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They See Me Scrolling, and I'm Hating: Instagram Usage and its Effect on Self-Esteem and Body Image

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Abstract

Research has consistently shown that exposure to thin-ideal media images negatively influences self-perception. Given the escalation of reliance on social media and the heavy online presence of young adults, particularly women, it is essential to identify ways that social media can influence perceptions of body image and self-esteem. This research proposal presents an exploratory investigation into the impact that social media, specifically Instagram, has on women's views of themselves and their bodies. The aim of the present study is to examine the potential effects of celebrity images, compared with equally attractive peer images and scenery (control) images, on body image and self-esteem in women. Participants will use a mobile application designed to resemble Instagram, which facilitates the exposure to images of celebrities, peers and travel destinations. It is hypothesized that participants exposed to celebrity images will experience lower self-esteem and more negative body image, than those exposed to both peer images and scenery images. In addition, it is expected that the effects of image type would be mediated by physical appearance comparison. In other words, participants exposed to celebrity and peer images will engage in more appearance comparison than participants who viewed scenery images. It is also predicted that celebrity worship will moderate the effect of image type on body image and self-esteem. The effect of exposure to celebrity images is expected to be greater for participants high on celebrity worship. The predicted results will establish a better understanding of the effect of social media on women's mental health.

Chapter 1

Introduction

Social Networking Sites (SNSs) provide a digital community that allows users to create individual profiles to interact with and meet other users, predominantly for social purposes. What can be considered a global consumer phenomenon, SNS usage has seen an exponential rise within the last few years (Boyd & Ellison, 2007). On many of the large SNSs, users are not necessarily "networking" or seeking to meet new people, but are instead mostly communicating with people who are already a part of their extended social network. There has also been a growing consensus for ways to describe the inability to control Internet use and how it can lead to distress and/or functional impairment in daily life. Texting and cell phones have exploded in popularity among adolescents and young adults, leading to a large concern for the adverse impact on youth. Now that the Internet constitutes an essential part of normal existence in the modern world, it is of great interest to look at how daily life can indeed be affected by SNS use.

Addiction to these Internet sites may be a potential mental health problem for some users, and contemporary scientific literature addressing addictive qualities of SNSs on the Internet is scarce. People engage in a wide variety of activities on the Internet; rather than becoming addicted to the medium per se, some users may develop an addiction to specific activities they engage in, an example being computer game addiction. The signs of addiction include neglect of personal life, mental preoccupation, escapism, mood modifying experiences, tolerance and concealing addictive behaviour, all of which appear to be present in some people who use SNSs excessively (Kuss & Griffiths, 2011).

Why do people want to use the Internet and particularly SNSs in the first place? When someone interacts over social media for extended periods of time, they inevitably feel compelled to continue to check for updates. Dr. Suzana Flores, author of *Facehooked: How Facebook Affects Our Emotions, Relationships and Lives*, has coined the term "Slot Machine Effect" to describe receiving likes and comments on posts as a form of intermittent reinforcement (Flores, 2014). In other words, there is a potential subsequent reward that comes with posting, through which external validation enables the continuance of staying digitally connected. Thus, as we remain highly invested in the content of SNSs, we can get caught up in the lights and continue to use the sites even more. Given that, could there be detrimental issues arising from this?

History of SNS

Before exploring the ramifications of SNSs on mental health, it is essential to first examine the history of these sites. In the 20ᵗʰ Century, computing technology began to change rapidly. After super computers were created in the 1940s, engineers started to develop a way to connect computers and build networks between them. According to Evan Andrews, the online world came to fruition in 1990 when Tim Berners-Lee invented the World Wide Web, which truly helped popularize the Internet (Andrews, 2013). The first social networking site was *SixDegrees,* which was launched in 1997 and named after the 'six degrees of separation' theory. The site allowed users to create a profile and add other users as friends. From here on, the Internet became a place of blogging and instant messaging. By the 2000s, access to the Internet became more prevalent and more and more people were using chat rooms for dating, making friends

and discussing topics they wished to talk about. In 2004, the most successful SNS, Facebook, was established as a closed virtual community, expanding rapidly with millions of users (Kuss & Griffiths, 2011).

The appeal of SNSs can be attributed to today's individualistic culture. Unlike the traditional virtual communities that emerged during the 1990s based on members' shared interests, SNSs today have become quite egocentric. The egocentric construction of SNSs may facilitate engagement in addictive behaviours and thus serve as a factor that attracts people to use them in a potentially excessive way. Due to this egocentric construction, SNSs allow individuals to enhance their mood because to present themselves positively can be a pleasurable experience. This positive experience can potentially cultivate and facilitate learning experiences that drive the development of SNS addiction.

Studies have shown that those who reported negative collective self-esteem reported more instrumental interest in SNS use for social compensation, learning, and social identity gratifications (SIG). Men were more likely to report SNS use for these reasons (Barker, 2009). Those who felt less secure in face-to-face interactions were more likely to use the Internet for interactional purposes and those who reported a disconnect from their peer group were more likely to seek social compensation and SIG via SNSs. Older adolescents who feel isolated and exhibit negative collective self-esteem seem to turn to their preferred SNS for companionship (Barker, 2009). They may desire to identify with others by using their SNS because they don't have positive relationships with members in their everyday lives. This is consistent with findings showing that individuals who feel a sense of negative social identity and collective self-esteem are more likely to distance themselves from their existing inner circle and seek identification

with other more favourably regarded ones. Interestingly, men were more likely to seek social compensation and social identification as well as learn about the 'social' world via SNSs (Zywica & Danowski, 2008).

Moreover, social media users may find it much easier to emotionally influence others because of their reliance on validation of vanity. The combination of the "online you" (the one you portray on your social media) and the "true you", create a double consciousness, a term coined by W. E. B Du Bois. In other words, your lauded self on social media is constantly seeking more validation through digital likes and not through real life interactions. While projecting what you want people to see and what you think people want to see, plus receiving positive reinforcement in the form of likes and comments, the positive façade conveyed online can become a problem for users and can disrupt their social life offline.

In thinking about the separation of the online and the true you, social media users are becoming increasingly more depressed by comparing themselves to their own profile (Flores, 2014). In other words, if a person's reality does not match the digital illusion they post on their profiles on the various social media sites, one may feel as though they are not living up to the "best" form of themselves. It is a self-check of reality vs. online life. In this way, users may be experiencing cognitive dissonance, which describes a state of having inconsistent or conflicting thoughts, beliefs, or attitudes. In terms of online presentation, users will become more self-aware of any inconsistencies in the content that they post online that may contradict their real life, and thus experience mental discomfort or psychological stress.

With the expansion of technology and the Internet, SNSs have become more and more popular. Among the most popular are Facebook, Twitter and Instagram, social media platforms that many people use frequently in their everyday lives (Statista, 2019). An interesting question to explore is whether social media has any negative effects on the individuals who use them often. For those who are constant 'Tweeters', 'Facebookers' and/or 'Instagrammers', another intriguing question for research is whether this has any effect on their self-concept. Does it make them feel better or worse about themselves, or does it have no effect on users?

Recent studies have shown that social media use is a good predictor of body dissatisfaction, eating disorder symptoms, and life satisfaction in adolescent girls (Ferguson, Muñoz, Garza, & Galindo, 2014). Other studies have shown that increased feelings of envy are significantly related to decreased feelings of life satisfaction and self-esteem for women who have online blogs and social media accounts (Cretti, 2015). Many studies have also shown that social media use causes individuals to create negative social comparisons with the people that they follow or are friends with on those platforms, which leads to negative effects on self-report (Vogel, Rose, Okdie, Eckles, & Franz, 2015; de Vries & Kühne, 2015; Vogel, Rose, Roberts, & Eckles, 2014). Now that social media has developed into more accessible online platforms and have become more prominent in many people's everyday lives, studying the potential impact they have on individuals is an important aspect to explore.

SNS and Personality

Personality traits can also be associated with extensive SNS use. People with large offline social networks, who are more extraverted and those with higher self-esteem use Facebook in particular for social enhancement (Kuss & Griffiths, 2011). Contrastingly, people with few online contacts wish to compensate for their introversion and low self-esteem by using Facebook for online gratification and popularity (Kuss & Griffiths, 2011). It should be noted that both personality traits, extraversion and introversion, are related to greater usage of SNSs even though they differ in the reasoning of usage. People high in extraversion use SNSs more frequently and are a part of more groups on Facebook and have more online friends than introverts. Introverts, on the other hand, are more open to disclose more information about their personal lives online, spending large amounts of time on Facebook (Kuss & Griffiths, 2011). SNSs appear to be beneficial for introverts in that they provide easier access to peers without the demands of real-life proximity and intimacy. Furthermore, this easy access can also promote a higher commitment to usage and can result in excessive and potentially addictive use.

There is also a relationship between narcissism and social media use. Narcissists have an imbalanced sense of self that can fluctuate between grandiosity (sense of superiority) and low self-esteem and vulnerability (Kuss & Griffiths, 2011). People higher in narcissistic personality traits tend to be more active on SNSs in order to present themselves favourably online, given that the online community empowers them to construct their ideal selves.

Personality is therefore an interesting aspect to explore when investigating social media usage. The implications of how personality and self-esteem interact can shed light

on Instagram as a platform where people are not only presenting themselves, but are also exposed to others likewise engaging in self-presentation. This underlying effect of being exposed to others' self-presentation online is the focus of this study.

SNSs and Social Comparison

Social comparison seems to be the driving force for people's consistent use of SNSs, and at the same time it is the cause of detrimental self-evaluations that some people experience. Social comparison theory is a psychological theory originally coined by Leon Festinger in 1954. This theory focuses on the belief that individuals have a drive to gain accurate self-evaluations (Festinger, 1954), and moreover, that individuals compare themselves to others to evaluate their own opinions and abilities in an effort to reduce any uncertainty in these areas as a way to learn how to define the self. Social comparison can be a way of self-enhancement by downward social comparisons, by means of looking to another individual or group that they consider to be worse off than them in order to feel better about themselves. It can also have a negative impact on an individual's self-report by means of upward comparisons, when comparing themselves with others who are better off or superior. Such negative social comparisons are detrimental to perceptions about the self. Research on body dissatisfaction typically focuses on lateral comparison (comparison with similar others/peers) and upward comparison (e.g. with celebrities via mass media). These studies have demonstrated that both upward and lateral comparisons are positively associated with body dissatisfaction and a drive for the thin ideal body for both men and women (Bessenoff, 2006).

