comparisons, regardless of the direction, can be harmful to one's psychological health. Because social networking sites provide users with ample opportunity to engage in social comparisons, this finding may hold additional importance for adolescents given their efforts to establish secure identities and their susceptibility to peer influence during this time (Steers et al., 2014).

Kross and colleagues (2013) investigated the relationship between Facebook use, life satisfaction, depression, and self-esteem in a college-aged population. The first phase of the study featured participants completing a set of questionnaires (Kross et al., 2013). The second phase entailed participants being text-messaged five times per day between 10:00 a.m. and midnight over 14 days (Kross et al., 2013). Each message contained a link to an online survey in which participants were asked to rate how they were feeling, if they were experiencing any anxiety or loneliness, the frequency of their Facebook use,

and the amount of direct interaction that they had with other people (Kross et al., 2013). The final phase of the study encompassed participants completing questionnaires in-person. Participants who used Facebook more frequently reported that they felt worse in the period separating two text messages during the second phase of the study (Kross et al., 2013). Further analysis, when controlling for BAS-2eline life satisfaction and average emotion levels over the 14-day period, revealed that the more participants used Facebook, the more their life satisfaction levels decreased over time (Kross et al., 2013). This noteworthy study suggests that Facebook use may predict declines in how people feel from one moment to the next and how satisfied they are with their lives (Kross et al., 2013).

The potentially intense nature of social networking sites has garnered attention due to its unfiltered content and unlimited accessibility, thereby raising questions as to whether adolescents' limited capacity for self-regulation in comparison to adults places them at greater risk for experiencing depression, anxiety, or body image disturbances (O'Keeffe & Clarke-Pearson, 2011). Despite the potential benefits for adolescents utilizing social networking sites, it is possible that there are significant risks associated with their use that require further analysis.

Conclusion

Social networking sites may provide the context by which adolescents endure the harmful effects of problematic social comparisons, leading to a decline in overall well-being due to the increased frequency and intensity of such comparisons (Kross et al., 2013). Nevertheless, a growing body of research illuminates that self-compassion can help adolescents contend with a variety of different stressors. Self-compassion may elicit

feelings of self-acceptance and self-kindness rather than self-criticism when adolescents

encounter disliked aspects of themselves on social networking sites (Neff & McGehee,

2010).

Chapter 3: Hypotheses

In evaluating the relationship between self-compassion, negative social comparison, and body image dissatisfaction in adolescents utilizing social networking sites, the following hypotheses were tested:

Hypothesis 1

It was hypothesized that negative body image, as measured by the Body Appreciation Scale-2 (BAS-2-2) and negative social comparisons, as measured by the Social Comparison Scale, would predict lower levels of self-compassion, as measured by the Self-Compassion Scale (SCS; Neff, 2003a). Dijkstra and Barelds' (2011) research findings suggest social comparisons are "typically mindless and automatic judgments." Accordingly, the mindfulness component of self-compassion refers to being aware and accepting of painful thoughts and feelings, such as those evoked by negative social comparisons, rather than allowing oneself to become overwhelmed by troubling emotional states (Germer & Neff, 2013; Neff 2003b). In addition, dysfunctional evaluations of the body peak during adolescence and are associated with lower self-esteem and depression (Murray et al., 2011). The common humanity component of self-compassion may help adolescents experience greater connectedness to others and allay fears of rejection by framing one's negative experiences in a more objective light (Neff, 2003b). Consequently, adolescents with lower levels of self-compassion may engage in more negative social comparisons and have more negative views of their bodies due to not being able to contend with stress in these domains in an adaptive manner compared to adolescents with higher levels of self-compassion.

Hypothesis 2

It was hypothesized that adolescents who spend more than 2 hours per day on social networking sites would have lower levels of self-compassion, as measured by the SCS (Neff, 2003a). This prediction was BAS-2ed on research suggesting that spending more time on social networking sites can lead to more isolation, less physical activity, and increased negative affect. (Chou & Edge, 2012; Pantic et al., 2012; Vogel et al., 2014). The constant exposure to idealized images and unrealistic sociocultural ideals that are commonplace to social networking sites may exert a negative effect on adolescents' overall self-compassion.

Hypothesis 3

It was hypothesized that adolescents who belong to more than three social networking sites would engage in more negative social comparisons, as measured by the Social Comparison Scale, than adolescents who belong to fewer social networking sites. The literature indicates that each social networking site has different interfaces (Lenhart, 2015), features, and methods of interaction with other users (Lee, 2014), thereby elucidating the possibility that each social networking site may present divergent opportunities for adolescents to compare themselves to other people. Previous research has focused primarily on the effects of social comparison on Facebook (Feinstein et al., 2013; Lee, 2014; Smith et al., 2013; Steers et al., 2014) or Twitter (Chrisler et al., 2013) without examining whether adolescents who use multiple social networking sites experience greater distress related to more varied and diverse opportunities to incur the harmful correlates of negative social comparison. This finding may expand upon the

findings of previous studies that did not explore the aggregate effects of belonging to multiple social networking sites.

