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# HASHTAGGING YOUR HEALTH: USING PSYCHOSOCIAL VARIABLES AND SOCIAL MEDIA USE TO UNDERSTAND IMPRESSION MANAGEMENT AND EXERCISE

### BEHAVIOR IN WOMEN

by

Caitlyn Hauff

A Dissertation Submitted in

Partial Fulfillment of the

Requirements for the Degree of

Doctor of Philosophy

in Kinesiology

at

The University of Wisconsin-Milwaukee

December 2016

#### HASHTAGGING YOUR HEALTH : USING PSYCHOSOCIAL VARIABLES AND SOCIAL MEDIA USE TO UNDERSTAND IMPRESSION MANAGEMENT AND EXERCISE BEHAVIOR IN WOMEN by

#### Caitlyn Hauff

### The University of Wisconsin-Milwaukee, 2016 Under the Supervision of Christy Greenleaf, Ph.D.

Our society has become heavily reliant on social media, especially in the health and exercise domain. Social and environmental factors impact females' body image perceptions and create body image disturbances, yet little research is dedicated to the exploration of how social media, and social comparisons through social media exposure, impact exercise behaviors and body image perceptions in females. Considering Perloff's (2014) theoretical model, the current study explored how the interaction between individual psychosocial variables and social media use predict exercise behaviors and engagement in impression management in women. Using a mixed methodological approach, the specific aims of this study were to explore (1) how psychosocial behaviors and social media use predict exercise behaviors and engagement in impression management; (2) the relationship between exercise behaviors, frequency of social media use, and content posted to social media; (3) how social media influences women's thoughts, perceptions, and conceptualizations of a healthy body and healthy exercise behaviors. Two studies were conducted using both quantitative and qualitative methods to explore associations in recreationally active women. The results of these studies provide insight into the complexities of social media and its influence on exercise behaviors and impression management, providing information that may be used to develop future interventions to increase body positivity on social media and improve exercise experiences.

© Copyright by Caitlyn Hauff, 2016 All Rights Reserved To all those who have supported me along the way, especially my husband, Nathan, who has been there to celebrate all my milestones big and small. Your unending love and faith in my abilities is unmatched, and I am forever thankful that I have had you by my side through this journey. You constantly force me to be the best version of myself and have given me more than enough reasons to help me realize how beautiful life is. I cannot wait to continue our adventure through this life together.

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"Be fearless in the pursuit of what sets your soul on fire."

#### #PhDone

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Hashtagging Your Health: Using Psychosocial Variables and Social Media Use to Understand Impression Management and Exercise Behaviors in Women

For many women in Western society, posting a status update, "liking" a photo, or creating a new Pinterest board has become an everyday norm and expectation. Currently, 74% of women who engage in online activity use social media sites, the most popular sites being Facebook, Pinterest, and Instagram (Duggan, 2013). Although 52% of online adults use more than two social media platforms, women are more likely than men to use these social media sites, indicating a heavy reliance on their social media presence (Duggan, 2013; Perloff, 2014). Some literature suggests that mass media outlets influence the perceptions women have about their bodies, leading to the development of body image concerns and eating disorder symptomatology (Grabe, Ward, & Hyde, 2008). Despite the popularity of social media, much of the literature on mass media influences examines sources such as magazine ads, television commercials, and music videos, warranting a need to explore the role of social media in this context. The lack of empirical evidence surrounding social media use and its influence on body image and health behaviors may be due to complexity and interactivity that social media outlets offer. Perloff (2014) suggests that exposure to social media content alone does not directly impact body image disturbance, but rather the reciprocal relationship between the social media user, the social media medium, and the context surrounding the social media exchange influence the cycles and outcomes of social media engagement. Due to its growing popularity among women, it is important to explore in depth how social media use might combine with other psychosocial risk factors to impact health behavior, particularly exercise behavior, and one's "presence" on social media.

There are many reasons women are motivated to exercise, the most common of which include health and fitness, enjoyment, and social engagement (Hausenblas, Brewer, & Van Raalte, 2004). Yet, often times women also engage in purposeful exercise for self-presentational reasons in order to obtain an ideal weight, manage an aesthetically appealing appearance, or identify themselves as an exerciser to the public (Hausenblas, Brewer, & Van Raalte 2004; Leary & Kowalski, 1990). Self-presentation—also referred to as impression management—refers to a process in which individuals attempt to control and manage the impressions others form of them (Hausenblas, Brewer, & Van Raalte 2004; Leary & Kowalski, 1990). Self-presentation is thought to be a powerful indicator of exercise engagement, affecting an individual's cognitions, attitudes, and behaviors, as one attempts to monitor how other's perceive and evaluate one's presence (Hausenblas, Brewer, & Van Raalte 2004). Individuals engage in impression management to create favorable impressions of themselves and control how other individuals might perceive their public persona in order to "save face" (Leary & Kowalski, 1990). Engaging in impression management is prevalent in an individual's daily life; through social interactions individuals are concerned with the impressions others have of them, as well as their choices to present themselves in one light or another. Thus, Leary and Kowalski (1990) proposed a two component model of impression management that describes the two distinct processes one goes through when monitoring and engaging in impression management: impression motivation and impression construction.

Impression motivation typically stems from a need to manage how one is coming across to others, especially when attempting to maximize potential rewards and minimize costs (Schlenker, 1980). Leary and Kowalski (1990) suggest individuals are motivated to convey the right impression in order to boost self-esteem or obtain positive, uplifting feedback from others.

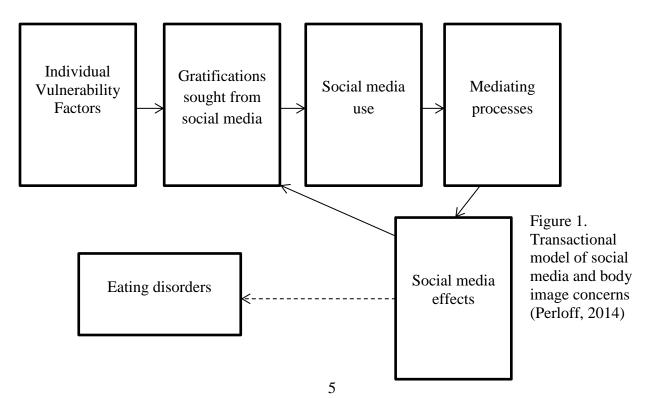
Often times individuals are fearful of receiving negative evaluations and are therefore motivated to act in a way that will procure a positive reaction from another. Typically, individuals perceive themselves as falling somewhere along a spectrum in regards to the impressions they find acceptable to present to the public (Leary & Kowalski, 1990). When an individual encounters a real or perceived discrepancy between one's current image and the image one wishes to project, that individual will be motivated to engage in impression management, finding a way to bring one's identity back in line with projected spectrum. While impression motivation might stem from a desire to create a particular identity, *impression construction* will dictate the behaviors one engages in to create that specific identity. Leary and Kowalski (1990) suggest that, in an attempt to create a desired identity, a person will behave publicly in a manner consistent with that identity, claiming to have attributes that align with the impression one is trying to create. Individuals often times try to occupy specific social roles, adopting characteristics and personality traits related to those roles, in order to portray a desirable social image. One might choose to engage in impression construction in order to identify with a popular public image, portray particular societal values, or act in preference of a significant other (Leary & Kowalski, 1990).

Considering self-presentation in an exercise context, women may feel motivated to engage in purposeful exercise to mold their bodies into thin, fit, lean physique to match the societal ideal for attractiveness, but some women may also engage in exercise as a means to present themselves to others as an exerciser. Research suggests that one of many reasons individuals engage in frequent exercise and wear appropriate exercise apparel to create the guise of being an exerciser, as they believe that the label of "exerciser" forms a favorable impression to others in society (Hausenblas, Brewer, & Van Raalte, 2004; Leary & Kowalski, 1990).

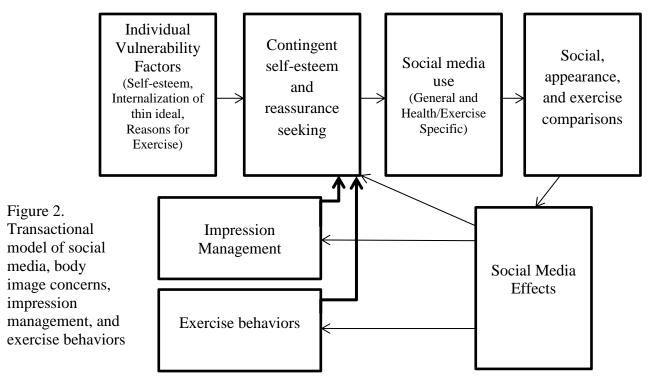
Individuals who are labeled as exercisers are perceived as being more confident, harder working, fitter, stronger, healthier, and more attractive than their non-exerciser counterparts (Martin, Sinden, & Fleming, 2000). Martin Ginis and Leary (2006) found that exercisers are also rated higher in physical attractiveness regardless of weight, while non-exercisers are stereotyped as being sloppier, lazier, sadder, less confident, and less sociable. The social environment also plays a role in the behaviors individuals engage in when exercising. Tripplett (1897) used the concept of social facilitation to describe how the presence of others improves performance and Hausenblas and colleagues (2004) describe social facilitation from a self-presentational perspective, indicating that the presence of others might influence an individual to construct the image that she is an avid or competent exerciser. In this case, individuals are motivated by others around them to construct a favorable impression about being an exerciser by exercising at higher intensities or engaging in behaviors that make them appear competent in the exercise they are performing.

Acknowledging the strong link that exists between self-presentation and exercise behaviors, it is important to explore how these behaviors might be dictated by individual psychosocial factors and social media use. Perloff (2014) developed a model, referred to as the transactional model of social media and body image concerns, suggesting that specific individual factors put women at risk for developing body image disturbances. These predisposing individual characteristics make women more vulnerable to seek out gratification through social media, putting them at further risk for engaging in social and appearance comparisons, which create negative effects on affect and body image (Perloff, 2014). Social media can be defined as an internet-based website or application that allows individuals to initiate conversations, network with others, and participate in the consumption or dissemination of consumer-generated content

(Xiang & Gretzel, 2010). Blackshaw (2006) further describes social media as "media impressions created by consumers, typically informed by relevant experience, and archived or shared online for easy access by other impressionable consumers" (paragraph 4). Social media users are able to "post," "blog," "like," "tweet," "follow," and "tag," on various social media platforms including Twitter, Instagram, Facebook, and personal blogging websites. Perloff (2014) suggests that women who exhibit to individual characteristics such as low self-esteem, low self-worth, and internalize the thin ideal, are more susceptible to viewing appearance-focused social media content that will allow them to experience gratification, reassurance, and validation from others. As women seek out gratification to bolster their self-worth, they may also engage in particular social media behaviors that allow them to create favorable impressions. Social media is therefore used as a platform to not only post photos and content about oneself in order to gain validation, but also as a tool to view posts from others and engage in upward and downward social comparisons, often time exacerbating body image disturbance and further need to feel reassured about one's appearance and behaviors (Perloff, 2014).



Perloff's (2014) original conceptualization of the transactional model of social media and body image presumed that the effects of social media would result in eating disorder behavior and a continuous feedback loop in which the woman continued to seek out gratification through social media use and engage in social comparison processes (see Figure 1). The current study plans to take a different approach to understand this model, suggesting that individual psychosocial factors in combination with social media engagement will dictate impression management and exercise behaviors (see Figure 2). The proposed model suggests that women who are predisposed to certain individual vulnerability factors, particularly low self-esteem, internalization of the thin ideal, and appearance-related reasons for exercise, will seek



out gratification and validation through their social media usage. Once a woman engages in social media use for validation, she will be more likely to socially compare herself to other users, resulting in potential body image and affective disturbances, which will in turn lead her to alter how she presents herself to others and the exercise behaviors she chooses to engage in in order to create a "socially acceptable" presentation.

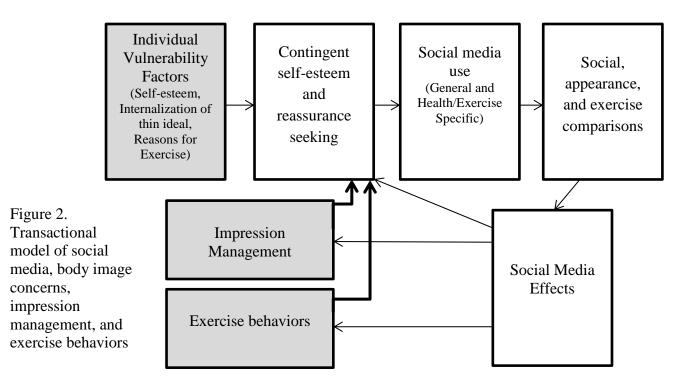
While the model is a compilation of separate constructs, it is important to understand the interconnectivity of the constructs and the relationship that exists between the two outcome variables, exercise behaviors and impression management. The outcome variables in this study share a unique association, each serving multiple functions for an individual. Exercise, in one context, might be used to shape and mold the body into society's thin ideal. In this premise, exercise is also used as a tool to present oneself in a certain light to others in order to gain approval, self-worth, and reassurance. In a different context, engaging in exercise serves as a way to document oneself as an exerciser, a trait deemed admirable by society (Hausenblas, Brewer, & Van Raalte, 2004). Thus, by chronicling exercise endeavors on social media, one is gaining positive affirmations from others about their chosen behavior and continues to not only pursue this behavior in order to maintain a favorable impression, but also to document it publicly. Perloff's (2014) initial conceptualization demonstrated that certain psychosocial traits and behaviors would lead to the eventual development of eating disorder symptomatology. The social media content one gravitates towards can have a large impact on one's behavioral patterns. Essentially, women who engage in disordered eating behaviors, as a result of low self-esteem, depression, body dissatisfaction and the like, will gravitate towards content that is in sync with their attitudes towards their bodies and diets (Perloff, 2014; Slater, 2007). Perloff (2014) suggests that content becomes more appealing when it falls in line with one's own beliefs and personality preferences. Thus, content that promotes similarity, identification, and a perception of reality encourages the viewer to absorb that content on a continual basis, which ultimately results in disordered eating behavior or the continuation of those behaviors (Perloff, 2014).