There have only been a few studies testing social media's effect on self-report through social comparison. A recent study examined the indirect relationship between Facebook use and self-perceptions through negative social comparison and whether that relationship differs depending on whether the individual was initially a happy or unhappy person (de Vries & Kühne, 2015). The survey showed that Facebook use related to a greater degree of negative social comparison, which related to negative self-perceived social competence and physical attractiveness. The researchers found that SNS use was negatively related to self-perception through negative social comparison, especially among unhappy people.

Research has also suggested a cause and effect relationship between social media use and social comparisons. For example, researchers interpreted female undergraduate students' social comparison orientation (SCO) to determine whether they pay a lot of attention to themselves compared with others or not (Vogel et al, 2015). Participants were asked to browse a Facebook profile of either an acquaintance of the same age and gender, their own profile, or an activity not engaging in social comparison. Results showed that participants high in SCO had poorer self-perceptions, lower self-esteem, and more negative effect balance than their low SCO counterparts after engaging in social comparison on Facebook.

Another experimental study examined social comparison and self-esteem with social media. Undergraduates, 73% of whom were women, were asked to view a social media profile created by the researchers that allegedly belonged to another student of the same sex at their university (Vogel et al, 2014). User content included posts related to fitness, well-being, attractiveness, and vitality. These factors were chosen because health,

appearance, and fitness were deemed to be important for college students. The use related to the high or low number of "likes" and comments accompanying the photograph that the user posted. Results showed that participants had lower self-esteem after exposure to those with a higher user activity. Research can therefore gain insight on the implications of social comparisons made online by focusing on the reasons for making these comparisons and the target group being compared. It is therefore an important factor to consider as affecting self-evaluations such as self-esteem and body image.

Why Instagram?

It's all too easy to get sucked into a black hole when scrolling through your social media feed. Going down the rabbit hole usually starts with curiosity. This curiosity gains momentum by viewing and engaging with each image in a seemingly endless stream. Then, it takes an ugly turn and morphs into jealousy and envy. Thoughts can go anywhere from "I want that dress" to "I wish I could pull off that bathing suit" to "how can I get glowing flawless skin too?" and so on. Our cognitive flow of thoughts leads to comparing our lives and ourselves in negative ways, that ultimately leaves us feeling terrible.

Instagram is essentially a highlight reel of our lives, showing off how happy we are, how much fun we are having, or how great our lives are. It's a carefully curated portrayal much like an iceberg, where half is hidden from view and submerged in the water. You choose what people get to see. Instagram is fun and exciting because it is a platform that allows us to control how we express ourselves. So why wouldn't we want to express ourselves in the best way possible? But the danger in this is that you feel pressure

to portray yourself 'perfectly'. It's hard not to turn to the help of filters, additional editing and touch-ups, or rehearsed poses for your Instagram photos.

As noted earlier, more studies have been conducted with specific social platforms, predominantly Facebook, and have shown significant effects on self-report and social comparisons. However, other social media apps such as Instagram have been scarcely studied. Instagram is unlike any other social media platform. Dissimilar to other SNSs like Facebook or Twitter, Instagram is exclusively for posting pictures (and short video clips). People post pictures for their followers to view, "like" and comment on. What's more, Instagram helped begin a 'selfie' revolution, where users take pictures of themselves using a front-facing camera on their smartphones. Instagram also has filters and photo editing tools for editing pictures before they are posted. Some people post aesthetic pictures of scenery, food, etc., but many people use this social platform to upload pictures of themselves.

Instagram, created in 2010, is a newer social media platform that has thrived more recently, which is why very few studies about Instagram exist. One of the few studies conducted on this SNS, titled *Instagram #Instasad?*: *Exploring Associations Among Instagram Use, Depressive Symptoms, Negative Social Comparison, and Strangers Followed*, explored the associations between Instagram usage and depressive symptoms through the mechanisms of negative social comparison, and moderated by the amount of strangers one followed (Lup, 2015). This study included participants between the ages of 18-29 years old who completed online questionnaires on frequency of Instagram use, amount of strangers followed on Instagram, as well as measures of depression and social comparison. The results revealed that Instagram use was marginally positively associated

with depressive symptoms, and that positive social comparison was significantly associated with depressive symptoms. The amount of strangers followed moderated the association of Instagram use with social comparison. These results determined that more frequent Instagram use has negative associations for people who follow more strangers, and positive associations with people who follow fewer strangers considering social comparison as a mediating factor.

As the above study demonstrates, the amount of strangers an individual follows correlates with negative social comparisons. What we don't know is whom the strangers are that these individuals are following. It could be other people in their age group that they do not necessarily know personally (peers), or it could be celebrities or other equally as famous people. In other words, following strangers changes one's social comparison group, whether they are users who are similar to them in age, race etc., or are celebrities with a higher social status. This could have an effect on other factors such as their self-esteem or body image. Following strangers such as celebrities and models and seeing photos that they post about their lavish lifestyles and "perfect" bodies may cause the individuals to have a lower self-esteem and feel dissatisfied with their physical appearance. Studies done to test the exposure of images of models on girls have found that participants who viewed pictures of models reported significantly lower body satisfaction and self-esteem than those in the control group who were not exposed to any models (Clay, 2005).

Facebook is a powerful and popular social media tool that incorporates text, pictures, group events, and other affordances to create an all-encompassing social media experience. Instagram, on the other hand, specifically focuses on the dissemination and

consumption of personal photographs. In this way, Instagram could potentially reveal a more direct relationship between women's body image and activity. Instagram selfies are a particularly interesting phenomenon, as they allow the uploading of self-taken photographs that focus on users' physical appearance. Selfies therefore provide a unique opportunity to identify correlations between self-created image content and the perception of one's body image.

The image-based SNS Instagram launched in 2010 quickly rose to support more than 500 million active monthly users who shared 95 million photos every day as of June 2016 (Aslam, 2019). The high social value surrounding Instagram makes the site a topic worthy of inquiry. The mobile aspect of Instagram provides an online platform for people to share pictures quickly and easily wherever they are. Simply put, it is "a smartphone application that purports to offer a new mode of instantaneous visual communication" (Champion, 2012).

With Facebook, your social comparison group is mainly your friends and family. You compare yourself to others whom are most likely similar to you in many ways (lateral comparison). With Instagram, your social comparison group can become celebrities that have a lot more money and many more significant attributes valued by society than most who follow them. For those individuals who use Instagram often, they see what these celebrities post every day, whether it be selfies at modeling photo-shoots, or pictures of their extravagant vacations in beautiful, foreign countries. If celebrities become their social comparison group, it is possible that this could have an even more negative effect on an individual's self-report.

Female Body Image

Body image refers to the perceptions and attitudes that individuals hold about their own bodies in relation to larger cultural expectations (Davison and McCabe, 2005). As summarized by Szymanski, *et al.* (2011), body image involves self-assessments of many different bodily features such as skin tone, proportions, and size. Body image is important because it entails making social and cultural comparisons that might feed into a person's sense of physical attractiveness and larger self-worth (Cash, 2002). Although body image is important for both men and women, objectification theory (Fredrickson and Roberts, 1997) asserts that women are more likely to be seen as physical and sexual objects whose social value can be inferred from bodily appearance. As such, women are more likely to engage in forms of self-objectification that confirms the sense of connection between their physical bodies and their sense of self-worth.

Expectations regarding the ideal female body size and shape have varied across time and culture. In modern Western society the ideal female body typically involves forms of thinness that might range from toned and athletic to slim and lanky (Pelegrini, *et al.*, 2014). The current privileging of the thin female body could have important ramifications for young adult women. More than half of the United States adult population can be classified as either overweight or obese, which reflects a growing sense of discrepancy between real bodies and social norms of female body beauty (Pesa, *et al.*, 2000). Indeed, approximately half of American adolescent girls report being unhappy with their body image (White and Halliwell, 2010). Although women tend to report greater body dissatisfaction than men (Furnham, *et al.*, 2002), research has revealed a correlation between body image and self-esteem among both young adult men

(Olivardia, *et al.*, 2004) and young adult women (Fabian and Thompson, 1989). Individuals who possess a poor sense of body image are also more likely to develop mental and physical issues such as eating disorders (Dittmar, 2009). Unfortunately, more than 30 million Americans suffer from an eating disorder at some point during their lives, with two-thirds of this group composed of women (Wade, *et al.*, 2011).

Body Dysmorphic Disorder

Body dysmorphic disorder (BDD) is a mental illness that leads the individual to have false, delusional, negative views of their appearance. In 2014, an annual survey carried out by Mission Australia, the National Survey of Young Australians, collected information from young people aged 15–19 years (Mission Australia Survey, 2014). Body image was one of the top issues of concern for both men and women. Body image concerns are often assumed to relate to females predominantly, yet a large proportion of males are in fact troubled with their appearance. Many studies reveal that a surprisingly high percentage of men are dissatisfied with, preoccupied with, and even impaired by concerns about their appearance. One study for example, found that the percentage of men dissatisfied with their overall appearance (43%) has almost tripled in the past 25 years and that nearly as many men as women are unhappy with their physical appearance (Pope et. al, 2000).

BDD is an under recognized yet relatively common and severe psychiatric disorder that affects as many men as women (Pope et al., 2000) and consists of a preoccupation with an imagined defect in appearance that causes clinically significant distress or impairment in functioning. The preoccupations are difficult to resist or control and can consume many hours each day (Phillips et al., 2006). Those with body

dysmorphic disorder perform repetitive and time-consuming behaviours in an attempt to examine, fix, or hide the "defect." The most common are mirror checking, comparing themselves with others, camouflaging (for example, with a hat), reassurance seeking, and excessive grooming (Perugi et al., 1997). Men with body dysmorphic disorder are most commonly preoccupied with their skin (for example, with acne or scarring), height, hair (thinning), nose (size or shape), or genitals (Phillips et al., 2006).

BDD is essentially obsessively fixating on a physical "flaw" and can be exacerbated by today's selfie and filter culture. Often, those who suffer from BDD are severely withdrawn from society. Selfie culture can trigger the anxieties of having BDD, but those who suffer from it are not going to be putting themselves out there for other people to actually scrutinize them. Much of the scrutiny of their looks comes from within, and if they are seeking validation, they are looking to validate what they believe their flaws to be. This may be why some people become obsessed with surgery and are never satisfied with the results, leading to more follow-up surgeries.

Societal pressures to fit into a certain standard of beauty can certainly trigger BDD, but BDD is different than general insecurities. While people with BDD may be obsessed with changing their appearance either superficially (changing clothes or accessories constantly) or cosmetically with surgery, chances are they do not spend a lot of time posting selfies of themselves on Instagram. They are far too concerned with the negative opinions that society has of their perceived flaws. Although research focusing on how traditional media and social media correlate to BDD would be beneficial, it is also of great concern to understand these correlations pertaining to young women not suffering from body dysmorphia. This focus would lay a foundation for notions about

appearance preoccupation (either of the self or others) and body dissatisfaction and self-esteem.