Hypothesis 4

In line with the previous hypothesis, it was postulated that adolescents who belong to more than three social networking sites would experience greater body image dissatisfaction, as measured by the BAS-2, compared to adolescents who belong to fewer social networking sites. It was predicted that belonging to more social networking sites would increase exposure to unrealistic body image standards (Hargreaves & Tiggemann, 2004; Myers & Crowther, 2009). A potential consequence of belonging to more social networking sites may be that an adolescent is more likely to encounter media images which lead to emotional distress and body dissatisfaction (Groesz et al., 2002; Tiggemann & Polivy, 2010). This hypothesis also explores the potential aggregate effects of belonging to multiple social networking sites.

Chapter 4: Method

Design

This quantitative survey study implemented a cross-sectional, correlational design. This design sought to quantify relationships between multiple variables (body image dissatisfaction, negative social comparisons, depression, anxiety, stress, and self-compassion) within an adolescent student sample.

Participants

Participants were recruited from a Mid-Atlantic public high school. Data were collected from 103 participants enrolled in the high school's health education curriculum. The vast majority of participants were in ninth (N = 57) or eleventh grade (N = 33). The school is composed of roughly 1,600 students in grades nine through twelve. The student diversity of the high school is 67% White, 15% Hispanic, 13% Asian, 2% African American, and 3% belonging to other ethnicities. The school has a 97% graduation rate.

Inclusion criteria. The inclusion criteria required that the participant was at least 13 years old and uses at least one social networking site. Each participant was required to return completed consent and assent forms.

Measures

Self-compassion. Participants were given the 26-item SCS (Neff, 2003a). This scale measures the three domains of self-compassion: self-kindness, common humanity, and mindfulness, using a 5-point scale with items ranging from 1 (almost never) to 5 (almost always). The SCS features six subscales: self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification. Higher scores on the self-judgment, isolation, and over-identification subscales indicate lower levels of self-

compassion. Research indicates that the SCS demonstrates strong internal consistency

(α= .92), convergent validity with self-acceptance ratings (r = .62, p < .01), discriminant

validity with narcissism (r = -.08, p = .23), and strong test-retest reliability (α = .93; Neff,

2003a). The SCS has been used in studies with adolescents and is considered appropriate

for this population (Bluth & Blanton, 2014a; Neff, 2003a). Reliability for the sample in

this study is α = 0.927.

     Social comparison. Social comparisons on social networking sites were

measured with the Social Comparison Scale. This scale was developed by Allan and

Gilbert (1995) to measure self-perceptions of social rank and relative social standing.

This scale uses a semantic differential methodology and consists of 11 bipolar constructs.

Participants are required to make a global comparison of themselves in relation to other

people and to rate themselves on a 10-point scale. Higher scores indicate higher self-

perceived ranking. The Social Comparison Scale uses the stem "In relationship to others I

feel." In order to assess social comparisons on social networking sites more accurately,

the stem was changed to "When I compare myself to others on social networking sites, I

feel." Allan and Gilbert (1995) reported the Cronbach alpha of the 11-item scale was .91

in a sample of 263 university undergraduates and postgraduates (mean age = 23.4 years

old). No known measure examining social comparison has been normed on an

adolescent population; the Social Comparison Scale has been used primarily in college

populations. Reliability for the sample in this study is α = 0.923.

     Body image. The BAS-2 (Tylka, & Wood-Barcalow, 2015) was used to measure

body image. Higher scores are indicative of greater body appreciation. The BAS-2 is a

13-item scale, with items ranging from 1 (never) to 5 (always). Research has provided

support for the BAS-2's test-retest reliability ($r = .90$; Tylka & Wood-Barcalow, 2015).

Research findings support the BAS-2's convergent validity in its association with higher

body esteem ($r = .50$, $p < .001$), lower weight concern ($r = .72$, $p < .001$), and lower body

shame ($r = -.73$, $p < .001$; Avalos et al., 2005). Tylka, and Wood-Barcalow (2015)

reported evidence for the BAS-2's internal consistency (Cronbach's $\alpha = .94$) in their

original undergraduate female validation sample. Reliability for the sample in this study

is $\alpha = 0.947$.

Demographic questionnaire. Participants were given a demographic

questionnaire. This questionnaire asked participants to identify their age, gender, and

grade. In addition, participants answered questions regarding how often they access the

Internet, how frequently they use the Internet, and the amount of time that they spend on

social networking sites. Lastly, participants reported which social networking sites they

use from a provided list. Participants were also able to write-in any social networking

sites that were not on the provided list.

Procedure

The researcher of the study proceeded through the Institutional Review Board

(IRB) of his institution and the high school to obtain permission to work with these

participants. Informed consent was obtained for participants under the age of 18 from a

parent or legal guardian and participant assent was gained before participants completed

any measures.