Although Perloff's original intent was to demonstrate how these psychosocial factors and social media use lead towards eating disorders, logically it makes sense that this type of progression would be true for other behaviors; in consideration of the present study, exercise and impression management behaviors. For example, reflected in literature regarding the exerciser identity (Hausenbals, Brewer, & Van Raalte, 2004; Leary & Kowalski, 1990; Martin, Sinden, & Fleming, 2000), it is plausible to conclude that women who engage in exercise and want to be labeled as exercisers, will find content related to health and exercise on social media appealing and will, in turn, gravitate to that content and that group of followers. In the same context that eating disorders promote body dissatisfaction and social comparisons, one might find similar parallels when assessing exercise behavior in women. Women who may be predisposed to low selfesteem, internalizing the thin-ideal, or desiring to exercise for appearance-related reasons may engage in comparisons either on social media or in-person at an exercise facility which could in turn prompt body dissatisfaction or anxiety towards appearance. Similar to Perloff's progression with eating disorders, the linkages between these behaviors may alter future exercise behaviors and choices regarding how one portrays themselves to the public. Assuming that women continue to latch onto an identity as an exerciser, or even as someone who is "healthy," they will continue to gravitate towards social media content that appeals to those traits which may influence subsequent behaviors. Thus, because the same progression still applies whether one is examining eating disorder, exercise, or impression management behaviors, it seems rational to interchange these outcome variables in the present model.

The following literature review will document the connections that exist between exercise, impression management, and the independent constructs of this model to develop a better understanding of how these variables co-exist in this model conceptualization.

#### **Description of Constructs**

Individual vulnerability factors. Interaction in a social media domain requires reciprocity between an individual and that individual's chosen audience. Social media is a place to document one's desire, or ideal, self-worth, thus variables such as low self-esteem, internalization of the thin-ideal, and having appearance-related reasons for exercise may influence a woman to not only gravitate towards certain types of social media sources (i.e. appearance-related content), but also create impressions that portray societal ideals to the real or imagined viewing audience (Perloff, 2014). Perloff (2014) finds predisposing individual characteristics to be central to understanding how social media may influence body image perceptions. Having a certain set of predisposed characteristics, particularly low self-esteem, internalization of the thin-ideal, and appearance-related reasons for exercise, encourages women to engage in social comparisons on social media and seek out reassurance and validation particularly when it comes to the impressions they are trying to portray to their audience (Perloff,



2014). Exposure to content related to self-esteem or appearance ideals sets in motion the chain of events demonstrated by the model in Figures 1 and 2. In accordance with the model conceptualization, I suggest that an individual's choice in exercise and impression management stems from pre-existing individual vulnerability factors, which ultimately act as the starting point of a variety of other behaviors.

The need and desire to have, and raise, self-esteem is not a new concept (Schlenker, 1980). Thus, considering social media presence, it seems logical that individuals will go through a great deal of trouble to present themselves in a positive light in order to create an impression that is favorable to their audience. Kramer and Winter (2008) suggest that individuals with low self-esteem might go to greater lengths (in relation to their social media activity) to achieve the ultimate ideal presence on social media as this might raise their levels of self-esteem. Social media sites are meant to allow growth in interpersonal relationships. By engaging in social media through posting photos, blogs, or status updates, an individual may become aware of personal shortcomings or deficiencies, in turn, lowering self-esteem (Gonzales & Hancock, 2011). It is also plausible that an individual may frame themselves in a way that is positively biased, garnering positive feedback and praise from their peers which will in turn raise self-esteem (Gonzales & Hancock, 2011). In his Hyperpersonal Model, Walther (1996) suggests that when using social media, individuals have the ability to selectively self-present themselves to their audience. Thus, when posting photos, status updates, or tweets, the user is able to carefully select how one's "highlight reel" might appear to others, making edits and emphasizing positive features of the self. Gonzales and Hancock (2011) suggest that optimizing one's selective selfpresentation on social media impacts the attitudes an individual has about one's own self-concept and self-esteem. In a study examining Facebook use, selective self-presentation enhanced self-

esteem, particularly when the participant edited information about themselves on their profile (Gonzales & Hancock, 2011). Logically, this makes sense as the individual is highlighting one's best parts and exposing those highlights to a group of known or unknown peers. Gonzales and Hancock (2011) concluded that non-edited representations of the self (i.e. looking at one's reflection in the mirror) may elicit feelings of low self-esteem, while engaging in actions that allow one to take extra time and edit their self-representations (i.e. using social media) will ultimately enhance self-esteem. Considering the purposes of our study, it is important to examine how levels of self-esteem might contribute to engagement in impression management behaviors on social media and if the ability to self-select and enhance one's posts allows for an increase in self-esteem.

It is well-documented that there is a link between self-esteem and exercise (Spence, McGannon, & Poon, 2005). While it has been demonstrated that exercise leads to small increases in self-esteem, using exercise as a means to raise self-esteem can become problematic when the focus of the outcome is to compare oneself to another in order to gain self-worth or meet a unrealistic cultural standard (Magnus, Kowalski, & McHugh, 2010; Spence, McGannon, & Poon, 2005). Although high levels of self-esteem can lead to resiliency, adaptability, emotional strength, and happiness, it also may compel women to exercise for superficial reasons (Magnus, Kowalski, & McHugh, 2010). Wilson & Rogers (2002) found that when women exercise for the purposes of self-evaluation and attainment of self-worth, they are unable to maintain proper motivation to adhere to an exercise program and falter in obtaining overall self-worth. Logically, physical fitness should have an effect on self-esteem. Self-esteem is derived from self-efficacy which is built through exercise participation. Thus, high levels of self-efficacy should lead to higher levels of exercise participation. Competence in exercise leads to continuation, and

continued exercise allows one's body to improve (i.e. striving towards meeting the societal ideal of attractiveness). Exercise participation is thought to have a large impact on self-esteem due to the way exercise increases both physical competence and physical self-worth (Spence, McGannon, & Kowalski, 2005). Thus, as one demonstrates competence and self-worth through exercise, self-esteem levels heighten, and one continues to engage in exercise in order to present themselves as an exerciser and maintain society's ideal level of attractiveness (Spence, McGannon, & Kowalski, 2005). The self-esteem garnered through exercise may influence how the individual chooses to present oneself not only in public, but on social media sites as well.

Schlenker (1980) believed that self-esteem stems from an individual's desire to seek out superiority over others. In this context, one's evaluation of the self depends on how one socially compares to others and whether or not one is rated favorably in relation to another (Schlenker, 1980). One way in which women might strive to enhance self-esteem is by addressing how they "stack up" against other women in society in regards to their appearance. Thinness ideals have left an imprint on women in Western cultures, creating a heavy focus on body image. Social media is riddled with selfies, tweets, and status updates that promote the thin-ideal internalization. Recently, it has also been noted that social media projects images relating to an athletic-ideal (Tiggemann & Zaccardo, 2016). The athletic-ideal refers to a body that is more toned and muscular in nature, shifting focus to the notion of being fit, not necessarily ultra-thin (Homan, 2010). While athletic-ideal internalization is not as detrimental for a female as internalizing the thin-ideal, it is still associated with negative consequences such as compulsive exercise, disordered eating, and lower body satisfaction (Homan, 2010, Wasilenko, Kulik, & Wanic, 2007). Similar to ultra-thin media content, content promoting the athletic-ideal suggests that if an individual works hard enough and engages in enough exercise, they will obtain a firm,

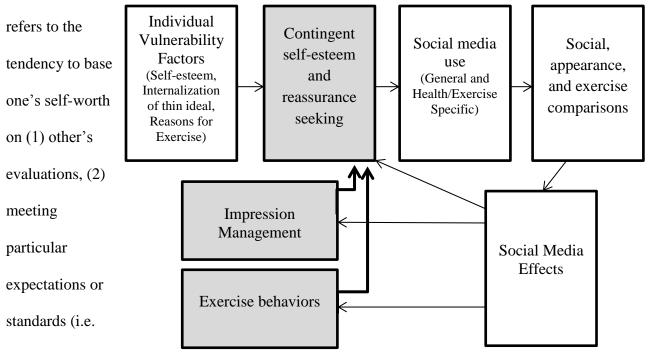
toned body. Yet, often times, this ultra-fit body is not attainable either. Viewing images of ultrathin, or ultra-fit, women, creates vastly more opportunities to compare oneself to others, gauge how one measures up, and find dislike towards body parts that could be improved through exercise (Perloff, 2014). As social media sources continue to emphasize the attractive features of peers, women are challenged to find ways to not only meet this ideal level of attractiveness, but also present themselves in a way that embodies society's appearance ideals in order to create and maintain a favorable impression.

When women internalize socially defined ideals of attractiveness, they begin to engage in behaviors to meet these ideals (Thompson & Stice, 2001). Many women turn to exercise to help shape and transform their bodies, particularly participating in exercise for appearance-related reasons (Greenleaf, 2005; Prichard & Tiggemann, 2008). When women engage in exercise for appearance-related reasons, they aim to lose weight, improve body tone, and improve attractiveness in order to adhere to societal standards of beauty and sexual desirability (Strelan, Mehaffey, & Tiggemann, 2003). Fitness and media ads portraying the "thin ideal" reinforce society's rigid standards for attractiveness, prompting women to engage in behaviors to alter their appearance to help themselves look like the woman on the ad (Thompson & Stice, 2001). It is important to note that in current society, many of these ads have moved from mass media sources like magazines and television to social media platforms. Vartanian, Wharton, and Green (2012) propose that individuals who choose to exercise for appearance-related reasons, as opposed to health-related reasons, are more likely to experience higher levels of body dissatisfaction and social physique anxiety, greater instances of disordered eating, and decreased levels of self-esteem and overall psychological well-being. Additional research has also noted that when considering the framework of the Self-Determination Theory, individuals who

exercise for appearance-based reasons are extrinsically motivated (Sebire, Standage, & Vansteenkiste, 2009). While these benefits are no mutually exclusive, findings do indicate that those individuals who display intrinsic motives for exercise, or exercising for health-related benefits, have greater physical self-worth, improved psychological well-being, and decreased exercise anxiety (Sebire, Standage, & Vansteenkiste, 2009). Women may feel inclined to change one's appearance through exercise, or engage in exercise as a way to create the impression that they are striving towards the thin ideal. Researchers propose that as long as women remain under a constant pressure to look thin and attractive, they will continue to exercise for weight control, body tone, and appearance-related reasons (Strelan, Mehaffey, & Tiggemann, 2003). Yet, some studies have demonstrated that exercising for extrinsic, cosmetic reasons does not necessarily prompt a change in the discrepancy between how a woman's actual self and her ideal self—she still remains dissatisfied (Strelan, Mehaffey, & Tiggemann, 2003). It seems that some women are motivated to exercise for appearance-related reasons because they have internalized society's expectations of their bodies, but those who value appearance-related reasons for exercise (weight control, tone, etc.) have increased body dissatisfaction and lower self-esteem (Strelan, Mehaffey, & Tiggemann, 2003). It leads one to question why appearance-related reasons for exercise are positively correlated to body image concerns, if exercise serves as a tool to enhance self-esteem. Sebire, Standage, and Vansteenkiste (2009) indicate that exercise can result in the improvement of body image, but Vartanian and colleagues (2012) indicate that this improvement might be dependent on the motivation behind the exercise. If women are motivated to exercise so that they socially compare more favorably against their peers, particularly on social media, it is possible that their reasons for exercise encourage maladaptive views of the body when a discrepancy is detected.

Individual vulnerability factors serve an important role in understanding the transactional model of social media and body image concerns. By understanding predisposed individual characteristics, I might better be able to grasp how a woman progresses through this model and what particular individual characteristics place women at an increased risk for maladaptive exercise and impression management behaviors. Preexisting factors may make some women more vulnerable for excessively seeking out gratifications or gravitating towards appearance-based social media content that initiates comparison processes.