Role of Mass Media

Mass media is often cited as a culprit for the growing trend of body dissatisfaction among young women (Dittmar, 2009). Mass media tend to portray women of below average thinness, and exhibit retouched and airbrushed models to enhance an idea of unrealistical perfect levels of physical beauty (Hass, *et al.*, 2012). Young women might develop body image issues if they compare themselves to social norms of beauty as displayed in these media representations (Bergstrom, *et al.*, 2009). Indeed, the viewing of idealistically thin physical media models has been found to correlate with negative body image. Tiggemann and Miller (2010) found that Internet appearance exposure and magazine reading, but not television exposure, are correlated with a greater internalization of thin ideals, appearance comparison, weight dissatisfaction, and a drive for thinness. To the extent that media portrayals are artificially manipulated to appear especially thin and attractive, they represent a standard that no one, not even the models or actors in the portrayals themselves, can hope to achieve in everyday life.

The duration of exposure to models in media may have an effect on body satisfaction and self-esteem. Studies have aimed to investigate the long-term effects of exposure to thin ideal images in the media but have only found that this exposure produces deleterious effects for youth (Stice, Spangler & Agras, 2001). What happens when women are exposed to female celebrities and models, seeing their pictures of their beauty and their lavish lifestyles, in the media on an every-day basis for an even longer

period of time? These models and celebrities become their social comparison group. Could this repeated exposure affect their self-esteem or body image?

The fact that social media possesses components of identity display and relational communication indicates that these platforms may have differing effects on users from traditional media. Countless studies show that mass media consumption has the potential to influence various dimensions of users' body image. As such, although there is a vast amount of research on the effects of mass media on the body image of young adult women, there has been little research on the effects of social media on young women's body image. Thus the connection between body image and social media remains less clear. Still, given the substantial amount of online presence of young adults, especially women, and their reliance on social media, it is important to appreciate and investigate ways that social media can influence perceptions of body image.

Role of Social Media

Social media can be distinguished from more traditional broadcast media in several ways. Perloff (2014) summarizes that social media is more interactive than traditional broadcast media, and therefore provides users with more agency to personalize and control their experience. Users can select the social media platforms and expressive tools that best fit their own needs and personality. Along with this sense of personalization, social media possesses a more identity-based and relationally motivated nature than traditional broadcast media because it encourages users to display their unique selves and interact with other users on a personal level (Acquisti and Gross, 2006). As such, social media has become a vital tool for individuals to build and maintain their offline and online relationships and reputations (Madden and Smith, 2010).

Informative clues might be gathered from related research regarding the connection between social media and self-esteem. For example, Vogel, *et al.* (2014) found that the frequency of Facebook use predicted lower self-esteem among young adults, and this relationship was mediated by users' degree of upward social comparison. In other words, participants' self-esteem decreased as they spent more time on Facebook comparing themselves to figures of seemingly higher social status. A similar study revealed a negative correlation between self-esteem and the frequency and length of young adults' Facebook sessions (Mehdizadeh, 2010). These findings are pertinent to the present study's focus on body image due to the established link between body image and self-esteem (*e.g.*, Fabian and Thompson, 1989). These studies, however, focused mainly on the frequency of Facebook use, and did not directly examine issues of body image or body dissatisfaction. Given this, research centered about Instagram use would contribute to more contemporary analyses of social media's effect on body image and self-esteem.

Social media has developed its own set of interactional norms. Facebook users, for example, have been found to adhere to implicit norms of friendship behavior (Bryant and Marmo, 2012). Meanwhile, Instagram has developed its own culture. People know what to share, what to like, as well as when and how to do these activities in ways that adhere to the latest trends. Two popular Instagram trends are #TBT (i.e., Throwback Thursday, which involves re-posting old pictures on Thursdays to reminisce about the past) and #SelfieSunday (i.e. posting pictures of yourself on Sundays). Hashtags are optimized by social media culture to identify keywords or topics of interest to facilitate search for it. They help users find posts about topics they are interested in. Users may use hashtags to keep tabs on topics and posts that are most relevant to them. Though hashtag

searches can vary, they essentially attract users to a certain niche, and may be used for strengthening a brand image. If people are using hashtags to search for self relevant information, it is likely that they would be susceptible to make social comparisons, which can either be detrimental (#bodygoals) or beneficial (#bodypositivity) for their mental health.

Another affordance of social media platforms is posting selfies, which have attracted a great deal of attention and curiosity because of what they can achieve in today's online world. As actor James Franco (2013) described in a *New York Times* article, "in a visual culture, the selfie quickly and easily shows, not tells, how you're feeling, where you are, what you're doing. [...] In our age of social media, the selfie is the new way to look someone right in the eye and say, 'Hello, this is me'" (Franco, 2013). In this way, the popularity of selfies might derive from their immense power as instruments for identity display. Other users can show their approval or disapproval by liking or commenting on a selfie that has been posted; creating a media stage for attention-seeking users to put on their best identity performances and receive feedback from their peers. Selfies have become a popular topic of media discussion. It can be argued that selfies could provide women with the power to redefine beauty and challenge the thin ideal that has become the media norm. The potential for selfies to subvert unhealthy body ideals might, however, remain unrealized if users continue to uphold current social norms in their use of selfies.

Social media platforms provide a domain for peer comparisons. Upward social comparisons with attractive peers can actually lead to more negative self-attractiveness ratings than comparisons made with attractive advertising models, who are perceived as

less similar (Cash et al. 1983). The online world is inundated with pictures of not only peers but also celebrities. The affordances of social media platforms accommodate the fast and constant exposure of thin ideal images that are in turn internalized by women and thus have a greater effect on body image disturbance and self-esteem. Therefore social comparisons instigated by social media should have affective impacts such as causing dissatisfaction with one's own appearance.

Ample research has investigated the effects of media models on body image, but the effects of exposure to images on social media sites are not well established. As social media platforms surpass traditional media in popularity and usage, especially among young people, it becomes important to include these newer forms of media in this line of research as well (Fardouly & Vartanian, 2015).

Rationale for Proposed Study

As of 2018, Instagram reached 1 billion monthly active users, after surpassing 800 million in September 2017 (Statista, 2018). SNSs represent social information sources that facilitate self- presentation and self-promotion. Instagram specifically focuses on the dissemination and consumption of personal photographs. A question is whether SNSs have negative effects on the individuals who use them often. For those who are constant "Instagrammers", does using Instagram have a negative effect on their self-concept? Does it make them feel better or worse about themselves? Negative social comparison of one's physical appearance with another's can be detrimental to perceptions about the self and thus affect self-esteem and body satisfaction.

A vast majority of research has documented influences of mass media portrayals on women's body dissatisfaction and show that young women have a more negative, distorted body image than young men (Helgeson, 2009). Young adult women who report lower self-esteem and higher thin-ideal internalization and experience more negative affect than their counterparts and spend more time ruminating about appearance-focused online comparisons (Perloff, 2014). Therefore a focus on women will provide a more appropriate emphasis on probing the potential effects of social media on self-esteem and body image. It is expected that social-media will trigger appearance-focused comparisons that would induce greater negative effects on body image as well as self-esteem.

Furthermore, as images of celebrities circulate on SNSs such as Instagram, women are more susceptible to the influences of the thin ideal, epitomized by celebrities who serve as unrealistic subjects of social comparison. Therefore it is of interest to investigate how women who use Instagram often are more susceptible to negative social

comparisons with celebrities and peers and therefore will experience lower self-esteem and more negative body image than those who do not use Instagram as often or at all. In this proposed study, I will investigate the effects of exposure to thin, attractive celebrities and peers viewed on a social media format, on women's self-esteem and body image. These effects will be evaluated based on appearance comparison as well celebrity involvement.

Hypotheses

H1: Women exposed to thin, attractive images of celebrities and peers will have lower self-esteem and more negative body image than those exposed to scenery images (control)

H2: Women exposed to thin, attractive images of celebrities will experience a greater decrease in self-esteem and more negative body image than those exposed to peer images scenery images (control)

H3: Physical appearance comparison will mediate the effect of exposure to image type

H4: Celebrity worship will moderate the negative correlation between viewing celebrity images and body image

H5: Celebrity worship will moderate the negative correlation between viewing celebrity images and self-esteem

CHAPTER 2
The Current Proposed Study

A majority of research pertaining to media and body dissatisfaction has examined traditional media outlets such as television and magazines. Also, previous research suggests that appearance comparison is positively correlated with body dissatisfaction and low self-esteem (Bessenoff, 2006). The rise of the Internet, particularly of social media, has led researchers to begin examining the effect of these SNSs on women's body image and self-esteem.

The current study will explore the role of Instagram usage, specifically exposure to female celebrity and peer images, on women's self esteem and body image. The combination of celebrity images with peer images, presented equally on the same platform, may result in users engaging in appearance comparison which would in turn affect their self-esteem and body image. It is hypothesized that viewing celebrity images and peer images will lower self-esteem and increase body dissatisfaction compared to viewing scenery images (control). It is also hypothesized that exposure to female celebrity images will result in a greater decrease in self-esteem and greater negative body image compared to exposure to both peer images and scenery images (control). In addition, it is expected that the effects of image type would be mediated by physical appearance comparison. Finally, it is predicted that the effects of image type on self-esteem and body image would be mediated by celebrity worship.

Participants

       The participants in this study will be adult women from ages 18-35. Participants will be recruited via an online advertisement flyer (see Appendix A). The criteria for participation include women from 18 to 35 years of age and owning a smart mobile phone. Following online recruitment, participants will be directed to the study's homepage where they will read the consent form (see Appendix B) and provide electronic consent. They are then prompted to complete the study's questionnaires and scales. These include the social media usage questionnaire, measures of self-esteem and body image, as well as the physical appearance comparison scale and celebrity worship scale.

Study Design

       A between-subjects experimental design will be used to investigate the effect of image type exposure (Celebrity, Peer, Scenery) on the dependent variables of self-esteem and body image. Physical appearance comparison will be tested as a possible mediating variablesand celebrity worship will be tested as a possible moderating variable.

Materials

1. Images
  There will be three types of images used for the study: Celebrity, Peer and Scenery. The images will be sourced from public Instagram profiles and will be displayed on the SEBI application designed for this experiment. The Celebrity and Peer images include full-body photographs taken of women in tight and/or revealing clothing as well as photos of the person's face, or "selfies". Participants will be randomly assigned to one of the 3 conditions and will only be exposed to those images from their assigned condition.