Informed consent was obtained by sending a form home with students enrolled in

the high school's mandatory health class. This form explained the purpose of the study,

potential risks, and time commitment to parents or legal guardians of potential

participants. The researcher's contact information was provided on this form in the event

that legal guardians or participants have any questions about the study. Participants

returned the informed consent and assent form to their health education teacher. These

forms were placed in a sealed envelope provided by the researcher. Prior to the measures

being distributed, the researcher composed a list of participants who had been given

consent to participate in the study by their parent or legal guardian as well as their own

assent to participate. These individuals were the only participants allowed to partake in

the study. Participants were informed of their voluntary participation and confidentiality.

At the request of the high school's IRB, a student who recorded a score on any measure

which was two standard deviations below the mean was identified by a personalized

student identification number which was written on each measure. This information was

shared with the school psychologist in order to identify any students who were in distress.

This stipulation was mandated by the high school's IRB and participants were made

aware of this on their consent and assent forms. Measures were distributed during the

students' health education class. After completing the measures, participants placed their

measures in sealed envelopes provided by the researcher. The researcher collected these

envelopes and stored the data at the Philadelphia College of Osteopathic Medicine.

Chapter 5: Results

In order to test the proposed hypotheses, the following analyses were conducted. Descriptive statistical analyses were conducted for gender, grade, frequency of Internet access, devices used to access the Internet, and minutes per weekday spent on social networking sites. The sample consisted of 72 females and 31 males. Out of the 103 adolescents who participated in this study, 57 were ninth grade students, 33 were eleventh grade students, and 13 were in neither ninth nor eleventh grade. Nearly 97% of the sample reported that they used the Internet almost constantly or several times per day, and the vast majority of adolescents reported that they accessed the Internet most frequently with a smartphone. Only 36.9% of the sample reported that they spent less than 1 hour per day on social networking sites. These results are presented in Table 1.

Additional descriptive analyses were conducted for membership to various social networking sites, total number of social networking sites belonged to, and the most frequently used social networking sites. The three most popular social networking sites for adolescents in this study were Snapchat, Instagram, and YouTube. Nearly 57% of the sample belonged to four or more social networking sites. A majority of the adolescents in this sample (63.2%) reported that they spent more than 1 hour per weekday on social networking sites. These results are presented in Table 2.

Finally, descriptive analyses were conducted for each scale. The range, minimum score, maximum score, mean, standard deviation, and variance were computed for the SCS, BAS-2, and Social Comparison Scale. These results are presented in Table 3.

Table 1

Frequency Table: Gender, Grade, Internet Use

	N	%
Gender		
Female	72	69.9
Male	31	30.1
Grade		
9	57	55.3
11	33	32
Other	13	12.6
Overall, how often do you use the Internet?		
Almost constantly	39	37.9
Several times per day	61	59.2
About once per day	2	1.9
Several times per week	1	1
What device do you use most frequently to access social networking sites?		
Smartphone	97	94.2
Personal desktop or laptop	5	4.9
None	1	1
How many minutes per weekday do you spend on social networking sites?		
0-15 minutes	8	7.8
30-60 minutes	30	29.1
1-2 hours	32	31.1

Table 2

Frequency Table: Social Networking Site Use and Membership

	N	%
Membership to various social networking sites		
Facebook	55	53.4
Twitter	23	22.3
Instagram	87	84.5
Google Plus	16	15.5
Snapchat	88	85.4
Vine	14	13.6
Tumblr	9	8.7
Whisper/Yik Yak/Ask.FM	4	3.9
YouTube	88	85.4
Online Pinboards	31	30.1
Online Message Boards	7	6.
Total Number of Social Networking Site Memberships		
0	2	1.9
2	5	4.9
3	38	36.9
4	25	24.3
5	15	14.6
6	8	7.8
7	6	5.8
8	4	3.9
Most frequently used social networking sites		
Snapchat	47	45.6%
Instagram	31	30.1%
YouTube	14	13.6%

Table 3

Frequency Table: Scale Analysis

Scale	Range	Minimum	Maximum	Mean	Standard Deviation	Variance
Self-Compassion Scale	75	48	123	86.25	17.65	311.86
Body Appreciation Scale-2	36	14	50	41.72	7.94	63.09
Social Comparison Scale	86	17	103	66.09	16.65	277.11

Hypothesis 1

A multiple regression was conducted to determine whether body image, as measured by the BAS-2, and social comparisons, as measured by the Social Comparison Scale, predicted self-compassion, as measured by the SCS. A Pearson correlation was conducted between body image and social comparisons and was found to be statistically significant, but the coefficient was not large enough to suggest multicollinearity, $r(100) =$ .460, $p < .001$. A multiple regression statistic was found to be significant, $F(2,99) =$ 26.313, $p < .001$. The adjusted R squared value was .334. This indicates that 33.4% of the variance in self-compassion was explained by body appreciation and social comparisons. The identified equation to understand this relationship was Self-Compassion = (1.039 score on BAS-2) + (.214 score on Social Comparison Scale) + 28.879. Therefore, scores on the Social Comparison Scale and BAS-2 can predict scores on the SCS, as overall levels of self-compassion can be predicted by body image and negative social comparisons made on social networking sites.