**Contingent self-esteem and reassurance seeking**. When using social media, users are active participants in the interactive processes that occur. Social media platforms are used as a tool to satisfy needs, gain gratifications, and seek out validation for their proposed impressions (Perloff, 2014). Compulsive reassurance seekers feel the need to constantly verify their value and self-worth (Miura & Yamashita, 2007). Validation, gratification, and reassurance sought through social media are based in one's needs to satisfy, and improve contingent self-esteem. Contingent self-esteem



societal standards for beauty), and (3) appearance (Patrick, Neighbors, & Knee, 2004). Women are subject to consuming images that promote unrealistic standards of appearance, encouraging social comparison processes (Patrick, Neighbors, & Knee, 2004). Social comparisons may prompt body image disturbances, and thus, women who find themselves vulnerable to feeling dissatisfied about their bodies may feel inclined to seek out gratifications from their social media sources in order to escape feeling distressed about their appearance and receive validation about social and physical attractiveness (Perloff, 2014).

Patrick, Neighbors, and Knee (2004) suggest that individuals base their successes on gaining acceptance from others, whether it be by getting a promotion at work, winning a game, or meeting cultural standards of attractiveness. Unlike global self-esteem, contingent self-esteem thrives on obtaining outcomes, meeting standards, and receiving validation (Patrick, Neighbors, & Knee, 2004). If worth is solely based on meeting a standard, women must continuously seek out validation and reassurance from comparative others in order to determine if they are thin enough, attractive enough, or talented enough. Patrick and colleagues (2004) found that when exposed to appearance-related media content, women high in contingent self-esteem were affected more by appearance-related comparisons and upward comparisons were positively associated with negative affect. The appearance-related comparisons were also reported as more automatic in the high contingent self-esteem group (Patrick, Neighbors, & Knee, 2004). Thus, it seems logical that women higher in contingent self-esteem might repeatedly check Facebook after posting a new status, obsessively compare Instagram pictures with others, or follow numerous celebrities on Twitter in order to assess how they might measure up to those they perceive as having a high social status (Perloff, 2014). Social media is a key outlet for achieving this kind of behavior. Women use social media as a tool to not only gain favorable impressions,

but also to garner reassurances that they are meeting societal standards. This type of behavior can be problematic as engaging in social comparisons when high in contingent self-esteem results in decreased positive affect and increased body surveillance and body shame (Patrick, Neighbors, & Knee, 2004). The need to satisfy one's contingent self-esteem through reassurance seeking seems to result in a host of maladaptive behaviors and negative consequences that might only serve to provoke increases in body image disturbance.

Research has yet to determine the link between contingent self-esteem, reassurance seeking, and exercise, but logically, the connection is clear. In order to document self-worth, women must meet society's standard of beauty. One way to achieve this standard is through exercise. Vinkers and colleagues (2012) suggest that individuals who feel poorly about their bodies practice extrinsic motivation when deciding to exercise. Focusing on exercise extrinsically is a means to gain a reward; in this case, improved appearance. Women who exercise for appearance-related reasons value documenting their self-worth through their appearance and thus, worry extensively about how others view their bodies. Taking this context into consideration, exercise is used as a way to alter appearance. So, when one aims to document self-worth through appearance, one might seek out validation on social media by posting about exercise successes, body-focused transformations, or training regimens in order to establish themselves as an exerciser and feed their self-worth in this capacity. Validation from peers might encourage the individual to continue exercise engagement because one has created a favorable impression.

Perloff (2014) suggests that those individuals who are more vulnerable to body image disturbances are more likely to seek out gratifications from different social media sources. This action, which serves to feed contingent self-worth, can be psychologically functional or

dysfunctional, implying that excessive gratification seeking may result in enhanced affect or selfesteem or the adoption of maladaptive and risky behaviors. Needing to document one's selfworth through reassurance seeking can have intrapersonal, interpersonal, and behavioral consequences. Perloff's (2014) research suggests that basing self-worth on the amount of likes, comments, and retweets received is a reality and common practice for many individuals, acting as a strong guide as to how others perceive the individual and how that individual might perceive themselves.

**Social media use.** Social media sites like Facebook, Instagram, and Twitter can serve as outlets for individuals to engage in self-promotion. Social media use differs significantly from normative mass media outlets in five main contexts. First, the interactivity allotted in social media use creates an environment in which the social media user is not only a consumer, but also an initiator and source of content (Perloff, 2014). Second, Sundar and Limperos (2013) suggest that social media allows users to create, customize, and deliver content in an actionable way. No

longer is the		
individual a	IndividualContingentVulnerabilitySelf-esteem	Social media Social, use appearance,
passive-	Internalization reassurance H	(General and Health/Exercise $\rightarrow$ and exercise
receiver in	of thin ideal, Reasons for Exercise)	Specific) comparisons
this process,		
instead the		
individual is	Impression Management	
transformed		Social Media Effects
into a	Exercise behaviors	

Communicator, increasing autonomy over the content consumed and shared (Sundar & Limeros, 2013). Third, Perloff (2014) suggests that due to the interactive nature of social media, these outlets are much more personal, self-centered, and individualistic than conventional mass media outlets. Considering some of the top social media outlets like Facebook and Twitter, the individual is capable of creating a profile, self-disclosing a multitude of information, and uploading a chosen profile picture that will portray a particular image to one's audience. Individuals are able to display as much, or as little, information about the self and social network as desired. Additionally, individuals have control over the images or posts they see, who they choose to accept or reject as "friends" and "followers," and how they choose to voice their opinions. The ability to customize one's experience on social media institutes a much more complex relationship than watching television or reading a magazine. Fourth, social media provides a way for an individual to have a presence in the multimedia world (Perloff, 2014). Through posting photos and modifying photos, creating tweets, and sharing videos, the individual is able to manage one's presence, depicting the self in a particular and chosen way to the specified audience. Leary and Kowalski (1990) suggest that individuals create impressions of all facets of their self-concept from their personal attributes to their attitudes, beliefs, interests, and perceived status. Social media provides a platform for an individual to portray one's desired impression to others, using customizations, editing, and filters to provide the audience with the best image possible. Lastly, while mass media caters to a large audience, social media tends to cultivate an audience of similar peers, and more often than not, actual peers of the user (Perloff, 2014). A social media user has the ability to control one's audience. While this individual might have the potential of reaching millions of other viewers, the audience is typically more compact

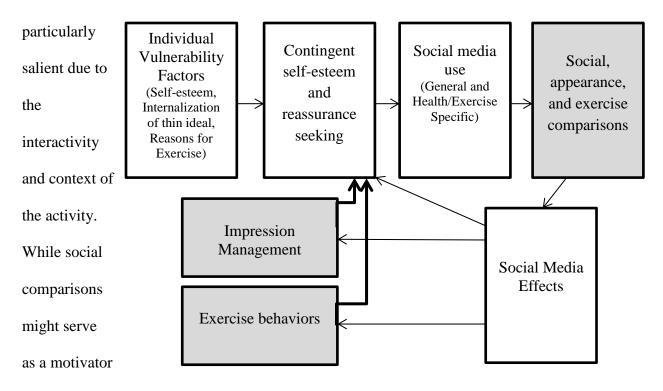
and personal. Considering these five attributes distinguishing social media from mass media, it seems clear as to why so many individuals are attracted to creating a presence on social media.

Using social media allows the individual to create and manage an impression—an impression that can fluctuate and change depending on one's mood, audience, or current experiences. How is social media being utilized in an exercise context though? Researchers found that social media use in health and exercise is most commonly used as an intervention tool, providing a place for discussion boards, online learning modules, and self-report journals (Williams, Hamm, Shulhan, Vandermeer, & Hartling, 2014). In a health intervention context, social media is a popular choice as it has the ability to reach a variety of people, is cost effective, and is easy for users to manage (Williams et al., 2014). Users are becoming more and more engaged with using social media as a tool for exercise thanks in part to the creation of exercise tracking devices such as FitBit, Nike Plus, and My Fitness Pal (Zuckerman & Gal-Oz, 2014). By using these devices, individuals are not only able to track their own exercise engagement, but they can also post results to their social media platforms or compete against friends (Zuckerman & Gal-Oz, 2014).. This type of engagement no longer makes the exercise experience purely personal; it allows others to view, comment on, and track one's exercise behaviors. Divulging one's exercise endeavors on social media opens the door for a new type of impression management—maintaining the impression that one is an exerciser.

As discussed previously, individuals engage in frequent exercise and wear appropriate exercise apparel to create the guise of being an exerciser, as they believe that the label of "exerciser" forms a favorable impression to others in society (Hausenblas, Brewer, & Van Raalte, 2004; Leary & Kowalski, 1990). It seems logical that one way to expose this impression to an audience is through presenting oneself as an exerciser on social media through posts,

photos, and shared or followed content. It is not unrealistic to suggest that often times social media users only post photos or content that increases the desirability of their highlight reel. Generally, users will post photos that make them look good, are appealing to their specified audience, and will gain positive feedback (Kramer & Winter, 2008; Tiggemann & Zaccardo, 2015). Although this is a general behavior, there is a lack of clarity in regards to posting exercise-related content. Additionally, it is unclear as to why some women choose to use, follow, and share content related to certain exercise behaviors such "fitspiration," "thinspiration," clean eating, or belonging to a "fit fam." Along with posting photos and creating posts, social media users also use hashtags as a way to enlarge their viewing audience, promoting more views and commentary on posts. It leads one to question what types of hashtags women are using in conjunction with their constructed impressions and why this is a presence they want to provide to their social media audience. Thus, while some of social media use is related to tracking exercise behavior, it is also possible that social media use is also used to create and maintain the impression that one is an exerciser through content posted and consumed.

Social, appearance, and exercise comparisons. Festinger's (1954) Social Comparison Theory asserts that humans are driven to compare themselves to others in an attempt to assess how they might stand in comparison to others or to gauge their progress towards their ideal self (Craft, et al., 2014; Perfloff, 2014). Social media domains and exercise settings provide a realm for individuals to compare themselves to others socially, physically, and in relation to exercise behavior. When presenting oneself to others, an individual intentionally chooses a particular impression to create and plans how to go about creating that impression (Leary & Kowalski, 1990). This choice in impression may occur in part due to how an individual views themselves in comparison to other individuals. In exercise and social media settings, peer comparisons are



for some, comparisons also contribute to body dissatisfaction, thin ideal internalization, disordered eating, and negative affect (Craft, et al., 2014; Perfloff, 2014). Craft and colleagues (2014) found that often times, body, eating, and exercise comparisons are motivated by the thin ideal internalization, meaning that women engage in these comparisons in order to assess their standing in relation to meeting the thin ideal. Through these comparisons, women understand that they have yet to reach their ideal, and this discrepancy between the ideal self and actual self leads to dissatisfaction with the body (Craft, et al., 2014). It is important to recognize how these comparisons relate to social media and exercise in order to better understand how comparisons influence impression management and exercise behavior.

Hogan (2010) describes engagement on social media as creating both an artifact and exhibition space for one's audience. Profile pages, posted photos, comments, and posts serve as artifacts that remain in the exhibition space for viewing by another at any point in time (Chua & Chang, 2016; Hogan, 2010). While the user might have posted in "real time," the actual post might be viewed retrospectively, which helps shape the audience's overall impression of the user. As a user, one strives to post photos and content that will meet the expectations of their followers and general guidelines of societal members (Chua & Chang, 2016). Thus, presentations of the self become selective and sometimes altered in order to gain a positive reaction from one's peer group. In today's society, Chua and Chang (2016) describe social media networks as a sort of live community where individuals can communicate via posts, share photos, and use profiles to create favorable impressions. The personalization and openness of social media encourages non-anonymity and acts as an extension of one's offline life (Chua & Chang, 2016). Engaging in social media allows an individual to portray themselves in a certain light, while also garnering feedback in the forms of comments and likes. It is this interaction that influence engagement in social comparative processes.

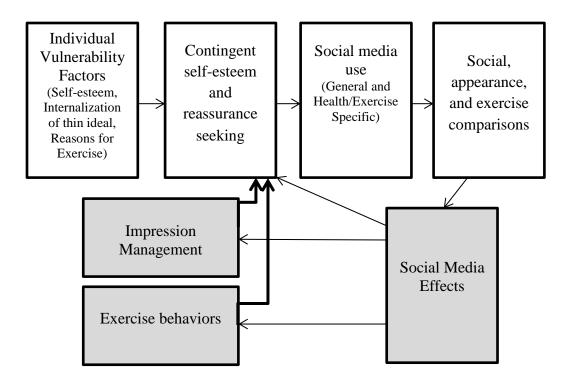
Social media triggers appearance comparisons through the communication of messages that relate to socially-defined ideals of attractiveness. Social media sources are notorious for projecting an unrealistic standard of beauty, implying that women should be ultra-thin, physically appealing, toned, and taut (Perloff, 2014). In today's society, social media makes it easy for an individual to digitally alter a photo to more closely match society's standard of beauty. Airbrushing, digital modification, and the use of filters allow one to re-touch photos, removing blemishes, enlarging breasts, and thinning out torsos to create the ideal photo of perfection (Tiggemann & Slater, & Smyth, 2013). On social media, opportunities for comparison are endless, and many times, women find themselves comparing their own images to images that have been magically re-touched and altered, aggravating body image disturbances (Tiggemann & Slater, & Smyth, 2013). Research suggests that women who perceive that they "fall short" in comparison to others will have increased online and offline body dissatisfaction, envy, and

negative affect (Perloff, 2014; Tiggemann & Zaccardo, 2015). Social media is also particularly salient for social comparisons due to the ease of access it provides. Quick access allows an individual to not only post about themselves, but also survey a variety of other posts in a matter of seconds. As mentioned before, many of these images are digitally altered in some fashion, so an individual often times will compare oneself with an idealized image of another increasing the chance of finding a discrepancy (Tiggemann & Zaccardo, 2015). In addition to comparing images, social media also allows for individuals to "like" and comment on statuses and photos. Results from a qualitative interview revealed that participants associated likes and number of followers/friends as a status symbol and a way to assert validation within their peer group (Chua & Chang, 2016). These participants also reported that the purpose of posting selfies was to obtain as many likes as possible and that if they did not get as many likes as another peer they would delete the photo (Chua & Change, 2016). Gaining likes and comments for posts may be one way to gain validation for the created impression or a sign of accomplishment, but this type of action has also been linked to poor body image (Chua & Chang, 2016; Clark & Tiggemann, 2006).