Celebrity Images: The Celebrity condition will contain 420 images of female celebrities from ages 18-35 (e.g. Fig. 1). Images will be sourced from Instagram profiles of female celebrities found on the top most followed celebrities list on Instagram (Trackalytics, 2019).

Figure 1. Example of celebrity image (Selena Gomez, @selenagomez)
Source: https://www.instagram.com/selenagomez/?hl=en

Peer Images: The Peer condition will contain 420 images of women ages 18-35 (e.g. Fig. 2). Following Brown and Tiggeman's (2016) approach of searching with hashtags, the peer images will be found using the #bodygoals hashtag search on Instagram. These images included in the study will be rated as equally attractive as the celebrities (see pilot study). The peer profiles are also chosen if they have less than 200 followers so as to ensure that they were not celebrities.

Figure 2. Example of Peer image (@lorengrayyy_11)
Source:
https://www.instagram.com/lorengrayyy_11/?hl=en

Scenery Images: The Scenery (control) condition will contain 420 images of travel destinations and landscapes (e.g. Fig. 3). The images will be sourced using the #travel hashtag on Instagram search and will not include any people.

Figure 3. Example of Scenery image (Venice, Italy, @ig_traveltour)
Source: https://www.instagram.com/ig_traveltour/

2. The Application

The SEBI application will be designed to mimic the social media application Instagram. The name of the application combines the acronyms for self-esteem and body image. The SEBI app is exclusively a mobile interface and is intended to be compatible for any smart phone device. Participants are asked not to go on Instagram for the duration of the study and are instead asked to download the SEBI app. One of Instagram's main features is the ability for users to scroll through images and videos uploaded by other people. The app for this experiment will aim to imitate this scrolling feature. The layout of the Instagram feed allows for vertical scroll for viewing posts one at a time. This type of interface is important because users have the agency to riffle through the images on their device. In other words, they can control the amount of time they spend looking at each image. In order to simulate the scrolling experience of Instagram, the app will also allow participants to scroll through designated images freely.

After completing pre-exposure measures for self-esteem, body image, physical appearance comparison and celebrity worship, participants will be asked to download the SEBI app on their mobile devices. Upon opening the app, there will be a layout of folder icons labeled and organized by day numbers. For example, the folders will be labeled Day 1, Day 2, and Day 3 etc. Participants will first open the folder icon labeled Day 1 and will then be expected to scroll through those set of images. They are allowed to scroll at their own pace and are only required to scroll until they see the last image for that day. The point here is to ensure exposure to all of the images regardless of the amount of time they spend using the app. Participants are expected to use the app in this way once on each consecutive day for a total of 2 weeks. Each daily folder will contain 30 images and so each participant will have seen a total of 420 images by the end of the study. The SEBI app will collect data on the total amount of time spent viewing images in each folder.

Pilot Study

A preliminary study will include 15 independent female raters in the age group of the target participant group in order to evaluate the attractiveness of the celebrity and peer images and test whether celebrity and travel images are well known. These participants will rate the attractiveness of each celebrity and peer image based on a 5-point Likert scale where 1 = very unattractive and 5 = very attractive. This will determine any significant differences between the celebrity and peer images. The celebrity images chosen for the main study are those recognized by all of the pilot study's participants. The chosen travel images are those recognized by the participants. The chosen peer images are those not recognized by the participants.

MAIN STUDY

PHASE I – Pre-Image Exposure Measures
- Social Media Usage

Prior to using the app, participants will be asked to fill out a questionnaire regarding their social media usage (see Appendix C). This will include questions about whether or not they have an Instagram account, the amount of people they follow on Instagram and the number of followers they have as well as how much time they believe to spend using Instagram per day (less than 10 min, 10–30 min, 31–60 min, 1–2 hrs, over 2 hrs). They will also be asked to report the recorded time (in minutes) they spend on Instagram based on the analytics provided by their smart phone's 'screen time' feature.

- Measuring Self-Esteem

In order to evaluate the effect of Instagram on self-esteem, participants will be asked to complete Heatherton and Polivy's (1991) State Self-Esteem Scale (SSES) (see Appendix D). The SSES is a 20-item inventory that measures momentary self-esteem. Items are rated on a five-point scale from 1 (not at all) to 5 (extremely). Factor analyses revealed three independent subscales for this measure: Social, Appearance, and Performance. The Social subscale includes statements such as "I feel self-conscious" and "I feel displeased with myself." Appearance subscale items include, "I am dissatisfied with my weight" and "I feel good about myself." Performance subscale items include, "I feel confident about my abilities" and "I feel as smart as others." Larger numbers indicate higher levels of self-esteem. Participants will be asked to fill out the SESS prior to exposure (pre-test). Afterwards, participants are prompted to complete the study's other scales before using the SEBI app.

- Measuring Body Image

In order to evaluate the effect of image exposure on body image, participants will be asked to complete the Visual Analogue Body Dissatisfaction Scale from the Visual Analogue Scale (VAS) (see Appendix E) developed by Heinberg and Thompson (1995). This measure is typically used in experimental research designs to assess pre-post fluctuations in psychological states. The VAS is assessed on a 10-centimeter horizontal line labeled with a specific attitude or emotional state. Participants will be asked to indicate their current level of satisfaction with their bodies by placing an X on the line that ranges from completely unsatisfied (left) to completely satisfied (right). The body image subscales include Feelings of fatness, Physical attractiveness and Body size satisfaction. Scores are recorded on a 100-point scale (measured in millimeters). Participants will be asked to fill out the VAS prior to exposure (pre-test) and are then prompted to complete the scales for appearance comparison and celebrity worship before using the SEBI app.

- Appearance Comparison

Participants will be asked to fill out the Physical Appearance Comparison Scale-Revised (PACS-R) (see Appendix F). The 11-item PACS-R was developed to measure one's tendency to compare one's physical appearance to that of others. Participants will be asked to indicate how often they make each kind of comparison using a 5-point Likert scale ranging from 0 ("Never") to 4 ("Always"). The PACS-R was significantly positively correlated with measures of eating pathology, internalization of appearance ideals, and appearance-related pressures from peers, family, and the media (Schaefer & Thompson, 2014). The PACS-R was also significantly negatively correlated with

measures of body satisfaction and self-esteem. Participants will be asked to fill out the PACS-R prior to exposure (pre-test) and then go on to complete the celebrity worship scale before using the SEBI app.

- Celebrity Worship

As adapted by Brown & Tiggemann (2016), the 34-item version of the Celebrity Attitude Scale (CAS) by McCutcheon, Lange, and Houran (2002) will be used to measure participants' level of celebrity worship (see Appendix G). The scale will be used as a means to measure worship of celebrities in general as opposed to worship of a specific celebrity. Using a 5-point scale (1 = strongly disagree, 5 = strongly agree), participants will be asked to state their views about celebrities. The items will range from a sense of general interest in celebrities to borderline pathological. For example, "My friends and I like to discuss what celebrities have done" (Item 5), "When something good happens to my favorite celebrity, I feel like it happened to me" (Item 6). A total score for celebrity worship will be calculated by averaging the items. The CAS has been shown to have good internal consistency and convergent validity (McCutcheon et al., 2002). Participants will be asked to complete the CAS prior to exposure (pre-test) and will then prompted to use the SEBI app for 2 weeks.

PHASE II

Following completion of the social media usage questionnaire and the pre-exposure measures for self-esteem, body image, appearance comparison, and celebrity worship, participants will be randomly assigned to one of three experimental conditions (Celebrities, Peers, or Scenery). Then, they will be asked to download the study's app

(SEBI) on their mobile devices and will be notified of their assigned condition. Once prompted, participants will begin viewing the images from the Day 1 folder assigned to their respective group. Instructions will then follow to view all images from that given folder and to do so consecutively for a total of 2 weeks (14 folders). To illustrate, participants will scroll through the images from the folder labeled Day 3 on the third day following the beginning of the study. At the end of the 2 weeks, participants will complete the post-exposure measures for self-esteem and body image as well as the measures for appearance comparison and celebrity worship. Participants will then be thanked and debriefed about the study online (see Appendix H).

Figure 4. Timeline of the study's procedure

DATA ANALYSIS

Statistical analyses will be conducted using SPSS. A between subjects design is chosen to analyze the effect of image type (independent variable) on self-esteem and body image (dependent variables).

Physical Appearance Comparison as a Mediator

The mediating role of Physical appearance comparison will be tested using the Preacher and Hayes' (2008) PROCESS analysis. This involves using a bootstrapping non-parametric approach, which allows for more precise and parsimonious conclusions in regards to the significance of the direct and indirect effects found. Mediation is established if the indirect effect of the independent variable (image type) on the dependent variables (self esteem and body image) via the mediator (physical appearance comparison) is significant. In contrast, if the direct pathway is not significant after controlling for the mediator, it will be shown that the physical appearance comparison significantly explains the effect of image type on self-esteem and on body image. Dummy coding will be used because the independent variable of image type had three levels (Celebrity, Peer and Scenery). Two dummy variables (celebrity: 1, 0, 0 and peer: 0, 1, 0) will be computed, with Scenery entered as a reference group. These two dummy variables will be added to the analyses as independent variables, pre-exposure scores for self-esteem and body image will be entered as covariates and physical appearance comparison will be entered as the mediator.

<u>Celebrity Worship as a Potential Moderator</u>

Preacher and Hayes' PROCESS analyses will also be used to test whether celebrity worship moderates the effect of image type. Dummy coding for image type will also be used, with the Scenery condition serving as a reference group. The two dummy variables will be entered as independent variables, pre-exposure scores for self-esteem and body image will be entered as covariates and celebrity worship will be entered as the moderator.

RESULTS

Pilot Study

An independent samples t-test will be conducted to compare attractiveness of Celebrity and Peer images. It is expected that the Celebrity images will be rated as more attractive than peer images, but there would be no significant differences where $p < 0.05$. An independent samples t-test will be conducted to compare the thinness of Celebrity and Peer images. Celebrity images are expect to be rated as thinner than peer images but will however yield no significant differences where $p < 0.05$.

Social Media Usage

The majority of participants reported that they had an account on Instagram (84.5%). The perceived Instagram usage was 31-60 minutes per day and the actual time spent on Instagram was 65 minutes per day. Participants reported following a mean number of 500 people on Instagram and have a mean number of 535 followers.