Hypothesis 2

A one-way ANOVA was conducted to determine whether adolescents who spent 2 hours or more per day on social networking sites experienced lower levels of self-compassion, as measured by the SCS. The Levene's test was not found to be significant; thus, equal variances can be assumed ($p = .59$). The results of the one-way ANOVA did not reveal a significant difference, $F(1,101) = .208$, $p = .649$. Therefore, adolescents who spent 2 hours or more per day on social networking sites did not experience significantly lower levels of self-compassion.

Hypothesis 3

A one-way ANOVA was conducted to determine whether adolescents who belonged to more than three social networking sites engaged in more negative social comparisons, as measured by the Social Comparison Scale. The Levene's test was not found to be significant; thus, equal variances can be assumed ($p = .973$). The results of the one-way ANOVA did not reveal a significant difference, $F(1,100) = .046$, $p = .831$. Therefore, adolescents who belonged to more than three social networking sites did not engage in more negative social comparisons compared to adolescents who belonged to fewer than three social networking sites.

Hypothesis 4

A one-way ANOVA was conducted to determine whether adolescents who belonged to more than three social networking sites experienced greater body image dissatisfaction, as measured by the BAS-2. The Levene's test was found to be significant; thus, equal variances cannot be assumed ($p < .05$). A Brown-Forsythe test was conducted and a significant difference was found, $F(1,98.829) = 9.415$, $p < .01$. Therefore,

adolescents who belonged to more than three social networking sites experienced greater body image dissatisfaction compared to adolescents who belonged to fewer than three social networking sites.

Ancillary Analyses

The relationship between gender, grade, and social networking use. In addition to the above descriptive analyses and hypotheses testing, further analyses explored the relationship between gender, grade, and social networking site use.

In order to analyze whether female students were more likely than male students to spend more than 2 hours per day on social networking sites, a one-way ANOVA was conducted. The Levene's test was found to be significant; thus, equal variances cannot be assumed ($p < .001$). A Brown-Forsythe test was conducted and a significant difference was found, $F(1,89.629) = 16.148$, $p < .001$. Therefore, female students were more likely than male students to spend more than 2 hours per day on social networking sites.

Further analysis was conducted to examine the relationship between gender and total number of social networking site memberships. A one-way ANOVA was performed to determine whether female students were more likely than male students to belong to more than three social networking sites. The Levene's test was not found to be significant; thus, equal variances can be assumed ($p = .447$). The results of the one-way ANOVA revealed a significant difference, $F(1,101) = 3.79$, $p < .05$. Therefore, female students were more likely to belong to more than three social networking sites than male students.

Additional analysis explored the relationship between grade level and the amount of time spent on social networking sites. A one-way ANOVA was conducted to

determine whether ninth or eleventh grade students differed in their likelihood to spend more than two hours per day on social networking sites. The Levene's test was not found to be significant; thus, equal variances can be assumed ($p = .192$). The results of the one-way ANOVA did not reveal a significant difference between groups, $F(2,100) = .462$, $p = .632$. Therefore, time spent on social networking sites did not differ significantly between ninth and eleventh grade students.

Further analysis examined the relationship between grade level and total number of social networking site memberships. A one-way ANOVA was conducted to determine whether the likelihood of belonging to more than three social networking sites differed between ninth and eleventh grade students. The Levene's test was found to be significant; thus, equal variances cannot be assumed ($p < .001$). A Brown-Forsythe test was conducted and a significant difference was not found, $F(2,58.6) = 1.603$, $p = .21$. Therefore, the likelihood of belonging to more than three social networking sites did not differ significantly between nine and eleventh grade students.

The relationship between gender, grade, body image, social comparison, and self-compassion. In addition to investigating the relationship between grade, gender, and social networking site use, further ancillary analyses examined the relationship between grade, gender, body image, social comparison, and self-compassion.

Additional analysis explored the relationship between gender and body image. In order to evaluate whether female students were more likely than male students to have higher levels of body image dissatisfaction, as measured by the BAS-2, a one-way ANOVA was conducted. The Levene's test was not found to be significant; thus, equal variances can be assumed ($p = .334$). The results of the one-way ANOVA did not reveal

a significant difference between groups, $F(1,101) = .782$, $p = .379$. Therefore, female students were not more likely than male students to have higher levels of body image dissatisfaction.

Further analysis evaluated the relationship between gender and social comparison. A one-way ANOVA was conducted to determine whether female students were more likely than male students to engage in negative social comparisons. The Levene's test was not found to be significant; thus, equal variances can be assumed ($p = .98$). The results of the one-way ANOVA did not reveal a significant difference between groups, $F(1,100) = 3.288$, $p = .073$. Therefore, female students were not more likely than male students to engage in negative social comparisons.

In order to determine whether female students were more likely to experience lower levels of self-compassion in comparison to male students, as measured by the SCS, a one-way ANOVA was performed. The Levene's test was not found to be significant; thus, equal variances can be assumed ($p = .996$). The results of the one-way ANOVA did not reveal a significant difference between groups, $F(1,101) = .261$, $p = .61$. Therefore, female students were not more likely than male students to experience lower levels of self-compassion.