Just like social media comparisons, comparative processes occur frequently in exercise settings. Frederick and Shaw (1995) reported that women felt less confident and more intimidated when exercising with other women who were wearing physique-revealing exercise apparel. Eklund and Crawford (1994) found that undergraduate women who suffered from higher levels of appearance anxiety paid more attention to their appearance during an aerobics class and were more likely to believe that they were being judged by other women while participating in an aerobic dance class. Salvatore and Marecek (2009) found that some women felt discouraged to life weights at a gym due to evaluation concerns focused both on one's

appearance and competence level. Previous research (Siden, Martin Ginis, & Angove, 2003) has indicated that women have negative feelings about their own bodies when shown exercise videos that portray an instructor and exercise participants with lean, toned, physique salient bodies. To exemplify this, Martin Ginis, Prapavessis, and Haase (2008) showed women two exercise videos: in the first video, the instructor appeared in physique-revealing exercise attire that emphasized the cultural standard of attractiveness; in the second video, the same instructor wore clothing that was physique-concealing. Martin Ginis and colleagues (2008) found that regardless of the video shown, women who believed there was a greater discrepancy between their own body and the body of the instructor reported higher levels of physical unattractiveness, physique anxiety, and body dissatisfaction. It is interesting to note that regardless of the clothing the instructor was wearing, women still perceived the exercise instructor to have a fit and toned body and that their own bodies were less attractive. This implies another cultural assumption that all exercise instructors are "in shape" and therefore have attractive bodies. Thus, the perceptions of what women believe to be true about others in comparison to themselves are almost as powerful, if not more powerful, than the tangible evidence in society.

**Social media effects**. Perloff's transactional model of social media and body image concerns suggests that the combination of vulnerability factors, reassurance seeking, and social media use influences social media content to affect the individual in a particular way, making them more vulnerable to eating disorder symptomatology (or in my conceptualization, certain impression management and exercise behaviors). My conceptualization of the model in this present study suggests exposure and engagement in social media results in changes in affect, social physique anxiety, and body satisfaction. These interconnected constructs are proposed to



play a significant role in how an individual creates and manages impressions and what exercise behaviors the individual chooses to engage in.

Negative social comparisons are thought to result in negative affect, particularly when an individual is low in self-esteem and high in the thin ideal internalization (Perloff, 2014). Negative affect can be characterized as feeling distressed and sad, or engaging in a variety of mood states such as anger, fear and disgust (Watson, Clark, & Tellegen, 1988). Typically, those who experience negative affect have high levels of stress, do not cope well in situations, and report more health complaints (Watson, Clark, & Tellegen, 1988). Positive affect, on the other hand, is characterized as having high energy and concentration, feeling enthusiastic, and being active (Watson, Clark, & Tellegen, 1988). Researchers have found that individuals who create positive self-presentations during interactions are more likely to find themselves in a positive mood state as they are highlighting positive features of the self (Kim & Lee, 2011). When providing an audience with a positive self-representation, it is also more likely that the individual

will gain validation and affirmations being sought, providing emotional stability to the user (Kim & Lee, 2011). In a study examining Facebook use, results demonstrated that user happiness increased when self-presentations on Facebook were positively reaffirmed by friends (Kim & Lee, 2011). Thus, individuals may choose to present themselves positively online because that is a belief they hold about themselves and a belief they want their friends to validate as well. When validation is received, the user reaps the psychological benefits and an increase in positive affect.

Self-presentational concerns also influence perceptions women have about their bodies. In conjunction with affect, body dissatisfaction and social physique anxiety may influence how one presents themselves to others in a public or online domain. Body dissatisfaction can be described as negative attitudes and beliefs towards one's physical body, whereas social physique anxiety (SPA) refers to feeling anxious about one's body due to the perception that their body may be negatively evaluated and judged by others (Hausenblas, Brewer, & Van Raalte, 2004; LePage & Crowther, 2010). Generally, SPA begins when an individual has a distorted perception of one's body, feeling dissatisfied with the shape or size of the body as a whole or particular parts of the body (Thompson & Fleming, 2007). Self-presentational concerns often arise when a woman perceives that her body is on display for others to be evaluated (Thompson & Fleming, 2007). When women feel as though they cannot present themselves in a way that aligns with society's standard of beauty, they experience further body dissatisfaction, self-doubt, and feelings of inadequacy (Hausbenblas, Brewer, & Van Raalte, 2004; Thompson & Fleming, 2007). SPA then results in engagement in maladaptive behaviors including exercising for appearance related reasons, engaging in excessive exercise or unsafe exercise behaviors (such as lifting weights that are too heavy), and adopting disordered eating behaviors (Hausenblas, Brewer, & Van Raalte, 2004). Those experiencing body dissatisfaction and SPA feel the need to

appear successful to others, promoting an image that they are capable and are striving to obtain the thin ideal.

Hausenblas and colleagues (2004) believe that women high in SPA are motivated to exercise for appearance-related reasons due to their desire to obtain the ideal body and relieve stress and anxiety related to their physique. Some women constantly attempt to mold and shape their body weight and size to reach society's ideal picture of attractiveness. It becomes a goal to obtain a thin and toned physique and women therefore choose to engage in exercise for selfpresentational purposes (Hausenblas, Brewer, & Van Raalte, 2004). Self-presentational concerns, in relation SPA and body dissatisfaction, may also deter women from exercising in certain arenas for fear of being evaluated by others in a public setting. Women high in SPA generally prefer to exercise alone as opposed to in groups (Spink, 1992). Additionally, self-presentational anxiety is provoked when women exercise in the presence of others while surrounded by mirrors (Focht & Hausenblas, 2006). Focht & Hausenblas (2006) found that when women exercised in a public, mirrored arena, as opposed to un-mirrored private space, women experienced less pleasure and tranquility during and after the exercise session. Women high in SPA tend to exercise more strenuously in the presence of others (possibly in an attempt to prove their worth) and this has been linked to negative affective states after exercise bouts, presumably due to a lack of enjoyment (Ekkekakis, Hall, & Petruzello, 2005; Focht & Hausenblas, 2006). Generally, exercise has been reported to be strongly associated with increases in positive affect (Reed & Ones, 2006). LePage and Crowther (2010) assessed a sample of undergraduate women and found that women experienced less negative affect and higher levels of positive affect directly following a bout of exercise. Research has also demonstrated a link between positive affective states following bouts of exercise on intention to exercise again an adherence to exercise

programs (Focht & Hausenblas, 2006). Yet, increased levels of body dissatisfaction and SPA, may lead women to engage in exercise for self-presentational purposes only. Participation in exercise for appearance-related reasons can lead to poorer body image, and when women exercise for appearance-related improvements and do not immediately see results, they are instantly disappointed in themselves and their bodies, which can foster appearance anxiety and deter motivation to exercise or decrease the ability to have a positive exercise experience.

Choice of apparel even has an impact on feelings of SPA and body dissatisfaction. Women high in SPA reported preference towards exercising in environments where other exercisers wore physique-concealing as opposed to physique-revealing apparel (Crawford & Eklund, 1994). Similarly, a sample of undergraduate women reported a personal preference to wear loose-fitting as opposed to tight clothing when exercising to hide their physique from evaluation (Eklund & Crawford, 1994). Eklund and Crawford (1994) also found that undergraduate women high in SPA were negatively affected when they perceived that they appeared less fit than other participants in an exercise class, thought obsessively about their bodies and believed they were being judged by others during an exercise class, and were highly aware of, and disliked having, coed participants in their aerobics class. Exercising in environments centered in self-presentation may result in greater feelings of body dissatisfaction, poorer mood states, higher levels of SPA, and motivation to exercise solely for appearancerelated reasons.

It was originally proposed that affect, body (dis)satisfaction, and SPA were effects of social media use. While these constructs are widely understood in the context of exercise and self-presentation, they also might play a large role in our social media experiences. Social comparisons can contribute to body dissatisfaction, SPA, and negative affect. Perloff (2014)

suggests that when exposed to appearance-focused social media content, females might become dissatisfied with their bodies and have an increase in negative affect because appearance is a component, and determinant, of their self-worth. Finding a discrepancy between one's actual self and one's ideal self may lead to engagement in exercise for appearance-related reasons so that when posting on social media in the future, the individual is conveying an impression that is more closely associated with society's perceived ideal of attractiveness. This can be a dangerous cycle to partake in, but it is clear that comparison processes through social media might significantly impact one's mood state and anxiety and dissatisfaction towards one's physical self-concept.

## Purpose

Currently, Perloff's original model, and this study's re-conceptualized model, is conceptual in nature, warranting a need to test the applicability of this model and delve deeper into how this model functions in real world experiences. Although there is a body of literature suggesting a link between exercise behaviors and self-presentation, as well as a previously established connection between mass media and body image concerns, there is a gap in the literature regarding the role of social media in the development of body image concerns, as well as how this form of media shapes self-presentation and exercise behaviors. Thus, considering the modified version of Perloff's model, the overall purpose of this study was to explore how psychosocial factors and social media use influence one's engagement in exercise and impression management. The overarching study purpose was achieved through the completion of two studies. The purpose of Study 1 was to discover how psychosocial behaviors and social media use predict exercise behaviors and engagement in impression management in women. Study 1 utilized a quantitative approach to test the modified Perloff model in a sample of young.

recreationally active women, to gain a better understanding of how, and if, each of the model constructs contributes to engagement in exercise and impression management. The hypotheses for Study 1 were as follows:

- (1) Individual vulnerability factors (global self-esteem, internalization of the thin ideal, and health/fitness, social/enjoyment, and appearance-related reasons for exercise) will significantly predict exercise, impression motivation, and impression construction in females after controlling for age, weight, BMI, race, and ethnicity.
- (2) Contingent self-esteem and reassurance seeking through social media use will significantly predict exercise, impression motivation, and impression construction in females after controlling for age, weight, BMI, race, and ethnicity.
- (3) General social media use and posting health and exercise-related content to social media will significantly predict exercise, impression motivation, and impression construction in females after controlling for age, weight, BMI, race, and ethnicity.
- (4) Social, body, and exercise comparisons will significantly predict exercise, impression motivation, and impression construction in females after controlling for age, weight, BMI, race, and ethnicity.
- (5) Social physique anxiety, body part (dis)satisfaction, and affect will significantly predict exercise, impression motivation, and impression construction in females after controlling for age, weight, BMI, race, and ethnicity.

Building upon Study 1, Study 2 used a combined phenomenological and photo elicitation qualitative approach to gain a better understanding of how this model takes place in real world experiences. The purpose of Study 2 was two-fold. Part 1 of Study 2 aimed to use Leary and Kowalski's (1990) impression management framework and literature regarding reasons for

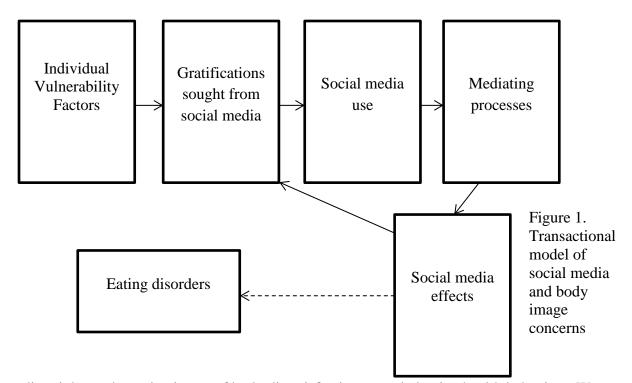
exercise to explore the relationship between exercise behaviors, frequency of social media use, and health and exercise-related content posted to social media. Grounded in impression management framework (Leary & Kowalski, 1990) and the modified version of the transactional model of social media and body image concerns (Perloff, 2014), Part 2 of Study 2 aimed to gain a better understanding of how social media influences women's thoughts, perceptions, and conceptualizations of a healthy body and healthy exercise behaviors. Specifically, Part 2 of this study aimed to assess: (1) how do perceptions of posts/images on social media influence motivation and construction of impressions and engagement in exercise; (2) how do women use social media to construct impressions of themselves in a health and exercise context; and (3) how does social media influence social comparisons and perceptions of one's body. Social media is an outlet that is constantly available and easily accessible to the public. Currently, there is a gap in the literature exploring how women use social media to conceptualize health and how social media consumption and engagement might impact exercise and self-presentational behaviors. This study allowed me to explore, in depth, how perceptions of posts/images on social media influenced motivation and construction of impressions, what kinds of messages women sent about themselves on social media in regards to health and exercise, and how women are influenced by social media sources to engage in particular exercise behaviors. This study shed light on how we can revolutionize the social media experience for women from a health and exercise standpoint, by increasing positive body image perspectives, and changing the overall quality of life for those who might feel the need to conform to societal standards of attractiveness based on the content consumed from their "friend" base.