Self-Esteem

Each participant's data will be analyzed using an ANOVA to test for any effect of image type on self-esteem. Table 1 shows the average pre-test and post-test score for each subscale based image type. Table 2 shows the average difference of the pre-post test scores for each image type. A one-way ANOVA will be conducted to determine if there are any differences between the independent variables (Celebrity, Peer and Scenery) on each subscale of the dependent variable (appearance, performance and social). Self-esteem is determined by the sum of the average difference score for each SSES subscale (see table

It is expected for significant differences to be found between the image types. A post-hoc analysis will be conducted to confirm where the differences exist between each image type.

Table 1: Descriptive Statistics for SSES Subscales by Condition

| Condition | SSES Subscales | | | | | |
| | Appearance | | Performance | | Social | |
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
Celebrity	24	18	27	21	27	22
Peer	26	24	29	25	28	25
Scenery	27	25	28	26	29	27

Table 2: Difference Scores for SSES Subscales by Condition

Condition	SSES Subscales			Total score
	Appearance	*Performance*	*Social*	
Celebrity	6	6	5	17
Peer	2	4	3	9
Scenery	2	2	2	6
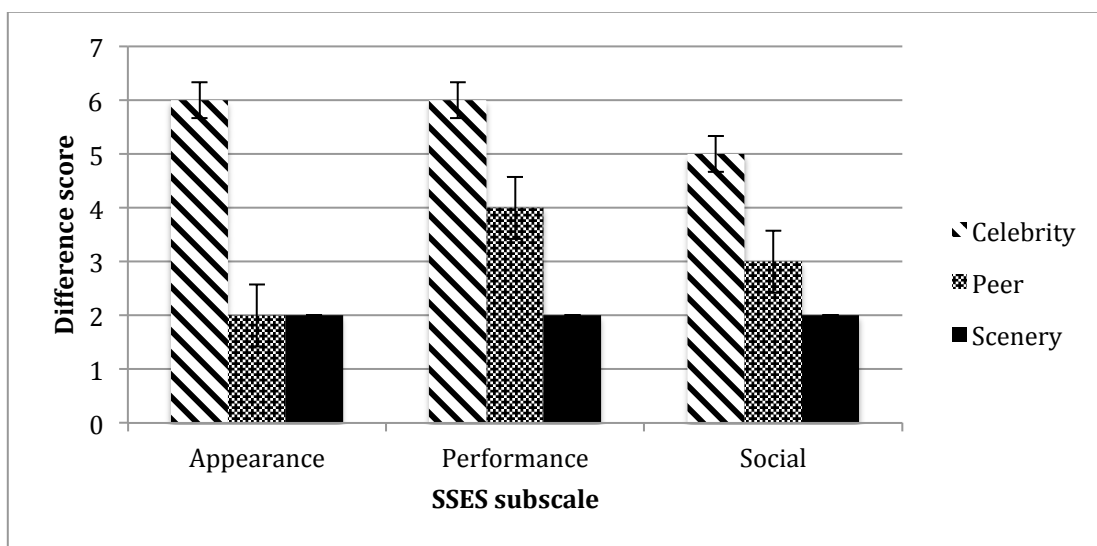
Figure 5. Difference scores of SSES subscales based on image type
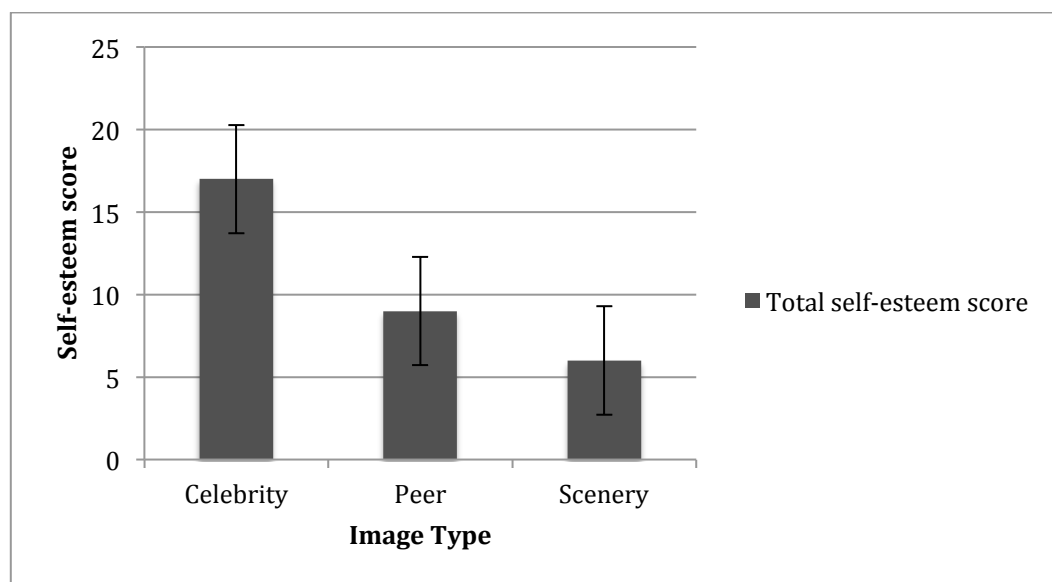
Figure 6. Total average difference score for self-esteem for each image type

Body Image

Each participant's data will be analyzed via an ANOVA to test for an effect of image type on body image. Table 3 shows the average pre-test and post-test scores for each subscale based image type. Table 4 shows the difference scores for each subscale based on image type.

Table 3: *Descriptive Statistics for VAS Subscales by Condition*

Condition	VAS Body Dissatisfaction Subscales					
	Feelings of Fatness		*Physical Attractiveness*		*Body Size Satisfaction*	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
Celebrity	71	62	75	68	69	61
Peer	73	67	77	72	72	70
Scenery	77	74	79	78	73	75

Table 4: Difference scores for VAS Subscales by Condition

Condition	VAS subscales			Total score
	Feelings of Fatness	*Physical Attractiveness*	*Body Size Satisfaction*	
Celebrity	9	6	3	18
Peer	7	5	1	13
Scenery	8	2	2	12

Figure 7. Difference scores of VAS subscales based on image type

Figure 8. Total average body image difference score for each image type

Physical Appearance Comparison as a Potential Mediator

Results are expected to show that the pathways between the two image types (Celebrity and Peer images) and appearance comparison are significant as well as the pathway between appearance comparison and self-esteem and between appearance comparison and body image. It is expected that the indirect effect between celebrity images and self-esteem via physical appearance compar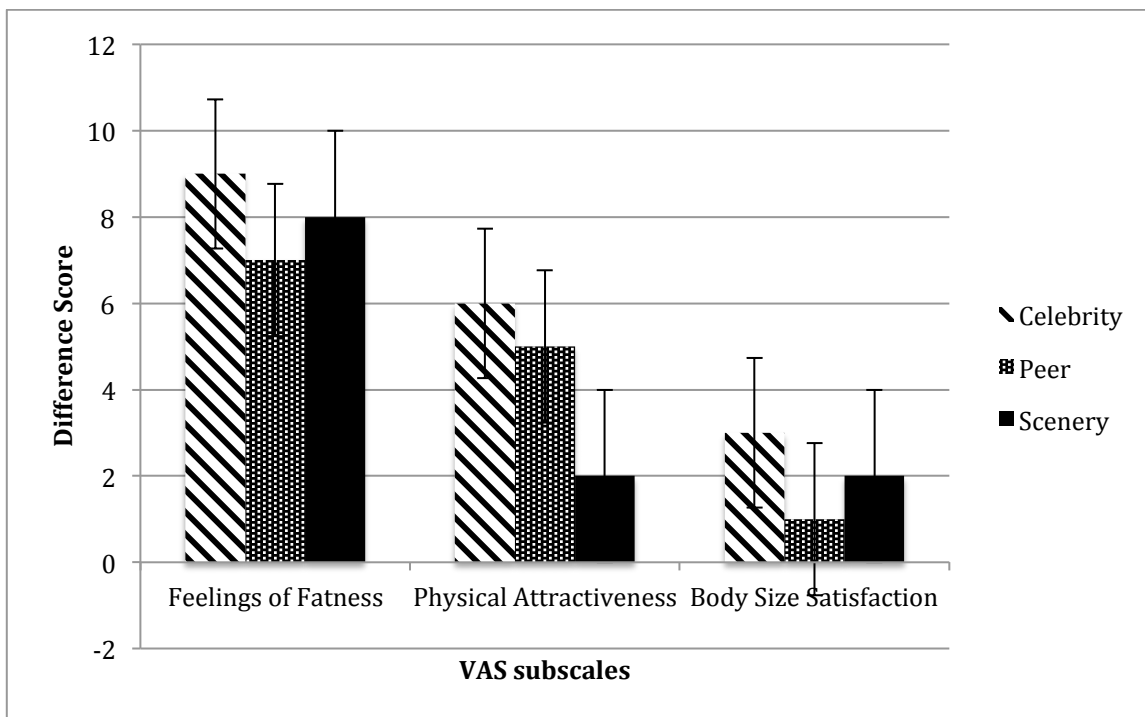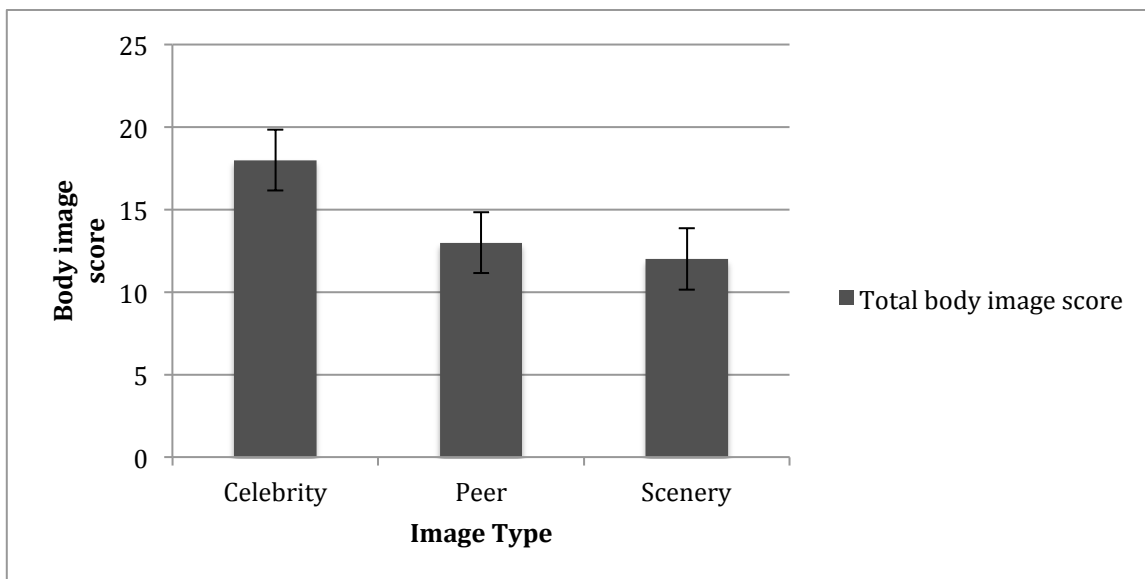ison be significant. The indirect effect between peer images is also expected to be significant. As mentioned, the remaining direct effects of celebrity and peer images on either self-esteem or body image are expected to be significant. Therefore, this result would support the hypothesis that physical appearance mediates the effect of image type on self-esteem.