Further analysis sought to investigate the relationship between grade level and body image dissatisfaction. A one-way ANOVA was conducted to determine whether eleventh grade students were more likely than ninth grade students to experience higher levels of body image dissatisfaction, as measured by the BAS-2. The Levene's test was not found to be significant; thus, equal variances can be assumed ($p = .602$). The results of the one-way ANOVA did not reveal a significant difference between groups, $F(2,100)$

= 2.199, p = .116. Therefore, eleventh grade students were not more likely than ninth

grade students to experience greater levels of body image dissatisfaction.

Another line of inquiry attempted to establish the relationship between grade level

and social comparison. A one-way ANOVA was conducted to determine whether

eleventh grade students were more likely than ninth grade students to engage in negative

social comparisons, as measured by the Social Comparison Scale. The Levene's test was

found to be significant; thus, equal variances can be assumed (p < .01). A Brown-

Forsythe test was conducted and a significant difference was found, $F(2,43.267) = 4.743$,

p < .05. Therefore, eleventh grade students were more likely than ninth grade students to

engage in negative social comparisons.

Further investigation examined the relationship between grade level and self-

compassion. A one-way ANOVA was conducted to determine whether eleventh grade

students were more likely to experience lower levels of self-compassion in comparison to

ninth grade students, as measured by the SCS. The Levene's test was not found to be

significant; thus, equal variances can be assumed (p = .879). The results of the one-way

ANOVA revealed a significant difference between groups, $F(2,100) = 5.437$, p < .01.

Therefore, eleventh grade students were more likely than ninth grade students to

experience lower levels of self-compassion.

Chapter 6: Discussion

Implications of Findings

The overall aim of the present study was to explore the relationship between self-compassion, body image, and social comparison in adolescents who utilize social networking sites. The growing popularity and unlimited accessibility of social networking sites among adolescents, largely facilitated by smartphones, necessitates further evaluation of how this online engagement impacts various dimensions of adolescent well-being.

The first hypothesis sought to investigate the relationship between self-compassion, body image, and social comparison. As predicted, negative social comparisons and body image dissatisfaction predicted lower levels of self-compassion. This finding is consistent with past research which has demonstrated that higher levels of self-compassion promote less self-criticism and fewer harsh judgments (Neff, 2003b; Neff & McGehee, 2010; Smeets et al., 2014). Although social networking sites provide users with the opportunity to create a more expansive social support network, enhance relationships with peers, and explore different parts of their identities (O'Keeffe & Clarke-Pearson, 2011), this context may also expose adolescents to unhealthy social comparisons related to many dimensions that comprise self-worth, including body image, social desirability, and academic competence (Lee, 2014; Myers & Crowther, 2009; Vogel et al., 2014). Because of the automatic and frequent nature of social comparisons on social networking sites due to being presented with information about others constantly (Dijkstra & Barelds, 2011; Lee, 2014), it is seemingly inescapable that an adolescent will encounter information from others which may illuminate a discrepancy

between his or her objective self and ideal self (Chou & Edge, 2012; Haferkamp & Krämer, 2011). The benefits of self-compassion in this type of circumstance are considerable. After engaging in harsh self-evaluation, adopting a self-compassionate mindset may help adolescents view themselves in a more adaptive manner by directing kindness inwards and recognizing that every person has imperfections (Bluth & Blanton, 2014b; Neff & McGehee, 2010). Additionally, the mindfulness component of self-compassion may help an individual become aware of this self-criticism and limit the amount of time spent ruminating about his or her perceived shortcomings (Neff, 2003b; Neff, 2010; Raes, 2010; Smeets, et al., 2014). A further benefit of exercising self-compassion during difficult times is that it can improve social connectedness to others by diminishing the likelihood that a person will engage in maladaptive avoidant responses, such as isolating or social withdrawal due to believing that others do not experience this type of dissatisfaction with themselves (Barnard & Curry, 2011; Leary et. al, 2007; Neff, 2003b). In this study, no statistically significant differences in overall levels of self-compassion were detected between gender or grade level.

The second hypothesis was not supported, as adolescents who spent more than 2 hours per day on social networking sites did not experience lower levels of self-compassion. This finding is inconsistent with much of the previously published literature. Past research has demonstrated that spending more time on social networking sites is associated with believing that peers are happier and more successful (Chou & Edge, 2012) and less connection to peers (Feinstein et al., 2013), potentially eliciting harsh self-evaluations in the process (Vogel et al., 2014). Kross and colleagues (2013) reported that more frequent Facebook use was associated with decreased life satisfaction,

higher levels of depression, and lower self-esteem. Additional studies have found that a

positive relationship exists between depressive symptoms and time spent on social

networking sites, leading researchers to speculate that social networking use impinges

upon adolescents' engagement in more constructive coping outlets (Pantic et al., 2012;

Smith et al., 2013; Steers et al., 2014). In evaluating why this study did not replicate

similar findings to an extensive body of research which suggests that social networking

site use exerts a deleterious impact on various dimensions of adolescent well-being, it is

crucial to highlight a potential source of this discrepancy. The demographic

questionnaire developed by the researcher asked participants to record how much time

they spent on social networking sites but did not provide clear and distinct options. For

example, a participant who spent 2 hours per day on social networking sites could have

recorded that he or she spent either "1-2 hours" or "2-3 hours" on the demographic

questionnaire. This oversight may partially explain why this hypothesis was not

supported. In this study, adolescent females were more likely to spend more than 2 hours

per day on social networking sites but no grade level difference was detected.