### Study 1

For many women in Western society, posting a status update, "liking" a photo, or creating a new Pinterest board has become an everyday norm and expectation. Currently, 74% of women who engage in online activity use social media sites, the most popular sites being Facebook, Pinterest, and Instagram (Duggan, 2013). Although 52% of online adults use more than two social media platforms, women are more likely than men to use these social media sites (Duggan, 2013; Perloff, 2014). Previous research suggests that mass media outlets have the potential to influence the perceptions women have about their bodies, leading to the development of body image concerns and eating disorder symptomatology for some (Grabe, Ward, & Hyde, 2008). Despite the popularity of social media, much of the literature in existence on mass media influences examines sources such as magazine ads, television commercials, and music videos. The lack of empirical evidence surrounding social media use and its influence on body image and health behaviors may be due to complexity and interactivity that social media outlets offer.

Social media can be thought of as a highlight reel, displaying the user's best (or worst) moments, photos, and experiences. It permits the individual to create a particular impression that can be viewed by friends and strangers alike, allowing for a plethora of opportunities to socially compare oneself to another, survey photos of others, and consume content that conveys a message related to the cultural ideal of attractiveness (Perloff, 2014). From a socio-cultural perspective, Western culture emphasizes the need for women to obtain an unrealistically thin image, establishing an almost impossible standard to meet without adopting maladaptive behavior patterns (Sabiston & Chandler, 2010). Research suggests that women viewing images of individuals with more neutral body shapes (Grabe, Ward, &

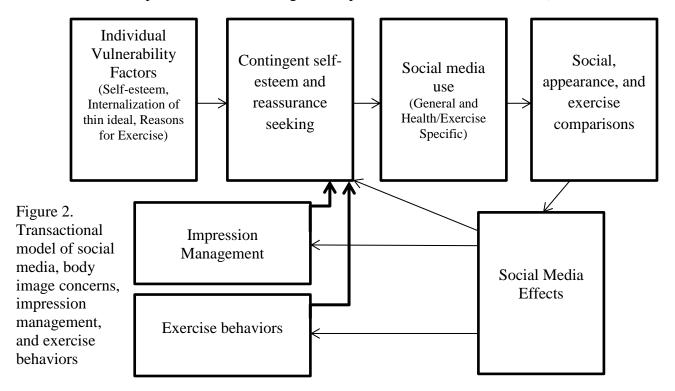
Hyde, 2008). Similar results have been demonstrated with women viewing "thin ideal" images on television commercials and in music videos (Grabe, Ward, & Hyde, 2008). While much of the research on this context stems from a mass media perspective, logically it makes sense that social



media might too be an instigator of body dissatisfaction or maladaptive health behaviors. Women have access to social media outlets at any hour of the day, prompting the consumption of content related to the thin-ideal and the need to create posts that fall in line with society's standards. The pressure to give one's social media world a viable and desirable impression may exert harmful effects on women's physical and mental health. In order to better understand how social media may impact women's physical and mental health, Perloff (2014) developed a model, called the transactional model of social media and body image concerns (see Figure 1). The first part of the model suggests that specific individual factors, such as low self-esteem, put women at risk for developing body image disturbances when engaging in social media use. These predisposing individual characteristics make women more vulnerable to seek out gratification through social media, putting them at further risk for engaging in social and appearance comparisons, which create negative effects on affect and body image (Perloff, 2014). Perloff (2014) suggests that women who are predisposed to individual characteristics such as low self-esteem, centrality of appearance to self-worth, and the internalization of the thin ideal, are more susceptible to viewing appearance-focused social media content that will allow them to experience gratification, reassurance, and validation from others. As women seek out gratification to bolster their self-worth, they engage in particular social media behaviors that allow them to create favorable impressions with their audience, increasing self-esteem and feelings of self-worth. Social media is therefore used as a platform to not only post photos and content about oneself in order to gain validation, but also as a tool to view posts from others and engage in upward and downward social comparisons, often times exacerbating body image disturbance and further need to feel reassured about one's appearance and behaviors (Perloff, 2014).

The current study plans to take a different approach to understand this model, suggesting that individual psychosocial factors in combination with social media engagement will dictate both impression management and exercise behaviors (see Figure 2). The proposed model suggests that women who are predisposed to certain individual vulnerability factors, namely low self-esteem, internalization of the thin-ideal, and appearance-related reasons for exercise, will seek out gratification and validation through their social media usage. Once a woman engages in social media use for validation, she will socially compare herself to other users, resulting in body image and affective disturbances, which will in turn alter how she presents herself to others on social media and the exercise behaviors she chooses to engage in in order to create a "socially acceptable" perception.

Women engage in purposeful exercise for self-presentational reasons in order to obtain an ideal weight, manage an aesthetically appealing appearance, or identify themselves as an exerciser to the public (Hausenblas, Brewer, & Van Raalte, 2004; Leary & Kowalski, 1990). Self-presentation (also referred to as impression management) refers to a process in which individuals attempt to control and manage the impressions others form of them (Hausenblas,



Brewer, & Van Raalte, 2004; Leary & Kowalski, 1990). Self-presentation is thought to be a powerful indicator of exercise engagement, affecting an individual's cognitions, attitudes, and behaviors, as one attempts to monitor how other's perceive and evaluate one's presence (Hausenblas, Brewer, & Van Raalte, 2004). Individuals engage in impression management to create favorable impressions of themselves and control how other individuals might perceive their public persona in order to "save face" (Leary & Kowalski, 1990). Engaging in impression management is a prevalent occurrence in daily life, and in social interactions, individuals are concerned with the impressions others have of them.

Impression motivation typically stems from a need to manage how one is coming across to others, especially when attempting to maximize potential rewards and minimize costs (Schlenker, 1980). Leary and Kowalski (1990) suggest individuals are motivated to convey the right impression in order to boost self-esteem or obtain positive, uplifting feedback from others. Often times individuals are fearful of receiving negative evaluations and are therefore motivated to act in a way that will procure a positive reaction from another. Typically individuals perceive themselves as falling somewhere along a spectrum in regards to the impressions they find acceptable to present to the public (Leary & Kowalski, 1990). When an individual encounters a real or perceived discrepancy between one's current image and the image one wishes to project that individual will be motivated to engage in impression management, finding a way to bring one's identity back in line with projected spectrum.

While impression motivation might stem from a desire to create a particular identity, impression construction will dictate the behaviors one engages in to create that specific identity. Leary and Kowalski (1990) suggest that, in an attempt to create a desired identity, a person will behave publicly in a manner consistent with that identity, claiming to have attributes that fall in line with the impression one is trying to create. Individuals often times try to occupy specific social roles, adopting characteristics and personality traits related to those roles, in order to portray a desirable social image. One might choose to engage in impression construction in order to identify with a popular public image, portray particular societal values, or act in preference of a significant other (Leary & Kowalski, 1990).Some women may engage in exercise as a means to present themselves to the public as an exerciser. Research suggests that individuals engage in frequent exercise and wear appropriate exercise apparel to create the guise of being an exerciser, as they believe that the label of "exerciser" forms a favorable impression to others in society

(Hausenblas, Brewer, & Van Raalte, 2004; Leary & Kowalski, 1990). Previous research has indicated that individuals who are labeled as exercisers create the impression of being more confident, harder working, fitter, stronger, healthier, and more attractive than their non-exerciser counterparts (Martin, Sinden, & Fleming, 2000). Thus, logically it makes sense that a woman might want to present herself on social media as an exerciser to demonstrate her participation in, and knowledge of, health behaviors as others will view this as a favorable mannerism.

Considering the strong link that already exists between self-presentation and exercise behaviors, it was important to explore how these behaviors might be dictated by individual psychosocial factors and social media use. The re-conceptualization of Perloff's transactional model of social media and body image concerns aimed to test how individual vulnerability characteristics, reassurance seeking due to a contingent self-worth, social media use, and effects of social media (see Figure 2) might predict engagement in exercise and impression management. While the model contains a cluster of constructs, it is important to understand the interconnectivity of these constructs and how they interact progressively and continuously in this model.

Interaction in a social media domain requires reciprocity between an individual and that individual's chosen audience. Social media is a place to document one's self-worth, thus variables such as low self-esteem, internalization of the thin-ideal, and having appearance-related reasons for exercise may influence a woman to not only gravitate towards certain types of social media sources (i.e. appearance-related content), but also create impressions that portray societal ideals to the real or imagined viewing audience (Perloff, 2014). Perloff (2014) finds predisposing individual characteristics to be central to understanding how social media may influence body image perceptions. Having a certain set of predisposed characteristics, particularly low self-

esteem, internalization of the thin-ideal, and appearance-related reasons for exercise, may encourage women to engage in social comparisons on social media and seek out reassurance and validation particularly when it comes to the impressions they are trying to portray to their audience (Perloff, 2014). Social media sites are meant to allow growth in interpersonal relationships. By engaging in social media through posting photos, blogs, or status updates, an individual may become aware of personal shortcomings or deficiencies, in turn, lowering selfesteem (Gonzales & Hancock, 2011). It is also plausible that an individual may frame themselves in a way that is positively biased, garnering positive feedback and praise from their peers which will in turn raise self-esteem (Gonzales & Hancock, 2011). In his Hyperpersonal Model, Walther (1996) suggests that when using social media, individuals have the ability to selectively selfpresent themselves to their audience. Thus, when posting photos, status updates, or tweets, the user is able to carefully select how one's "highlight reel" might appear to others, making edits and emphasizing positive features of the self. Gonzales and Hancock (2011) suggest that optimizing one's selective self-presentation on social media impacts the attitudes an individual has about one's own self-concept and self-esteem.

Schlenker (1980) believed that self-esteem stems from an individual's desire to seek out superiority over others. In this context, one's evaluation of the self depends on how one socially compares to others and whether or not one is rated favorably in relation to another (Schlenker, 1980). One way in which women might strive to enhance self-esteem is by addressing how they "stack up" against other women in society in regards to their appearance. When women decide to buy into socially defined ideals of attractiveness, they begin to engage in behaviors to meet these ideals (Thompson & Stice, 2001). Many women turn to exercise to help shape and transform their bodies, particularly participating in exercise for appearance-related reasons (Greenleaf,

2005; Prichard & Tiggemann, 2008). When women engage in exercise for appearance-related reasons, they aim to lose weight, improve body tone, and improve attractiveness in order to adhere to societal standards of beauty and sexual desirability (Strelan, Mehaffey, & Tiggemann, 2003). Fitness and media ads portraying the "thin ideal" reinforce society's rigid standards for attractiveness, prompting women to engage in behaviors to alter their appearance to help themselves look like the woman on the ad (Thompson & Stice, 2001). It is important to note that in current society, many of these ads have moved from mass media sources like magazines and television to social media platforms. Vartanian, Wharton, and Green (2012) propose that individuals who choose to exercise for appearance-related reasons, as opposed to health-related reasons, are more likely to experience higher levels of body dissatisfaction and social physique anxiety, greater instances of disordered eating, and decreased levels of self-esteem and overall psychological well-being. If women are motivated to exercise so that they socially compare more favorably against their peers, particularly on social media, it is possible that their reasons for exercise encourage maladaptive views of the body when a discrepancy is detected.

Perloff suggests that individual vulnerability factors make woman more susceptible to certain social media behaviors, particularly reassurance seeking. Social media platforms are used as a tool to satisfy needs, gain gratifications, and seek out validation for their proposed impressions (Perloff, 2014). Compulsive reassurance seekers feel the need to constantly verify their value and self-worth (Miura & Yamashita, 2007). Validation, gratification, and reassurance sought through social media are based in one's needs to satisfy, and improve contingent selfesteem. Contingent self-esteem refers to the tendency to base one's self-worth on (1) other's evaluations, (2) meeting particular expectations or standards (i.e. societal standards for beauty), and (3) appearance (Patrick, Neighbors, & Knee, 2004). Women are subject to consuming

images that promote unrealistic standards of appearance, encouraging social comparison processes (Patrick, Neighbors, & Knee, 2004). Social comparisons may prompt body image disturbances, and thus, women who find themselves vulnerable to feeling dissatisfied about their bodies may feel inclined to seek out gratifications from their social media sources in order to escape feeling distressed about their appearance and receive validation about social and physical attractiveness (Perloff, 2014). Women who exercise for appearance-related reasons value documenting their self-worth through their appearance and thus, worry extensively about how others view their bodies (Vinkers, Evers, Adriaanse, & de Ridder, 2012). Taking this context into consideration, exercise is used as a way to alter appearance. So, when one aims to document selfworth through appearance, one might seek out validation on social media by posting about exercise successes, body-focused transformations, or training regimens in order to establish themselves as an exerciser and feed their self-worth in this capacity. Validation from peers might encourage the individual to continue exercise engagement because one has created a favorable impression.