It is expected that the same pattern of results will arise for body image in that the indirect effects for both celebrity images and peer images on body image via physical appearance comparison are significant. Therefore, this result would support the hypothesis that physical appearance mediates the effect of image type on body image.

Celebrity Worship as a Potential Moderator

Product terms represent interactions between image types and celebrity worship. A significant interaction is found when a product term explains additional variance above the main effects (Preacher & Hayes, 2008). Given this, results are expected to show that the interaction between celebrity worship and image type explains significant additional variance in self-esteem and body image. Results are expected to reveal that the interaction explains significant additional variance in self-esteem for celebrity images and not for peer images. This result would mean that the effect of celebrity images on self-

esteem is moderated by celebrity worship. This same pattern of results is expected for body image, such that the effect of celebrity images on body image is moderated by celebrity worship.

The nature of the interaction will also be determined. Results are predicted to show that celebrity worship levels are negatively associated with body image for participants who viewed the celebrity images. For participants low on celebrity worship, image type should have little effect on their body image. For participants high on celebrity worship, image type will make a large difference to their body image where celebrity images will have the greatest effect.

CHAPTER 3

Discussion

Social networking sites, a product of the 21st century, provide new avenues for presentation of the self as an object. By providing various opportunities for selective self-presentation and expression through photos, personal details, and commenting, SNSs demonstrate how modern technology enables us to reconsider and improve previously understood psychological processes. Theoretical frameworks can benefit from expanding previous "offline" approaches by incorporating an understanding of how social media may alter mental processes.

Previous research on social media has shown that exposure to other people's lives through the Internet appears to have an effect on various factors such as body dissatisfaction and self-esteem. A majority of these studies have suggested that social media use can cause individuals to create negative social comparisons, depending on whom they follow or are friends with on such SNSs. This subsequently causes negative effects on their self-evaluations such as self-esteem. Thus, the current study proposes the investigation of Instagram usage and its potential effects on self-esteem and body image. Additionally, the study aims to advance exploration into the effect that types of images exhibited on SNSs, namely those of attractive celebrities and peers, may have on one's self-evaluation and also aims to contribute to current understandings of appearance comparison and of celebrity worship.

This research utilizes an experimental design to examine the impact of exposure to images of attractive women on self-concept. The aim is to determine and assess the potential effects of thin, attractive images of women (celebrities and peers) presented on

Instagram on levels of self-esteem as well as body image, following image exposure. In this study, state self-esteem is measured using the SSES scale. The difference in SSES subscale scores (Appearance, Performance and Social) obtained prior to and after exposure of image type will assess any change in state self-esteem. It is expected that image type will have a significant effect on self-esteem. More specifically, it is predicted that exposure to celebrity images will have a significantly greater and more negative effect on self-esteem compared to exposure to peer images and scenery images. This result would therefore suggest that images of celebrities presented on social media platforms like Instagram, would have detrimental effects on women's self-esteem.

In addition to self-esteem, this study aims to analyze the effect of exposure to image type on women's body image. Body image will be assessed using the Visual Analogue Scale (VAS) that particularly measures body dissatisfaction via subscales of Feelings of Fatness, Physical Attractiveness and Body Size Satisfaction. Differences in VAS subscale scores obtained prior to and after exposure of image type will assess any change in body image. It is expected that image type will also have a significant effect on body image. Like for state self-esteem, exposure to celebrity images is expected to have a significantly greater effect on body image than exposure to peer images and scenery images. Therefore, women exposed to celebrity images will have significantly more body dissatisfaction compared to those who viewed peer images and scenery images. This result would suggest that those images of celebrities on Instagram will have adverse effects on women's body image and that more exposure to attractive celebrities online would increase body dissatisfaction.

Appearance comparison and celebrity worship were included in the proposed study as potential factors that would influence the effects of online image exposure on self-esteem and body image. Firstly, this research aims to examine appearance comparison as a potential mediator in the relationship between exposure to thin ideal images of celebrities and peers and negative evaluation, such that exposure should induce comparison to the ideal (either thin ideal made explicit on SNSs or personal body image ideal), which should in turn elicit lowered self-evaluation. The current study intends to show that when assessing appearance, women do compare to both celebrities and peers (Jones, 2001). Thus, appearance comparison as a mediator would mean that the correlation between thin-ideal exposure and negative self-evaluation (low self-esteem and body dissatisfaction) might be explained by the presence of appearance comparison mechanisms. This finding would therefore expand our understanding of the underlying processes of social comparisons made due to the salience of the thin ideal on SNSs on various negative outcomes.

Through the agency of appearance comparison, we may feel a sense of inconsistency (self-discrepancy) between the thin ideal made prominent in media and one's conception of their own appearance. In other words, the internalization of the standard of beauty promulgated by social media and personal notions of oneself conflict. It is likely that experiencing a self-discrepancy may moderate the likelihood of making social comparisons, which may correlate to having lower self-esteem and more body dissatisfaction. Future research could examine a potential correlation between self-discrepancy and appearance comparison and whether exposure to the thin ideal on social media mediates this effect.

Women's internalization of sociocultural standards of female beauty is an important factor to consider as a mediator for the association between media exposure, specifically social media exposure, and body dissatisfaction. It is crucial to distinguish between simply being aware of cultural standards of female beauty and internalizing them. Although many individuals indicate awareness of cultural and societal norms of the thin ideal, not all internalize them. Body image is central to women's self-definition due to the socialization of the belief that appearance is an essential basis for self-evaluation (Thompson et al., 1999). The media– magazines, television, advertising and now social media– not only emphasize that appearance epitomizes female self-worth, but also present a cultural ideal of beauty that is becoming increasingly more unachievable. Digital image manipulation, for example airbrushing and adding filters, facilitated by social media, may account for the increase in unrealistic images that affects women's standard of beauty and thus self-evaluation.

Moreover, adolescence describes an important period of exposure of sociocultural ideals and forming views about oneself. As a young adult, women who have experienced this internalization of the thin ideal in their adolescence may experience lower self-esteem and more negative body image than those not socialized in this way. Experimental studies have been heavily focused on effects of conventional mass media like television advertisements and magazines. However, social media is currently the type of media that primarily attracts adolescent and young adult women. More than 80% of young adults (18-29 year olds) in the U.S. use mobile devices and 72% of this group uses SNSs (Lenhart et al., 2010). With this in mind, the effect of exposure to a thin ideal on social media on the target age group (young adults) and gender (women) is of great interest.

Although this study does not include any analysis of sociocultural attitudes toward appearance based on factors such as age, race/ethnicity and gender, it is proposed that awareness and internalization of societal standards of female beauty could account for trends in body dissatisfaction and self-esteem. Therefore, it will be beneficial for future research to assess inferences about the internalization of the thin ideal, especially in a period of time where social media further dictates this notion, on women's self-esteem and body image, while accounting for age and cultural differences.

Celebrity worship was also measured in this study as a potential moderator for the interaction between exposure to thin ideal images of celebrities and negative self-evaluation. The effect of exposure to celebrity images is expected to be greater for participants high on celebrity worship. Celebrity worship was found to moderate the effect of exposure to celebrity images on women's self-concept. Also to assess the direction of this interaction, the current study hypothesizes that those in the celebrity image condition with higher scores of celebrity worship will have lower self-esteem and more body dissatisfaction than those with lower scores in celebrity worship. Thus, celebrity worship as a mediator would mean that the correlation between celebrity exposure and negative self-evaluation (low self-esteem and body dissatisfaction) might be explained by a high interest in celebrities. This finding would extend research into celebrity worship and its effect on one's self-evaluation as well as shed light on Instagram as platform for promotion and consumption of celebrity culture.

Furthermore, it is possible to consider celebrity worship as a behavioural phenomenon that significantly dominates a person's life. Research may delve into emotional and cognitive dynamics of celebrity worshippers in hopes of formulating a

more precise conceptualization of this phenomenon. The prevalence of celebrity worship in modern societies are direct products of mass media and communications, and this point of view agrees with Showalter' s (1998) conclusion that recent technology accelerates the proliferation of many types of delusional beliefs.

It would be beneficial to examine the relationship between appearance comparison and celebrity worship as both could happen concurrently in an online environment. Social comparison theory (Festinger, 1954) suggests that comparisons will be made most readily with those who are perceived as similar to oneself, as this comparison provides the most self-relevant information. Although research has found that women report comparing more with their peers than with the thin ideal in media (Heinberg and Thompson, 1992), recent studies have also included celebrities as a comparison group. Also, Strahan et al. (2006) found that women reported they compared themselves to peers when evaluating their social skills but compared themselves to celebrities when evaluating their appearance. This study proposes that women will compare themselves with celebrities on Instagram due to exposure of such images and this comparison may involve a high interest in those celebrities. It would be beneficial for further research to analyze reasons for comparisons made online. For example there may be a correlation between state appearance comparison and celebrity worship, which will corroborate research on appearance comparison to celebrities online.

Implications for Instagram

Instead of using the Instagram app to test these effects, this study proposed the utilization of a mobile application (SEBI) designed to mimic Instagram. The reason for using the SEBI app as opposed to Instagram, accounts for certain aspects of Instagram

that are hard to control for, especially in an empirical study. Therefore, it is important to justify the use of the SEBI app and how the findings from its use in an experimental setting can extend to Instagram usage.

One significant factor to consider for using Instagram in an empirical setting is Instagram's algorithm that controls the order of posts on a user's feed. Instagram implemented this algorithm in 2016 so as to change the order of posts appearing on one's feed from reverse chronological order to posts that are the most individually relevant. The algorithm helps organize content more efficiently by taking into account a user's recent activity so that newer posts are more likely to appear first on one's feed. The SEBI app will not include an algorithm that functions in this manner, but aims to control for any potential biases and ensure that the order of the images that a participant sees on SEBI is randomized. Note that while these images are sourced from Instagram, they are not expected to be self-relevant to participants to prevent sensitization of photos.