        Another possible reason for the lack of corroboration for this hypothesis may be

linked to how the metric of time or frequency of use is not as robust a predictor of

psychological distress as previously believed (Luchman, Bergstrom, & Krulikowski,

2014). Recent lines of inquiry have suggested that maladaptive social networking site

use may stem from engaging in less goal-oriented activities, such as scrolling through

status updates or aimless browsing rather than using social media to form more

meaningful relationships with friends (Luchman et al., 2014; Oberst, Wegmann, Stodth,

Brand, & Chamarro, 2017). Oberst and colleagues (2017) have proposed that compulsive

checking behaviors and excessive engagement with social media are more likely to occur when an adolescent fears that he or she is missing out on their friends' plans and activities. This construct has been labeled as "fear of missing out," or FOMO, and may explain the tendency for certain adolescents to constantly seek updates on social networking sites to such a detrimental degree that it limits their involvement in more beneficial activities (Oberst et al., 2017). FOMO has also been linked to perceived social deficits (Oberst et al., 2017) and has been shown to be a predictor of smartphone addiction (Chotpitayasunondh & Douglas, 2016). This illuminates how adolescents with preexisting psychopathology, namely depression and anxiety, may be more likely to use social networking sites in a maladaptive manner, which could serve as a stronger predictor of negative outcomes than overall time spent on social networking sites (Luchman et al., 2014; Oberst et al., 2017).

The third and fourth hypotheses scrutinized the impact of belonging to multiple social networking sites. The third hypothesis, which predicted that adolescents who belonged to more than three social networking sites would engage in more negative social comparisons, was not supported. Interestingly, the fourth hypothesis was supported, as adolescents who belonged to more than three social networking sites experienced greater body image dissatisfaction. The rationale for these hypotheses was BAS-2ed on previous research which suggested that membership to multiple social networking sites increased the probability of experiencing symptoms of depression and anxiety (Primack et al., 2017) as well as the likelihood of engaging in negative social comparisons to others due to added exposure to other online profiles, especially in relation to one's physical appearance (Dijkstra & Barelds, 2011; Lee, 2014; Myers &

Crowther, 2009; Ridolfi et al., 2011; Tiggemann & Slater, 2013). Other research has

proposed that multitasking between multiple social networking sites can lead to deficits

in cognitive control (Ophir, Nass, & Wagner, 2009) and reduced ability to regulate

emotions (van der Schuur, Baumgartner, Sumter, & Valkenburg, 2015). Therefore,

adolescents who belong to multiple social networking sites may be more vulnerable to

engage in mindless comparisons to others as a result of their relatively diminished

cognitive resources and inability to recognize this problematic tendency (Dijkstra &

Barelds, 2011; Primack et al., 2017; van der Schuur et al., 2015). Primack and colleagues

(2017) also contend that belonging to multiple social networking sites increases the

possibility that users will commit embarrassing mistakes due to the difficulties related to

navigating the unique interface, unwritten rules, and styles of communication of each

social networking site.

An extensive body of research has demonstrated that appearance-focused social

comparisons play a pivotal role in body dissatisfaction due to dysfunctional evaluations

about one's weight, size, or shape relative to a peer or media images (Groesz et al., 2002;

Murray et al., 2011; Myers & Crowther, 2009; Tiggemann & Slater, 2013).

Nevertheless, social comparisons are not limited to body image and occur across an

extensive range of domains, such as social desirability, academic competence, and

athletic ability (Feinstein et al., 2013; Kross et al., 2013; Pantic et al., 2012). In

evaluating why participants in this study who belonged to three or more social

networking sites were not more likely to engage in more negative social comparisons, it

is critical to highlight the unique social media habits of this sample. The three most

popular social networking sites in this study were Snapchat, Instagram, and YouTube,

whereas Facebook was used by only 53.4% of the sample. In Oberst and colleagues'

(2017) sample of 1468 adolescents, Facebook was used by 99.3% of the sample, whereas

Instagram (35.0%) and Snapchat (10%) were used far less often. This trend was also

found in the Pew Research Study, as Facebook was the most popular social networking

site among 1060 adolescents and Instagram (52%) and Snapchat (41%) were used less

frequently (Lenhart, 2015).

      In comparison to Facebook, there is a dearth of research on Snapchat, Instagram,

and YouTube. Nevertheless, recent lines of inquiry may offer insight into why this

sample's utilization of these social networking sites did not lead to a high incidence of

negative social comparisons. Piwek and Joinson (2016) found that nearly 80% of the

adolescents in their study reported using Snapchat to interact with fewer than 12 people.