Now more than ever women are using social media to seek out reassurance, due to its efficiency and ease of access. Social media can be defined as an internet-based website or application that allows individuals to initiate conversations, network with others, and participate in the consumption or dissemination of consumer-generated content (Xiang & Gretzel, 2010). Blackshaw (2006) further describes social media as "media impressions created by consumers, typically informed by relevant experience, and archived or shared online for easy access by other impressionable consumers" (paragraph 4). Social media users are able to "post," "blog," "like," "tweet," "follow," and "tag," on various social media platforms including Twitter, Instagram, Facebook, and personal blogging websites. Social media sites often times allow an individual to

constantly engage in self-promoting behaviors. Social media use differs significantly from normative mass media outlets in five main contexts.

First, the interactivity allotted in social media use creates an environment in which the social media user is not only a consumer, but also an initiator and source of content (Perloff, 2014). Second, Sundar and Limperos (2013) suggest that social media allows users to create, customize, and deliver content in an actionable way. No longer is the individual a passivereceiver in this process, instead the individual is transformed into a communicator increasing autonomy over the content consumed and shared (Sundar & Limeros, 2013). Third, Perloff (2014) suggests that due to the interactive nature of social media, these outlets are much more personal, self-centered, and individualistic than conventional mass media outlets. Considering some of the top social media outlets like Facebook and Twitter, the individual is capable of creating a profile, self-disclosing a multitude of information, and uploading a chosen profile picture that will portray a particular image to one's audience. Individuals are able to display as much, or as little, information about the self and one's circle of friends as desired. Additionally, individuals have control over the images or posts they see, who they choose to accept or reject as "friends" and "followers," and how they choose to voice their opinions. The ability to customize one's experience on social media institutes a much more complex relationship than watching television or reading a magazine.

Fourth, social media provides a way for an individual to have a presence in the multimedia world (Perloff, 2014). Through posting photos, creating tweets, and sharing videos, the individual is able to manage one's presence, depicting the self in a particular and chosen way to the specified audience. Leary and Kowalski (1990) suggest that individuals create impressions of all facets of their self-concept from their personal attributes to their attitudes, beliefs, interests,

and perceived status. Social media provides a platform for an individual to portray one's desired impression to others, using customizations, editing, and filters to provide the audience with the best image possible. Lastly, while mass media caters to a large audience, social media tends to cultivate an audience of similar peers, and more often than not, actual peers of the user (Perloff, 2014). A social media user has the ability to control one's audience. While this individual might have the potential of reaching millions of other viewers, the audience is typically more compact and personal. Considering these five attributes distinguishing social media from mass media, it seems clear as to why so many individuals are attracted to creating a presence on social media to promote their health and exercise behaviors.

Using social media allows the individual to create and manage an impression—an impression that can fluctuate and change depending on one's mood, audience, or current experiences. Festinger's (1954) Social Comparison Theory asserts that humans are driven to compare themselves to others in an attempt to assess how they might stand in comparison to others or to gauge their progress towards their ideal self (Craft, et al., 2014; Perfloff, 2014). Social media domains and exercise settings provide a realm for individuals to compare themselves to others socially, physically, and in relation to exercise behavior. When presenting oneself to others, an individual intentionally chooses a particular impression to create and plans how to go about creating that impression (Leary & Kowalski, 1990). This choice in impression may occur in part due to how an individual views themselves in comparison to other individuals. In exercise and social media settings, peer comparisons are particularly salient due to the interactivity and context of the activity. While social comparisons might serve as a motivator for some, comparisons also contribute to body dissatisfaction, thin ideal internalization, disordered eating, and negative affect (Craft, et al., 2014; Perfloff, 2014). Craft and colleagues (2014) found

that often times, body, eating, and exercise comparisons are motivated by the thin ideal internalization, meaning that women engage in these comparisons in order to assess their standing in relation to meeting the thin ideal. Through these comparisons, women understand that they have yet to reach their ideal, and this discrepancy between the ideal self and actual self leads to dissatisfaction with the body (Craft, et al., 2014). It is important to recognize how these comparisons play out in a social media and exercise context in order to better understand how comparisons influence impression management and exercise behavior.

As a user, one strives to post photos and content that will meet the expectations of their followers and general guidelines of societal members (Chua & Chang, 2016). Hogan (2010) describes engagement on social media as creating both an artifact and exhibition space for one's audience. Profile pages, posted photos, comments, and posts serve as artifacts that remain in the exhibition space for viewing by another at any point in time (Chua & Chang, 2016; Hogan, 2010). While the user might have posted in "real time," the actual post might be viewed retrospectively, which not only helps shape the audience's overall impression of the user, but also allows the user to reflect on posts previously made in an act of comparison. Thus, presentations of the self become selective and sometimes altered in order to gain a positive reaction from one's peer group. Researchers have found that individuals who create positive selfpresentations during interactions are more likely to find themselves in a positive mood state as they are highlighting positive features of the self (Kim & Lee, 2011). When providing an audience with a positive self-representation, it is also more likely that the individual will gain validation and affirmations being sought, providing emotional stability to the user (Kim & Lee, 2011). In a study examining Facebook use, results demonstrated that user happiness increased when self-presentations on Facebook were positively reaffirmed by friends (Kim & Lee, 2011).

Thus, individuals may choose to present themselves positively online because that is a belief they hold about themselves and a belief they want their friends to validate as well. When validation is received, the user reaps the psychological benefits and an increase in positive affect.

Self-presentational concerns also influence perceptions women have about their bodies. In conjunction with affect, body dissatisfaction and social physique anxiety may influence how one presents themselves to others in a public or online domain. Body dissatisfaction can be described as negative attitudes and beliefs towards one's physical body, whereas social physique anxiety (SPA) refers to feeling anxious about one's body due to the perception that their body may be negatively evaluated and judged by others (Hausenblas, Brewer, & Van Raalte, 2004; LePage & Crowther, 2010). Generally, SPA begins when an individual has a distorted perception of one's body, feeling dissatisfied with the shape or size of the body as a whole or particular parts of the body (Thompson & Fleming, 2007). Self-presentational concerns often arise when a woman perceives that her body is on display for others to be evaluated (Thompson & Fleming, 2007). When women feel as though they cannot present themselves in a way that aligns with society's standard of beauty, they experience further body dissatisfaction, self-doubt, and feelings of inadequacy (Hausbenblas, Brewer, & Van Raalte, 2004; Thompson & Fleming, 2007). SPA then results in engagement in maladaptive behaviors including exercising for appearance related reasons, engaging in excessive exercise or unsafe exercise behaviors (such as lifting weights that are too heavy), and adopting disordered eating behaviors (Hausenblas, Brewer, & Van Raalte, 2004). Those experiencing body dissatisfaction and SPA feel the need to appear successful to others, promoting an image that they are capable and are striving to obtain the thin ideal.

Hausenblas and colleagues (2004) believe that women high in SPA are motivated to exercise for appearance-related reasons due to their desire to obtain the ideal body and relieve stress and anxiety related to their physique. Some women constantly attempt to mold and shape their body weight and size to reach society's ideal picture of attractiveness. It becomes a goal to obtain a thin and toned physique and women therefore choose to engage in exercise for selfpresentational purposes (Hausenblas, Brewer, & Van Raalte, 2004). It was originally proposed that affect, body (dis)satisfaction, and SPA were effects of social media use. While these constructs are widely understood in the context of exercise and self-presentation, they also might play a large role in our social media experiences. Social comparisons can contribute to body dissatisfaction, SPA, and negative affect. Perloff (2014) suggests that when exposed to appearance-focused social media content, females might become dissatisfied with their bodies and have an increase in negative affect because appearance is a component, and determinant, of their self-worth. Finding a discrepancy between one's actual self and one's ideal self may lead to engagement in exercise for appearance-related reasons so that when posting on social media in the future, the individual is conveying an impression that is more closely associated with society's perceived ideal of attractiveness. This can be a dangerous cycle to partake in, but it is clear that comparison processes through social media might significantly impact one's mood state and anxiety and dissatisfaction towards one's physical self-concept.

Considering the interconnectivity of the model constructs, and the progressive nature of the proposed model, it seems that this model may be more than just a conceptualization. Yet, to date, it is unknown if this model has ever been tested to determine how much each of these constructs might contribute to body image disturbance, impression management, and exercise engagement. Thus, in accordance with the re-conceptualized transactional model of social media

and body image concerns proposed by the principal investigator, the aim of Study 1 was to assess the progressive nature of the model, extending it beyond its conceptual framework. I sought to determine if individual vulnerability factors make a person more susceptible to social media engagement, and how patterns of social media engagement influence exercise behaviors and impression management on social media platforms. Specifically, I aimed to discover how psychosocial behaviors and social media use predict exercise behaviors and engagement in impression management in women. The hypotheses for this study were as follows:

- (1) Individual vulnerability factors (global self-esteem, internalization of the thin ideal, and health/fitness, social/enjoyment, and appearance-related reasons for exercise) will significantly predict exercise, impression motivation, and impression construction in females after controlling for age, weight, BMI, race, and ethnicity.
- (2) Contingent self-esteem and reassurance seeking through social media use will significantly predict exercise, impression motivation, and impression construction in females after controlling for age, weight, BMI, race, and ethnicity.
- (3) General social media use and posting health and exercise-related content to social media will significantly predict exercise, impression motivation, and impression construction in females after controlling for age, weight, BMI, race, and ethnicity.
- (4) Social, body, and exercise comparisons will significantly predict exercise, impression motivation, and impression construction in females after controlling for age, weight, BMI, race, and ethnicity.
- (5) Social physique anxiety, body part (dis)satisfaction, and affect will significantly predict exercise, impression motivation, and impression construction in females after controlling for age, weight, BMI, race, and ethnicity.

### Method

# **Participants**

Participants for this study were 605 recreationally active females between the ages of 18-35. In this study, recreationally active was defined as females engaging in 30 minutes of purposeful exercise at least two times per week. Participants acknowledged having a social media account with at least one social media platform (i.e. Twitter, Facebook, Instagram, etc.) and they acknowledged accessing at least one of their social media accounts a minimum of five times per day. The above measures specific the inclusion criteria for this study. The age range of 18-35 was chosen based on statistics from the Pew Research Center (Hampton, Goulet, Rainie, & Purcell, 2011). The Pew Research Center found that 49%, 60%, and 56% of adults between the ages of 18-35 use Facebook, Twitter, and other social networking sites, respectively (Hampton, Goulet, Rainie, & Purcell, 2011). Considering the popularity of social media amongst women in this age range, the specified age range of 18-35 was considered appropriate to explore for this study. Participants were excluded from this study if they were male, pregnant, under the age of 18 or over the age of 35, were not physically active at least two times per week for 30 minutes, were not active social media users or consumers, and were currently being treated for an eating disorder or exercise addiction.

### **Recruitment Strategy and Sample Characteristics**

Of the 605 participants, 42.98% of them were recruited via flyers that were placed around a university campus, email, social media, and word of mouth. I placed an announcement containing the inclusion criteria, survey link, and password on her own social media platforms including Facebook, Instagram, and Twitter. I also posted the study announcement in a variety of public Facebook exercise groups including: The Badgerland Striders, Badger CrossFit, Alpha

Gamma Delta International Sorority, Ultimate U Total Health, Wisconsin Athletic Club, Plano Pacers Running Club, Dallas Running Club, Tidewater Striders Running Club, Run JunkEes Run Club, and the International Society of Sports Nutrition. The remaining 57.02% participants were recruited for me via a survey company called Qualtrics. The use of Qualtrics was made possible through a grant provided to me by University of Wisconsin-Milwaukee's College of Health Sciences. Prior to distributing the survey, Qualtrics was given specific and detailed instructions regarding the inclusion and exclusion criteria for this study. Participants that failed to meet the inclusion criteria were thanked for their time and directed to the end of the survey.

Demographic information was self-reported by the participants. The mean age of the participants was 27.43 (SD = 4.43 years) years. Their ethnicities were as follows: 86.6% reported not being Hispanic/Latino, 9.8% reported being Hispanic/Latino, and 3.6% of the women did not respond to this question. Of the 605 women surveyed, their self-reported races were as follows: 79.5% White, 9.9% Black or African American, 4.6% Asian, 2.8% Multiple Races, 1.3% American Indian or Alaskan Native, 0.5% Hispanic, 0.4% Middle Eastern, 0.3% Native Hawaiian or Pacific Island, 0.2% Aborigine, 0.2% Spanish, and 0.2% did not respond. The mean body mass index (BMI) for this sample was 26.3 (SD = 8.3) kg/m<sup>2</sup>. The mean height was 64.68 inches (SD = 3.48 inches). The mean weight for this sample was 153.54 lbs. (SD = 43.25 lbs.). On average, women in this sample exercised 4.48 days per week (SD = 1.47 days). A summary of the characteristics for this sample can be found in Table 1.