According to TechCrunch (2018), the algorithm determines what one sees on their Instagram feed based on interest, recentness, and relationship. Instagram's algorithm predicts what posts you will care about based on past activity (following, liking and commenting) on similar posts. When considering if there are any effects that viewing certain types of photos has on self-esteem and body image, it is especially important to consider the interactive activity on the various types of accounts on Instagram.

The algorithm also considers how recently a post was shared and prioritizes newer posts over weeks-old ones. The SEBI app does not consider recentness since the images are pre-selected and randomly assigned and distributed in the daily folders. To note however, the photos presented on this study's app are expected to be new to participants

to control for pre-exposure biases. This factor may be hard to control on Instagram where photos that you may have already liked or commented on still show up on the feed because the algorithm deems it more recent.

Lastly, the algorithm also considers the relationship you have with other people you interact with on Instagram. The algorithm ranks higher the people you interact with frequently in the past on Instagram and therefore shows you more of those people's posts. This is a fitting factor to examine as we can think about the role of celebrity worship on Instagram usage. Celebrity accounts may be more relevant to users and so considering Instagram's algorithm, they are going to be seeing a lot more of posts from celebrities, therefore reinforcing even more exposure, subsequently making them more susceptible to feelings of lower self-esteem and more negative body image. This aftereffect can especially be seen for persons who follow a vast majority of celebrities, especially those they interact with more online, more so than those who do not follow as many celebrities. Those who are not preoccupied with celebrity images would not be as susceptible to these effects.

Most likely, women high on celebrity worship consider celebrities to be self-relevant, and thus may feel more dissatisfied when they feel as though they are not as attractive or self-confident. Contrastingly, women low on celebrity worship would likely consider the lives and bodies of celebrities as irrelevant to them and therefore not experience body dissatisfaction or a decline in self-esteem. The SEBI app does not have a personalized feed as Instagram does, and therefore does not account for individual preferences for certain celebrities over others. However, the celebrity images are chosen for the experimental condition because they are universally known. Familiarity with

celebrities may affect the correlation of image exposure and self-evaluations and further research could account for this.

On a platform like Instagram, it is not uncommon for users to follow accounts that promote self-improvement or personal growth. Instagram influencers are users with an established credibility who provide inspiration and promote authenticity and trustworthiness. These influencers can be celebrities as well as users you may not know personally (peers) but are similar in age, gender and other demographic factors. Using social comparison theory as the theoretical framework, it is of interest to understand how social comparison with peers and celebrities on Instagram relate to not only self-deprecation but also motivation for self-enhancement. Upward social comparison, comparison to others we perceive to be socially better off than we are, has been found to lower self-esteem (Buunk, Gibbons & Reis-Bergan, 1997). Despite these negative effects of upward comparisons, they can sometimes be useful because they provide helpful information that may promote self-betterment as we imagine ourselves as part of the group of well-off people that we want to be like. Thus, upward social comparisons serve to enhance the self by eliciting behaviors to improve oneself; when discrepancies between the self and the comparison standard arise, people are motivated to change their self to be more like the comparison standard (Higgins, 1987). Further research may delve into relationships between the idealization of Instagram influencers and the motivations for self-improvement.

While celebrity stories and images are common content of traditional media such as women's magazines, peer images are not. Presently, women are likely to be exposed to an increasing number of attractive peer images with the growing popularity of SNSs like

Instagram. Many of these attractive peers are likely to be unknown, in contrast to previous research with known peers (Fardouly & Vartanian, 2015). The present study's use of the social networking site of Instagram afforded the opportunity to test the effect of both celebrity and unknown peer images on the same platform. These results suggest that exposure to thin ideal images may have a similar negative effect on body satisfaction, regardless of the context or whose body is featured. Future research might explicitly investigate this suggestion.

Limitations and Future Implications

Though it may be found that exposure to celebrity images is expected to have a more adverse effect on self-esteem and body image than viewing peer images, participants may compare similarly to celebrity and peer images because Instagram presents both on an equal platform. It is important to note that many women are exposed to attractive celebrity and peer images on a daily basis. The current study employs a between-subjects design, which signifies that participants are randomly assigned to only one condition and therefore are only exposed to one image type. Future studies may implement a within-subjects design that will have participants be exposed to all image types in order to assess any factors that may explain any differences in self-esteem and body image. Perhaps significant differences can be evaluated based on metrics collected on the SEBI app. The amount of time spent looking at each image, where the more time spent viewing a particular image correlates to a decrease in self-esteem and more body dissatisfaction. For example, spending more time looking at celebrity images,

significantly more than viewing peer and scenery images, within a given folder could explain a decrease in self-esteem and greater body dissatisfaction.

Future research could also explore the amount of exposure one is subjected to while using the app, based on the number of accounts followed. Although Instagram feeds might vary between users, the results from this study's social media usage questionnaire can be used to reveal the average number that people follow. From this, it would be possible to examine any detrimental impacts of viewing certain types of images more frequently than others, which can also include other types of accounts such as close friends, family members or business companies. To illustrate, say women follow an average of 200 people on Instagram, of which 120 are celebrities. This disparity could suggest that following more celebrities than other types of accounts could be more detrimental for mental health than following a majority of other non-celebrity account types or no celebrities at all.

As with all research studies, any findings made should be interpreted in the context of some limitations. Firstly, demographic information such as race/ethnicity was not collected or assessed in the proposed study. Including race as an independent variable would help determine whether individuals in the study are representative of the target population in an effort to generalize any findings. However, participation is not limited to people in specific areas, as access to the Internet expands to several regions of the world. Future research may assess the correlation between image type exposure and self-esteem and body image on the basis of racial and regional differences. Furthermore, as this study looks at implications of the effects of viewing celebrities as the standard of beauty, different cultures may have different conceptions of this ideal. For example, in the United

States and some other Western cultures, the body ideal is not only about being slim but also about being curvaceous (K. Harrison, 2003). Women from different ethnic/racial backgrounds may vary in the extent to which they are dissatisfied with their bodies because the ideal body image depends on cultural and social group context (Crago & Shisslak, 2003). This then calls into question whether a different cultural ideal of beauty buffers or exacerbates body dissatisfaction and how either effect is moderated by social media exposure.

As the social comparison theory (Festinger, 1954) purports that individuals are likely to compare themselves to those who are more similar to them, it may also be insightful to enquire about the various attributes of the other that are being compared. For example, individuals are more likely to compare themselves with those of the same race. Existing research shows that the effects of the media on concerns of African American female body image differ from those of European and American women, as many African American women report no changes in body image after exposure to mostly European/American models in the media (Frisby, 2004). Individuals may fail to exhibit in-group social identification when viewing models of other racial groups. Therefore, research on the role of race and culture in self-identification to models/celebrities, specifically those on social media, will support valuable findings on self-esteem and body image.

Other limitations include the possibility of demand effects, which describe changes in participants' behaviour due to assumptions about experimenter expectations or about the study's hypotheses. Perhaps the consent form could have a more vague description of the study that does not mention mental health, or the inclusion of a strong

cover up story prompted at the beginning of the study. Also, as opposed to a lab setting, the proposed study is conducted exclusively online where participants utilize a mobile application. Participants may attend to the images differently from how they would interact with images on Instagram. As mentioned, the SEBI app provides only simulates Instagram in order to control for biases and variables not expected nor accounted for in analyses. Despite this, the choice of coordinating the study digitally may be fitting given that Instagram is a mobile application and would represent the naturalistic environment.

Another limitation that may arise due to the online nature of the study is participant error. For example, participants may not finish the entire study. However, because the study is conducted online, a larger number of participants will be recruited, given that access to information, in this case the recruitment flyer, via the Internet, is faster and more widespread. Given this, a statistically significant sample size should not be greatly affected.

Other future research can investigate the long-term effects of Instagram usage as well as how these effects can generalize to other SNSs, given the distinct characteristics of each social media platform. Lastly it would beneficial to explore how the effects found can extend to those with Body Dysmorphic Disorder.

Conclusion

Despite the above limitations, the current study is proposed to demonstrate that exposure to celebrity and peer images on Instagram can have a negative effect on women's self-esteem and body image. Results are expected to support the hypothesis that exposure to images featuring celebrities' bodies will lower self-esteem and promote more

body image dissatisfaction. This study also supposes that state appearance comparison and celebrity worship can occur online and mediate the effects of celebrity image exposure. These findings would considerably expand previous research on the impact of exposure to model images in mass media and instigate an extension to social media. Findings will also advance investigation of self-assessments made in terms of both content (to celebrities and peers) and format (social media platform). Accordingly, this study intends to illustrate the ever-growing role played by Instagram in contemporary self-evaluation.

Indeed, the recent increased access and exposure to attractive/ideal images amplified by SNSs may constitute a significant shift in the media landscape. This exposure is therefore not limited to Instagram but can also be extended to other SNSs; thus, widening the digital scope beyond Instagram would be beneficial and essentially inevitable.

If the findings from the proposed study demonstrate a causal effect of image type (Celebrity, Peer, Scenery) on body dissatisfaction and self-esteem, it is mindfully suggested that women limit their exposure to celebrity and peer images. However, their profusion on SNSs, would present a foreseeable daunting challenge. Rather, it is suggested that women be informed about the potential dangers of overexposure to attractive individuals on SNSs and our tendency to make self-deprecating comparisons online. As unpleasant as these online comparisons can feel, they may serve a positive purpose of informing us of an aspect of our lives that may benefit from some improvement.

With all things considered, buffering the vast amount of mental energy on your appearance or self worth is no easy task. We may not realize how powerful a determinant social media usage is of our self-appraisal. However, as social media is not expected to just disappear any time soon, "optimism is the opium for the people" (Kundera, 2001). It is valuable to be aware of the negative repercussions of SNSs but also optimize its use for self-empowerment.

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Appendix A
Online Recruitment Flyer

Bard College

SEEKING VOLUNTEERS FOR A RESEARCH STUDY

As part of a senior project at Bard College, a study will be conducted and we are seeking your help. The purpose of this research study is to examine the relationship between Instagram usage and self-esteem and body image.

To participate in this research, you must:
- Be 18 years old or older
- Identify as a woman
- Have a smartphone

Participation in this study involves:
- A time commitment of at least 1 hour per day for 2 weeks
- Enter a draw to win a $50 Amazon gift card

Please share this flyer with others who fit the criteria above.
                              Thank you!

To find out more information about this study, please contact Keva Chang at:
- Email: kc8704@bard.edu

Study Title: They See Me Scrolling, and I'm Hating: Instagram Usage and its Effect on Self-Esteem and Body Image
Principal Investigator: Keva Chang
Senior Project Advisor: Frank Scalzo

Appendix B
Consent Form For Research Participation

You a have been invited to participate in a study conducted by Keva Chang, a senior Psychology major at Bard College. The purpose of the study is to investigate the effects of social media usage on mental health.