Similarly, in a qualitative study conducted by Vaterlaus and colleagues (2016),

participants conveyed that Snapchat was reserved for their closest relationships.

Snapchat users have reported that this social networking site is used for messaging more

than any other platform and the ability to send or receive pictures or short videos along

with text messages helps them better understand the emotional context of conversations

compared to traditional text messaging (Vaterlaus, Barnett, Roche, & Young, 2016).

      Similar to Snapchat, Instagram is a specialized image-BAS-2ed platform and its

growing user BAS-2e may reflect that it is supplanting the photo-sharing functions of

Facebook (Pittman & Reich, 2016). Pittman and Reich (2016) found that using

Instagram and Snapchat more frequently predicted lower levels of self-reported

loneliness. Photos with friends and pictures of oneself are the most popular images

uploaded onto Instagram and garner the most positive feedback from others, in the form

of compliments and "likes" (Pittman & Reich, 2016). It has been proposed that the images posted on these social networking sites foster positive feelings due to providing a more intimate connection to others and create the sense that one is actually communicating with others (Pittman & Reich, 2016). Consequently, Snapchat and Instagram may help mitigate loneliness and negative emotions, as adolescents engage in goal-directed activities in an effort to improve their relationships rather than simply browsing content.

Despite the aforementioned benefits of using these image-BAS-2ed social networking sites, their popularity in this sample may have contributed to the body image dissatisfaction experienced by participants who belonged to more than three social networking sites. Although most of the research on the relationship between body image and social networking sites has focused on Facebook (Kross et al., 2013; Ridolfi et al., 2011; Tiggemann & Slater, 2013; Vogel et al., 2014), recent research suggests that Instagram may also exert a detrimental effect on adolescent body satisfaction (Ahadzadeh, Pahlevan, Sharif, & Ong, 2017). In an undergraduate student sample, participants who spent more time on Instagram reported that they were more likely to compare their physical appearance to others, scan the profiles of other users, and experience body image dissatisfaction (Ahadzadeh et al., 2017). A possible reason for this relationship may emanate from adolescents being exposed to idealized body images from other Instagram users which can lead to negative feelings towards one's own body, a process which has also been observed on Facebook (Ahadzadeh et al., 2017; Ridolfi et al., 2011; Tiggemann & Slater, 2013). Nevertheless, the direction of this relationship is unclear. The cross-sectional research design of these studies makes it difficult to

ascertain whether specific vulnerability factors, such as preexisting mental health issues, influence this relationship (Ahadzadeh et al., 2017). Primack and colleagues (2017) have speculated that individuals who suffer from depression or anxiety may be inclined to use a broader range of social networking sites in an effort to find an online context in which they feel most comfortable and accepted. Therefore, it is possible that the negative psychological consequences believed to emanate from belonging to multiple social networking sites may be connected to these mediating and moderating factors (Oberst et al., 2017).

Limitations

This study has several inherent limitations. First, the sample size for the study is limited to only one high school in the Mid-Atlantic region of the United States. The lack of diversity in this sample may inhibit generalizability, as nearly 70% of the students at this high school identify as Caucasian. An additional characteristic of this sample that may limit generalizability is the socioeconomic status of the community's residents. This town's estimated median household income ($116,600) is more than double the overall median household income of the state ($56,448). This disparity may lead to differential access to smartphones, laptops, tablets, and the Internet, thereby impacting social networking site involvement for this sample.

In addition to the lofty socioeconomic status of the high school's community and lack of diversity, a further limitation of this sample is connected to a potential self-selection bias. In order to conduct this study, the high school's IRB required that any student who recorded a score greater than two standard deviations below the mean would be identified and potentially referred to the school's counseling center. Students were

notified about this condition through the informed consent and assent process.

Consequently, participants may have attempted to depict themselves in a more favorable

light by under-reporting potential distress in an effort to avoid being referred to the

school's counseling center. Additionally, out of a potential sample of roughly 685

students, only 103 were willing to participate. It is possible that many students were not

willing to participate in this study due to fearing that they would be singled out for their

responses and garner unwanted attention in the process.

An additional limitation of this study is its reliance upon self-report. Participants

may not remember the exact amount of time that they spend on social networking sites

and their estimates may be inaccurate. Since social networking site use is such an

ingrained activity for adolescents, it is possible that their estimates may not account for

their constant activity on social networking sites. In addition, participants that spend

more time on social networking sites may feel self-conscious about revealing that they

spend a considerable amount of time on social networking sites. Conversely, other

participants may exaggerate the amount of time that they spend on social networking

sites.

Future Directions

Future studies should continue to explore the relationship between social

networking sites, self-compassion, body image, and social comparisons in adolescents.

Several possible research endeavors could yield further insight into this relationship.