### Measures

*Demographics and screening questionnaire*. Participants were asked to complete a short demographics questionnaire in order to collect descriptive information about the sample (Appendix A). Items on this questionnaire included, age, weight, height, and race/ethnicity.

Weight and height were used to calculate each participants' BMI via the following equation: {[weight in pounds/(height in inches)<sup>2</sup>]703}.

Additionally, at the end of the demographics questionnaire, participants were asked to respond to five questions that served to screen out those who did not meet the inclusion criteria (Appendix A). Participants were asked about their frequency of exercise, frequency of social media use, and if they were currently pregnant, being treated for an eating disorder, or being treated for exercise addiction. Those participants that met all five inclusion criteria were prompted to complete the remainder of the study. The demographics and inclusion criteria questionnaire were the first measure completed by all participants who took the survey.

Self-esteem. Global self-esteem was assessed using the Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965; Appendix B). The RSE is a 10 item, self-report measure; participants respond to items based on a four-point Likert-type scale, using the anchors *strongly agree* to *strongly disagree*. Example items include, "On the whole, I am satisfied with myself," and "I certainly feel useless at times." To obtain an RSE score, items are first assigned their appropriate values (values range from 0 to 3; negatively worded items are reverse scored), then all items are summed to create a total score. Scores range from 0-30, with higher scoring indicating greater levels of global self-esteem. Previous research has indicated adequate test-retest reliability with scores ranging from 0.82 during a one week testing interval to 0.88 during a two week testing interval (Fleming & Courtney, 1984; Silber & Tippett, 1965). Sufficient internal consistency is indicated with Cronbach's alpha for various samples ranging from 0.77 to 0.92 (Blascovich & Tomaka, 1993; Dobson, Goudy, Keith, & Powers, 1979; Rosenberg, 1979; Rosenberg, 1986). Cronbach's alpha for this sample was 0.658. Evidence of construct validity has been demonstrated as the RSE correlates strongly with other self-esteem measures in the predicted

direction (Rosenebrg, 1979). Fleming and Courtney (1984) reported significant, negative relationships between self-esteem and anxiety (r = -0.64) and depression (r = -0.54), and significant, positive relationships between self-esteem and self-regard (r = 0.78), social confidence (r = 0.51), and physical appearance (r = 0.42).

Appearance ideals. Societal and interpersonal aspects of appearance ideals was measured using the Sociocultural Attitudes Towards Appearance Questionnaire, fourth revision (SATAQ-4; Schaefer et al., 2015; Appendix C). The SATAQ-4 is a 22 item self-report questionnaire; participants respond to items based on a 5-point Likert-type scale, ranging from *definitely* disagree (1) to definitely agree (5). The SATAQ-4 measures the following five constructs: (1) internalization of the thin ideal and low body fat (ex: "I want my body to look very thin"); (2) internalization of the muscular/athletic ideal (ex: "It is important for me to look athletic"); (3) pressure from family members to look a certain way (ex: "I feel pressure from my family members to look thinner"); (4) pressure from peers to look a certain way (ex: "My peers encourage me to get thinner"); (5) pressure from the media to look a certain way (ex: "I feel pressure from the media to improve my appearance"). Items are summed to create a total score, higher scores indicating greater appearance-related sociocultural influence. Schaefer and colleagues (2015) reported adequate internal consistency (Cronbach's alpha = 0.85 to 0.96) in a large sample of U.S. college women, international women, and U.S. men. Cronbach's alpha for this sample was 0.914. Evidence of convergent validity for internalization of the thin ideal/low body fat (r's = 0.53 to 0.63), internalization of the muscular/athletic ideal (r's = 0.12 to 0.26), pressure from family (r's = 0.37 to 0.47), pressure from peers (r's = 0.41 to 0.46), and pressure from the media (r's = 0.51 to 0.53) has been demonstrated by significant, positive correlations with measures of disordered eating (Schaefer et al., 2015). Additionally, internalization of the

thin ideal/low body fat (r's = -0.37 to -0.43 and -0.25 to -0.39), pressure from family (r's = -0.29 to -0.45 and -0.21 to -0.33), pressure from peers (r's = -0.29 to -0.42 and -0.22 to -0.31), and pressure from the media (r's = -0.34 to -0.41 and -0.25 to -0.31) demonstrated significant, negative associations with both appearance evaluation and self-esteem measures respectively (Schaefer, et. al, 2015).

Reasons for exercise. Reasons for exercise was assessed using the Reasons for Exercise Inventory (Silberstein, Striegel-Moore, Timko, & Rodin, 1988; Appendix D). In this 24 item self-report questionnaire, participants respond to items assessing to what extent each item is an important reason for them to exercise using a 7-point, Likert-type scale with anchors ranging from not at all important (1) to extremely important (7). Example items include, "To be slim," and "To meet new people." A score for this measure is created by averaging the ratings of all item responses. The inventory assesses seven areas for exercise: exercising for weight control, fitness, health, improving body tone, improving overall physical attractiveness, improving mood, and enjoyment. Researchers have found evidence to condense these seven areas into the following four factors to improve internal consistency: exercising for (1) fitness/health management, (2) appearance/weight management, (3) stress/mood management, and (4) socialization (Cash, Novy, & Grant, 1994). O'Hara, Cox, and Amorose (2014) further compartmentalized these groupings to reflect the following categories: (1) health and fitness, (2) appearance reasons for exercise, and (3) mood and enjoyment. These subscales used by O'Hara and colleagues (2014) were reflected in the present study. Previous researchers demonstrate adequate internal consistency indicating Cronbach's alphas = 0.91 for health/fitness factor, 0.89 for appearance/weight factor, 0.88 for stress/mood factor, and 0.73 for socialization factor in a sample of college women (Cash, Novy, & Grant, 1994). In its entirety inventory had a

Cronbach's alpha of 0.91, further demonstrating internal consistency (Cash, Novy, & Grant, 1994). Cronbach's alpha for this sample was 0.899 when taking into consideration the scale as a whole. In this sample, Cronbach's alpha was 0.829 for the appearance reasons for exercise subscale, 0.912 for the health and fitness subscale, and .754 for the mood and enjoyment subscale. The Reasons for Exercise Inventory was also positively, significantly correlated with measures of exercise frequency (r = 0.23) and body-image distress (r = 0.31). Additionally, appearance/weight management was positively, significantly related to exercise frequency (r = 0.33) and body image distress (r = 0.47), and significantly, negatively associated with body satisfaction (r = -.40).

*Contingent self-esteem.* Contingent self-esteem, which is a type of self-esteem associated with evaluating oneself against a certain standard or objective, was measured using the *Contingent Self-Esteem Scale* (Kernis, 2003; Paradise & Kernis, 1999; Appendix E). The Contingent Self-Esteem Scale is a self-report measure containing 15 items. Participants respond to items based on a 5-point, Likert-type scale, with anchors ranging from *not at all like me* (1) to *very much like me* (5). Example items include, "An important measure of my worth is how competently I perform," and "Even in the face of failure, my feelings of self-worth remain unaffected." A total score is obtained by reverse scoring appropriate items and then summing all items. The scores range between 15 and 75 with higher scores indicating greater contingent self-esteem. Previous researchers reported high internal consistency for this measure, indicating Cronbach's alpha between 0.81 and 0.85 (Patrick, Neighbors, & Knee, 2004; Wouters et al., 2013). Cronbach's alpha for this sample was 0.835. In terms of validity, researchers have found this measure to relate negatively to authenticity (r = -0.58), awareness (r = -0.58), unbiased

processing (r = -0.43), behavior (r = -0.56), and relational orientation (r = -0.34) (Kernis & Goldman, 2006).

*Reassurance seeking via social media.* In order to assess reassurance seeking on social media, a modified version of the Facebook Reassurance Seeking Scale (Clerkin, Smith, & Hames, 2013; Appendix F) was used. The scale is meant to assess online reassurance seeking, or how much importance individuals place on receiving commentary from others for their posts on social media. The modified scale contains 5 items, and is measured using a 7-point, Likert-type scales with anchors ranging from strongly disagree (1) to strongly agree (7). The original version of the scale, which was provided to me by Clerkin, sought to measure Facebook use only, whereas this modified version sought to assess general social media use (i.e. Facebook, Twitter, Instagram, etc.). For example, the original version of an item read, "I update my Facebook Status multiple times per day." The item was modified for this study to read, "I update my social media accounts multiple times per day." The original version, created by Clerkin, Smith, and Hames (2013), exhibited acceptable test-retest reliability (average Cronbach's alpha was 0.66), and a positive, significant correlation with the Depressive Interpersonal Relationship Inventory—Reassurance Seeking Subscale (r's between 0.31 and 0.33 at Time 1 and Time 2, p<.01). Cronbach's alpha for this sample was 0.632.

Social media use. Social media use was assessed using a modified version of the *10-item Facebook Behavior Measure* (Carpenter, 2012; Compiet, 2013; Appendix G). In its original form, this measure contained four subscales: (1) frequency of Facebook use, (2) Facebook monitoring, (3) social support seeking, and (4) social support provision (Carpenter, 2012). Compiet (2013) added three additional subscales to this measure: (5) attitude towards a large number of Facebook friends, (6) self-promotion on Facebook and (7) self-promotion with

Facebook pictures. For the purposes of this study, the term "Facebook" will be replaced with the term "social media" in order to encompass general social media use. For example, the question "How often do you use Facebook?" will change to "How often do you use social media?" Additionally, in order to gather information related to posting health and fitness-related content on social media, I duplicated the first subscale, frequency of Facebook use, and modified questions so that they related specifically to posting health and fitness-related content. For example, the item "How often do you update your status" became "How often do you update your status on social media with content related to health or fitness?" This self-report measure contains 45 items; participants respond on a 6-point, Likert-type scales with anchors ranging from (1) never to (6) all the time. Previously, Compiet (2013) reported Cronbach's alpha for the seven subscales ranging from 0.69 (self-promotion with Facebook pictures) to 0.87 (social support seeking). Complet (2013) also reported adequate construct validity (CFI = 0.87; RMSEA = 0.05). Carpenter demonstrated similar findings with his four subscale measure (CFI = 0.93, RMSEA = 0.09). Cronbach's alpha for this sample for general social media use scale was 0.963. Cronbach's alpha for the created subscale specific to posting health and exercise-related content on social media was 0.933 for this sample. When the Cronbach's alpha was calculated for the original scale and the additional subscale combined, the result was 0.967.

*Appearance and social comparisons*. Appearance comparisons was assessed using the *Physical Appearance Comparison Scale-Revised* (PACS-R; Schaefer & Thompson 2014; Appendix H). The PACS-R measures the tendency to which one compares oneself with others, and it is an extension of the original 5-item Physical Appearance Comparison Scale (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999; Thompson, Heinberg, & Tantleff-Dunn, 1991). This self-report measure contains 11 items; participants respond on a 5-point, Likert-type scale with

anchors ranging from *never* (0) to *always* (4). Example questions include, "When I'm with a group of friends, I compare my body size to the body size of others," and "When I'm out in public, I compare my body size to the body size of others." A total score is created by summing all items; higher scores indicate a greater tendency to compare one's appearance to others. Schaefer and Thompson (2014) exhibited acceptable reliability (Cronbach's alpha = 0.97). Cronbach's alpha for this sample was 0.972. Additionally, Schaefer and Thompson (2014) demonstrated convergent validity in a sample of 598 undergraduate women; the PACS-R was positively associated with eating pathology (*r*'s range from 0.48-0.71), internalization of appearance ideals (*r*'s range from 0.13-0.63), and appearance-related pressures from peers, family, and the media (*r*'s range from 0.34-0.57), and negatively associated with measures of body satisfaction (r = -0.55) and self-esteem (r = -0.39).

Social comparison behavior was assessed using the *Body, Eating, and Exercise Comparison Orientation Measure* (BEECOM; Fitzsimmons-Craft, Bardone-Cone, & Harney, 2012; Appendix I). The BEECOM is an 18 item, self-report measure, in which participants to respond to items related to social comparison tendencies on a 7-point, Likert-type scale. Questions are anchored with the responses *never* (1) to *always* (7). The measure contains three subscales: (1) Body Comparison Orientation (6 items), (2) Eating Comparison Orientation (6 items), and (3) Exercise Comparison Orientation (6 items). For this study, only the *Body Comparison Orientation* and the *Exercise Comparison Orientation* will be used. Example items include, "I pay attention to whether or not I am as thin as, or thinner than, my peers," and "I pay close attention when I hear peers talking about exercise (in order to determine if I am exercising as much as they are)." This measure is scored by summing all items to create a total score, or summing items in each separate subscale to create a total subscale score. Higher scores indicate greater engagement in body and exercise comparisons. Cronbach's alpha was reported at 0.96 for total scale, 0.94 for Body Comparison Orientation, 0.94 for Eating Comparison Orientation, and 0.93 for Exercise Comparison Orientation (Fitzsimmons-Craft, Bardone-Cone, & Harney, 2012). Additionally, Fitzsimmons-Craft and colleagues (2014) report a Cronbach's alpha of 0.91 or higher at time 1 and time 2 in a sample of collegiate women. Cronbach's alpha for this sample was 0.949. Fitzsimmons-Craft, Bardone-Cone, and Harney (2012) demonstrated construct validity of both the subscales' scores and the total score by exhibiting positive, significant association with other similar measures of social comparison and physical appearance social comparison (*r*'s range from 0.42 to 0.76). Additionally, the BEECOM total and subscale scores were significantly, positively correlated with similar measures of eating disorder pathology and body dissatisfaction (*r*'s range from 0.60 to 0.75).