PARTICIPATION
Your participation in this study is voluntary. You may refuse to take part in the research or withdraw from the study at any time without penalty. You may skip any question you do not wish to answer for any reason. Active participation is required and appreciated. If you decide to withdraw from the study at any point, any personal information you provided will immediately be deleted and will exempt from any further analysis. Compensation will be provided, as you will be entered into a drawing to win a $50 Amazon gift card.

• What you will be doing:
The study involves the use of a smart phone application and a time commitment of at least one hour per day for a total of 2 weeks. You will be required to use the app as instructed. The app will collect data on the amount of time used. You will also be required to refrain from using Instagram for the duration of participation in this study.

BENEFITS & RISKS
You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about social media's effect on our mental health. There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life. However, there may be minimal discomfort in answering personal questions.

CONFIDENTIALITY
Your survey answers will be stored initially on Qualtrics.com in a password protected electronic format. The site will ask you to provide your name, age and contact information (email and phone number). Data will later be downloaded and stored. This information will remain anonymous as we analyze the data. If you choose to provide contact information such as your phone number or email address at the end of the study, your responses may no longer be anonymous to the researcher. However, no names or identifying information would be included in any publications or presentations based on these data, and your responses to this survey will remain confidential.

CONTACT
If you have questions concerning the study, please contact the principal investigator, Keva Chang by email at kc8704@bard.edu or my project advisor Frank Scalzo at scalzo@bard.edu.

ELECTRONIC CONSENT:

Please select your choice below. You may print a copy of this consent form for your records. Clicking on the "Agree" button indicates that:

- You have read the above information
- You voluntarily agree to participate
- You are 18 years of age or older

☐ Agree

☐ Disagree

Appendix C
Social Media Usage Questionnaire

1. Please fill in the following form.

**First
Name:**

Surname:

Email:

2. Do you have an Instagram account?

Yes

No

3. How many people do you follow on Instagram?

4. How many followers do you have on Instagram?

5. How much time do you believe you spend on Instagram per day?

Less than 10 minutes

10-30 minutes

31-60 minutes

1-2 hours

Over 2 hours

How much time do you actually spend on Instagram (in minutes)? You can find this by checking your smartphones' screen time that has this data.

Appendix D
Current Thoughts Scale (Heatherton & Polivy, 1991) – A measure of state self-esteem

This is a questionnaire designed to measure what you are thinking at this moment. There is, of course, no right answer for any statement. The best answer is what you feel is true of yourself at this moment. Be sure to answer all of the items, even if you are not certain of the best answer. Again, answer these questions as they are true for you RIGHT NOW.

Using the following scale, place a number in the box to the right of the statement that indicates what is true for you at this moment:

1 = not at all
2 = a little bit
3 = somewhat
4 = very much
5 = extremely

1.	I feel confident about my abilities.	P
2.*	I am worried about whether I am regarded as a success or failure.	S
3.	I feel satisfied with the way my body looks right now.	A
4.*	I feel frustrated or rattled about my performance.	P
5.*	I feel that I am having trouble understanding things that I read.	P
6.	I feel that others respect and admire me.	A
7.*	I am dissatisfied with my weight.	A
8.*	I feel self-conscious.	S
9.	I feel as smart as others.	P
10.*	I feel displeased with myself.	S
11.	I feel good about myself.	A
12.	I am pleased with my appearance right now.	A
13.*	I am worried about what other people think of me.	S
14.	I feel confident that I understand things.	P
15.*	I feel inferior to others at this moment.	S
16.*	I feel unattractive.	A
17.*	I feel concerned about the impression I am making.	S
18.*	I feel that I have less scholastic ability right now than others.	P
19.*	I feel like I'm not doing well.	P
20.*	I am worried about looking foolish.	S

Note: The statements with an asterisk are reversed-keyed items

The letter in the last column indicates the primary factor on which that item loaded in a factor analysis. The three factors were labelled performance self-esteem (P), social self-esteem (S) and appearance self-esteem (A).

References

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Appendix E

<u>Visual Analogue Scale</u>

Please indicate your current feelings with an 'X' on the line below

_____

Completely
Unsatisfied
with my
body

Completely
Satisfied
with my
body

Appendix F
Physical Appearance Comparison Scale-Revised (PACS-R)

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

Never	Seldom	Sometimes	Often	Always
0	1	2	3	4

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

Appendix G
The Celebrity Attitude Scale (CAS)- measure of celebrity worship

The purpose of this survey is to identify your views about famous persons. The responses you give are confidential. There are no right or wrong answers, so please answer as openly and thoughtfully as you can. For purposes of the survey we are defining the term "celebrity" as a famous living person (or one who died during your lifetime) that you greatly admire.

Who is your favorite celebrity? _____ (Please choose one famous person, as defined above).

Just in case your favorite celebrity is unknown to us, please circle one or more of the following to describe why your favorite celebrity is famous: Acting   Author Artist   Medicine   Modeling   Music   News   Politics   Religion   Royalty Radio or TV Talk Show   Science   Sports   Other (please describe)_____

Please use the following scale in response to the items below.
5 = Strongly Agree; 4 = Agree; 3= Uncertain or neutral; 2 = Disagree; 1 = Strongly Disagree

1. If I were to meet MFC in person, he/she would already somehow know that I am his/her biggest fan	1 2 3 4 5
2. One of the main reasons I maintain an interest in MFC is that doing so gives me a temporary escape from life's problems.	1 2 3 4 5
3. MFC is practically perfect in every way.	1 2 3 4 5
4. I share with MFC a special bond that cannot be described in words.	1 2 3 4 5
5. To know MFC is to love him/her	1 2 3 4 5
6. When something bad happens to MFC I feel like it happened to me	1 2 3 4 5
7. When MFC fails or loses at something I feel like a failure myself.	1 2 3 4 5
8. The successes of MFC are my successes too.	1 2 3 4 5
9. I consider MFC to be my soul mate.	1 2 3 4 5
10. When MFC dies (or died) I will feel (or I felt) like dying too.	1 2 3 4 5
11. If someone gave me several thousand dollars to do with as I please, I would consider spending it on a personal possession (like a napkin or paper plate) once used by MFC.	1 2 3 4 5
12. When something good happens to MFC I feel like it happened to me.	1 2 3 4 5
13. I am obsessed by details of MFC's life.	1 2 3 4 5
14. I have pictures and/or souvenirs of MFC which I always keep in exactly the same place.	1 2 3 4 5
15. I love to talk with others who admire MFC	1 2 3 4 5
16. Keeping up with news about MFC is an entertaining pastime.	1 2 3 4 5
17. It is enjoyable just to be with others who like MFC	1 2 3 4 5
18. I enjoy watching, reading, or listening to MFC because it means a good time	1 2 3 4 5
19. Learning the life story of MFC is a lot of fun	1 2 3 4 5
20. I like watching and hearing about MFC when I am with a large group of people	1 2 3 4 5
21. My friends and I like to discuss what MFC has done	1 2 3 4 5
22. I would gladly die in order to save the life of MFC	1 2 3 4 5
23. If I were lucky enough to meet MFC, and he/she asked me to do something illegal as a favor, I would probably do it.	1 2 3 4 5
24. If I walked through the door of MFC's home without an invitation she or he would be happy to see me.	1 2 3 4 5
25. I have frequent thoughts about my celebrity, even when I don't want to	1 2 3 4 5
26. I often feel compelled to learn the personal habits of MFC	1 2 3 4 5
27. MFC would immediately come to my rescue if I needed help	1 2 3 4 5
28. MFC and I have our own code so we can communicate with each other secretly (such as over the TV or special words on the radio)	1 2 3 4 5
29. If MFC was accused of committing a crime that accusation would have to be false	1 2 3 4 5
30. If MFC endorsed a legal but possibly unsafe drug designed to make someone feel good, I would try it	1 2 3 4 5
31. News about my celebrity is a pleasant break from a harsh world	1 2 3 4 5
32. If MFC found me sitting in his/her car, he or she would be upset	1 2 3 4 5
33. It would be great if MFC and I were locked in a room for a few days	1 2 3 4 5
34. If MFC saw me in a restaurant he/she would ask me to sit down and talk	1 2 3 4 5

<u>Scoring</u>
Suggested by: Maltby, J., Day, L., McCutcheon, L.E., Houran, J. & Ashe, D. (2006). Extreme celebrity worship, fantasy proneness and dissociation: Developing the measurement and understanding of celebrity worship within a clinical personality context. *Personality and Individual Differences*, *40*, 273-283.

Intense personal 1+ 8 + 11 + 2 + 33 + 18 + 24 + 12
+ 14 + 16 + 28 +6 + 3 Entertainment Social 17+ 31
+ 23 + 13 + 19+ 29 +5 Borderline Pathological 4 +
22 + 25 + 15 + 20 + 7

The rest of the items can be considered as filler items.

Appendix H
Debriefing Form for Participation in a Research Study

Thank you for your participation in this study! The general purpose of this research is to evaluate the effect of Instagram usage, especially the exposure to photographs of women's bodies, on self-esteem and body image.

Purpose of the Study:

We previously informed you that the purpose of the study was to assess the effects of exposure to women's bodies on Instagram on one's self-esteem and body image. The study is part of a Senior Project at Bard College. The goal of my research is to investigate whether being exposed to images of celebrities and peers (persons with less followers) on a social platform like Instagram will either increase or decrease self-esteem and negatively affect body image.

We realize that some of the questions asked may have provoked strong emotional reactions. As a student researcher, I do not provide mental health services and therefore there will be no follow-up after the study. However, we want to provide every participant in this study with a comprehensive and accurate list of clinical resources that are available, should you decide you need assistance at any time.

Confidentiality:

You may decide that you do not want your data used in this research. If you would like your data removed from the study and permanently deleted please contact the researcher via email.
Please do not disclose research procedures and/or hypotheses to anyone who might participate in this study in the future as this could affect the results of the study.

Final Report:

If you would like to receive a copy of the final report of this study (or a summary of the findings) when it is completed, please feel free to contact us. For your information, the findings will be available in the Bard College Stevenson Library's online database.

Useful Contact Information:

If you have any questions or concerns regarding this study, its purpose or procedures, or if you have a research-related problem, please feel free to contact the head researcher, Keva Chang (kc9704@bard.edu) or the project advisor (scalzo@bard.edu). If you have other concerns about this study or would like to speak with someone not directly involved in the research study, you may contact the Chair of the Department of Psychology, Sarah Dunphy-Lelii (sdl@bard.edu).

***Please keep a copy of this form for your future reference. Once again, thank you for your participation in this study! ***