In order to analyze the complex relationship between these variables, it is

imperative that diverse research designs are utilized. To date, social networking sites

have been studied primarily with cross-sectional research designs (Ahadzadeh et al.,

2017). A potential limitation of this approach is that researchers are unable to determine whether preexisting psychopathology plays a role in the negative outcomes associated with maladaptive social networking site use (Ahadzadeh et al., 2017). Longitudinal studies may help researchers establish whether social networking sites are more likely to exert a detrimental effect on adolescent psychological well-being at different points during this stage of development. In addition to utilizing longitudinal studies, a true experimental design could feature a manipulation over the amount of time or number of social networking sites that adolescents were exposed to before measuring levels of self-compassion, depression, anxiety, or other psychological constructs. This design could help researchers make causal inferences into the effects of social networking sites without relying exclusively on self-report.

Future research should also seek to understand the differential effects of various social networking sites. Although there is considerable overlap among social networking sites, such as having the ability to create an online profile, post pictures or videos, send messages, and share personal information, divergent features among various sites may lead to unique influences on psychosocial functioning, identity development, or stress (Primack et al., 2017). The recent proliferation of various social networking sites has led to researchers applying information about Facebook to other social networking sites despite different aged users and different activities inherent to each site. This study captured the surging popularity of image-BAS-2ed social networking sites, such as Snapchat and Instagram, thus highlighting the need for more precise measurement tools to understand how their use impacts adolescents (Primack et al., 2017).

Similar to previous studies, the popularity of social networking sites in this study elucidates how this type of online engagement is embedded deeply within the daily activities of adolescents. Despite the detrimental potential outcomes associated with their use, such as body image dissatisfaction, depression, and anxiety, the benefits of using these sites appear to outweigh the costs for adolescents. Consequently, it is essential to develop age-appropriate media literacy campaigns to help adolescents navigate the inevitable and unavoidable drawbacks related to using social networking sites. These interventions can help adolescents develop a more comprehensive repertoire of coping strategies, such as improving their awareness of the natural tendency to compare oneself to others. This type of intervention can help adolescents contend with the subsequent negative feelings that may accompany this type of comparison with greater emotional equanimity rather than concluding that they are undesirable or defective.

In addition to media literacy campaigns that specifically target coping strategies for managing the challenges and intensity of the online world, future research should also explore how self-compassion interventions can be implemented effectively for adolescents. A recent pilot study suggested that self-compassion in adolescents can be bolstered in a relatively short period of time (Bluth, Gaylord, Campo, Mullarkey, & Hobbs, 2015). This treatment protocol consisted of six weekly meetings which lasted for 90 minutes. Initial sessions defined self-compassion and introduced adolescents to various mindfulness activities. A core component of this treatment intervention was an overview of adolescent brain development and explaining how these changes impact mood, emotions, behavior, and relationships (Bluth et al., 2015). Other components of Bluth and colleagues' (2017) program centered upon helping adolescents recognize and

acknowledge their painful experiences while also learning how to soothe themselves through the development of an inner compassionate voice through writing or artwork. Adolescents who participated in this study reported that they found self-compassion and mindfulness to be beneficial and relevant to their daily lives due to its effectiveness in attenuating depression, anxiety, and stress (Bluth et al., 2015). The success of this pilot study suggests that self-compassion can be bolstered with practice and highlights the need for greater dissemination of similar treatment interventions in order to help adolescents enjoy the positive correlates of this construct, including more social connectedness, improved quality of life, greater confidence, and less depression, anxiety, shame, and fear of failure (Barnard & Curry, 2011).

Conclusion

The present study investigated the relationship between self-compassion, body image, and negative social comparisons in adolescents who use social networking sites. Despite noteworthy limitations, such as the cross-sectional research design, potential lack of generalizability, and reliance upon self-report, this study contributes to the growing body of literature which elucidates the benefits associated with higher levels of self-compassion in adolescence (Barnard & Curry, 2011; Bluth & Blanton, 2014b; Leary et al., 2007; Neff, 2003b; Neff & McGehee, 2010). In line with previous studies, adolescents reported frequent use of social networking sites, primarily facilitated by smartphones (Lenhart, 2015; Strasburger et al., 2010; Tiggemann & Slater, 2013). Although the constant accessibility of social networking sites via smartphones has been linked previously to negative outcomes (Chou & Edge, 2012; Ridolfi et al., 2011; Vogel et al, 2014), an important finding in this study was the lack of significant relationship

between overall time spent on social networking sites, lower levels of self-compassion, negative social comparisons, and negative body image. This discovery suggests that pre-existing vulnerabilities, such as depression and anxiety, coupled with online activities that do not help adolescents enhance their relationships with friends, may explain why previous studies have established a strong connection between social networking site use and diminished psychological well-being (Luchman et al., 2014; Oberst et al., 2017). Ultimately, it is essential for researchers and clinicians to develop a more comprehensive understanding of the relationship between the multitude of variables in this domain which impact the psychological well-being of adolescents. This pursuit can aid in the development of preventative measures, such as treatment programs that bolster self-compassion and media literacy campaigns. These interventions can empower adolescents with increased knowledge and an expanded repertoire of coping skills, thereby increasing the likelihood that they will be able to enjoy the benefits associated with social networking sites without incurring harmful consequences.

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