Social Physique Anxiety. Social physique anxiety, which refers to feeling anxious about one's physique being evaluated negatively by others, was measured using the 9-item Social Physique Anxiety Scale (SPA; Martin, Rejeski, Leary, McAuley, & Bane, 1997; Appendix J). The SPAS is a self-report measure in which participants respond to items based on a 5-point Likert-type scale, using the anchors not at all characteristic of me (1) to extremely characteristic of me (5). Example questions include, "I wish I wasn't so uptight about my physique/figure," and "I usually feel relaxed when it is obvious that others are looking at my physique/figure." The 9item SPA is scored by reverse scoring items 5 and 8, and then summing all items. Scores on the nine-item SPA can range from 9-45, with higher scores indicating greater levels of SPA. Internal consistency for this measure is estimated at 0.67 (Motl & Conroy, 2000). The Cronbach's alpha for this sample was 0.772. Motl and Conroy (2000) provided evidence of factorial validity, factorial invariance, and construct validity for the unidimensional 9-item SPA, providing sufficient evidence for using this measure in the present study. The SPA was positively associated with objectified body consciousness (r = 0.47), and negatively associated with perceived physical ability (r = -0.31), physical self-presentational confidence (r = -0.52), and social desirability (r = -0.15).

Body satisfaction. Body (dis)satisfaction was measured using the Body Parts Satisfaction Scale-Revised (BPSS-R; Petrie, Tripp, & Harvey 2002; Appendix K). The BPSS-R is a 12-item, self-report measure. Participants respond to items on a 6-point, Likert-type scale using the anchors extremely dissatisfied (1) to extremely satisfied (6). Using this scale, participants rank different aspects of the body including weight, stomach, and upper thighs, to determine their level of satisfaction with the specified body parts. The measure contains two subscales (Face and Body) and a score of overall satisfaction. The total score is found by averaging all items; higher scores reflect greater satisfaction. Petrie, Tripp, and Harvey (2002) report internal consistency for both subscales (Cronbach's alpha=0.89 for Body and 0.76 for Face). Cronbach's alpha for this sample was 0.897. Petrie and colleagues (2002) additionally report that the Body and Face subscales are moderately correlated with each other (r = .037). The BPSS-R demonstrated both construct and concurrent validity. Face and Body subscales were unrelated to age and appearance orientation, and significantly negatively related to concern about body size and shape (r = -0.75and -0.39), body dysphoria (r = -0.73 and -0.46), binge eating (r = -0.37 and -0.34), and concern with dieting (r = -0.60 and -0.31). The two subscales were also positively significantly related to overall body satisfaction (r = 0.81 and 0.42).

*Affect.* In order to assess positive and negative affect, this study used the *Positive Affect Negative Affect Scale* (PANAS; Watson, Clark, & Tellegen, 1985; Appendix L). Positive affect refers to feelings of enthusiasm, high energy, and alertness, whereas negative affect refers to

feelings of anger and fear (Watson, Clark, & Tellegen, 1985). The PANAS is a self-report measure in which participants assess the extent to which they feel in a certain affective state during the specified time period. Participants respond on a 5-point, Likert-type scale, with anchors ranging from very slightly or not at all (1) to extremely (5). The scale contains mood descriptors for both positive and negative affect. Examples of positive descriptors include "inspired" and "determined," while negative descriptors include "irritable" and "nervous." The scale is scored by summing the positive and negative affect items separately. A higher score on the positive affect items indicates greater positive affect. Lower scores on the negative affect items indicate lower levels of negative affect. Watson and colleagues (1985) reported high internal consistency for both the positive affect items (Cronbach's alphas ranging from 0.86 to 0.90) and negative affect items (Cronbach's alpha ranging from 0.84 to 0.87) for each time category. Cronbach's alpha for this sample was 0.817. Watson and colleagues (1985) also demonstrated scale, item, and external validity. The positive affect and negative affect scales correlated with similar constructs in the predicted direction. Positive affect was negatively related to depression (r = -0.36), general distress and dysfunction (r = -0.19), and state anxiety (r= -0.35). Negative affect was positively related to depression (r = 0.58), general distress and dysfunction (r = 0.74), and state anxiety (r = 0.51).

*Impression management.* Impression management, specifically impression motivation and impression construction, was measured using the *Self-Presentation in Exercise Questionnaire* (SPEQ; Conroy, Motl, & Hall, 1998; Conroy, Motl, & Hall, 2000; Grammage et al., 2004; Appendix M). The SPEQ is an 8-item, self-report measure that assesses the extent to which individuals manage their impressions in an exercise setting. The 8 items are answered on a 6-point, Likert-type scale anchored with the responses *strongly disagree* (1) to *strongly agree*  (6). The measure contains two subscales: Impression Motivation and Impression Construction. The subscales are based on Leary and Kowalski's (1990) two-component model. Example questions include, "I wear exercise/athletic clothing so other people will see me as an exerciser," and "I try to appear toned and fit to others." Higher scores on the Impression Motivation subscale indicate a great desire to present oneself as an exerciser, and higher scores on the Impression Construction subscale indicate more use of strategies related to portraying oneself as an exerciser. Lindwall and Martin Ginis (2006) demonstrated Cronbach's alpha of 0.81 and 0.80 for Impression Motivation and Impression Construction, respectively, in a sample of Swedish undergraduate students. Grammage and colleagues (2004) demonstrated Cronbach's alpha of 0.83 (Impression Construction) and 0.81 (Impression Management) in a sample of Canadian university students. In the original 11-item measure, Conroy and colleagues (2000) estimated internal consistency at 0.83 for Impression Management, 0.81 for Impression Construction, and 0.85 for the total questionnaire. Cronbach's alpha for this sample was 0.892 for the total questionnaire. Cronbach's alpha for the Impression Motivation subscale was 0.888, and Cronbach's alpha for Impression Construction was 0.815 for this sample. Evidence of validity was reported by Grammage and colleagues (2004), indicating that factors of Impression Management and Impression Construction were moderately correlated in their sample of Candian collegiate students (r = .44). Conroy and colleagues (2000) additionally reported that Impression Motivation was positively correlated with body surveillance (r = 0.41), reported days per week of exercise (0.16), and perceived physical ability (r = 0.23), and negatively associated with physical self-presentation confidence (r = -0.16); Impression Construction was positively correlated with social time spent exercising (r = 0.23) and body surveillance (r = 0.18), and negatively associated with physical self-presentation confidence (r = -0.22).

Exercise behaviors. The Godin Leisure Time Exercise Questionnaire (LTEQ; Godin & Shepard, 1985; Appendix N) was used to assess leisure time physical activity behaviors. The LTEQ is a two item questionnaire that asks the participant to report leisure time exercise participation. The first item assesses weekly (seven day) frequency of strenuous, moderate, and mild exercise participation. The total score for this item is calculated by multiplying the weekly frequencies by 9 (strenuous), 5 (moderate), and 3 (mild), and then summing those totals to obtain a total metabolic equivalent tendency score (Brunet & Sabiston, 2009). The second item asks the participant to report the frequency of engagement in a leisure time physical activity that works up a sweat. This item is scored on a three-point, Likert-type scale containing the options often, sometimes, never/rarely. The total exercise score for the first item was found to have two-week test-retest reliability of r = 0.74 in a sample of 53 adults (Godin & Shepard, 1985) and onemonth test-retest reliability of r = 0.62 in a sample of 78 adults (Jacobs, Ainsworth, Hartman, & Leon, 1993). Test-retest reliability for the second item was reported in one study as r = 0.69(Jacobs, et. al, 1993) and in a separate study as 0.80 (Godin & Shepard, 1985). Cronbach's alpha for this sample was 0.513. Validity for this measure has been exhibited through significant associations with similar constructs. Godin and Shepard (1985) demonstrated that the total exercise score was significantly related to VO<sub>2</sub>max (r = 0.24) and body fat (r = 0.13). Additionally, the sweat inducing item was significantly associated with VO<sub>2</sub>max (r = 0.26) and body fat (r = 0.21). Similar significant associations for both items were demonstrated by other authors (Jacobs, et. al, 1993; Miller, Freedson, & Kline, 1994; Sallis, Buono, Roby, Micale, & Nelson, 1993).

In addition to the LTEQ, exercise behavior was also assessed using a 7-item, self-report survey I created specifically for this study (Appendix O). Example questions include, "I typically do the following types of exercises (check all that apply)," and "On average, I typically exercise \_\_\_\_\_\_ days per week." This scale will be used to capture information not obtained through the LTEQ.

# Procedure

After obtaining approval from University of Wisconsin-Milwaukee's Institutional Review Board, participants were recruited via e-mail, printed flyers, word of mouth, and social media advertising. Participants were provided with a link to the study survey, as well as a password to access the study. Once participants gained access to the survey website, which was created through University of Wisconsin-Milwaukee's Qualtrics survey instrument system, they were provided with an electronic informed consent document (Appendix P). The informed consent form provided the purpose the study, my contact information, and an assurance of anonymity of answers. Prior to the start of the survey, participants were screened for inclusion. If participants met all inclusion criteria, they were asked to continue on with the survey and were provided with the first measure. If participants did not meet the inclusion criteria, they were thanked for their time and directed to resources regarding healthy living and exercise behaviors. After completion of the survey, participants had the option to enter a drawing to win one of five \$10.00 Amazon gift cards. Additionally, participants had the opportunity to leave their name and contact information if they wished to be contacted in the future to participate in the interview portion of this study. The participant contact information provided for entrance into the gift card drawing or participation in Study 2 was not connected to the participant answers. The survey was designed to take each participant 20-30 minutes to complete. The survey measures were randomized. Each participant filled out the demographics questionnaire first (as it contained the

inclusion criteria questions) and from that point forward the survey imstruments appeared in random order.

Sample size estimation. A power analysis for a multiple hierarchical regression with 18 predictors was conducted in G\*Power Version 3.1.9.2. (Faul, Erdfelder, Buchner, & Langfor, 2016) to determine a sufficient sample size. To estimate the sample size needed for this study, I assessed previous studies utilizing the same constructs as the present study to observe previously determined effect sizes. Previous studies (Dittmar & Howard, 2004; Grossbard, Lee, Neighbors, & Larimer, 2008; Homan, McHugh, Wells, Watson, & King, 2012; Myers & Crowther, 2007; Pidgeon & Harker, 2013) assessing body image dissatisfaction, thin-ideal internalization, social comparison tendencies, body-focused anxiety, contingent self-esteem, and image exposure reported effect sizes ranging from 0.019-1.52, representing small to large effect sizes based on Cohen's (1992)  $f^2$  criteria. Thus, using an alpha of 0.05, a power of 0.80, and effect sizes ranging from 0.019-1.52 it was determined that an effective sample size for this study would be a minimum of 418 participants.

## **Planned Analyses**

Utilizing IBM SPSS Statistics software, version 22, I first obtained descriptive statistics, means, standard deviations, and correlations of the variables (Table 2). After assessing this preliminary information, I then assessed three separate hierarchical multiple regressions, one for each outcome variable (exercise, impression motivation, and impression construction). The three hierarchical multiple regression analyses allowed me to evaluate the ability of the model (Figure 2) to predict impression management and exercise behaviors by controlling for various variables. The steps of the analysis were determined by the re-conceptualized transactional model of body image, social media use, impression management, and exercise behaviors model I proposed. In

the first step of the analysis, I forced the following variables into the model in order to serve as covariates: age, weight, BMI, race, and ethnicity. In the second step, I entered the first block of variables into the model (total scale scores for self-esteem, internalization of the thin ideal, and reasons for exercise) to determine if they significantly predicted the proposed outcome variable. In the third step, I entered the second block (total scale scores for contingent self-esteem and social media reassurance seeking) into the model, as well as any variables from the first block that were significant in predicting the outcome variable. During the fourth step, I entered the third block (total scale score for general social media use and total subscale score for health/exercise-related social media content) into the model, along with any previous significant predictors. In the fifth step, I entered the fourth block (total scale score for physical comparison and combined subscale scores of body/exercise comparisons) into the model, in addition to any significant predictors from the previous steps. In the sixth and final step, I entered the fifth block (total scale scores for positive affect, negative affect, social physique anxiety, and body parts satisfaction) into the model, as well as any variables from the previous blocks that were indicated as significant predictors. I completed this process three separate times, first using exercise behavior as an outcome variable (as measured by the LTEQ), then impression motivation (as measured by the SPEQ-impression motivation subscale), then impression construction (as measured by the SPEQ-impression construction subscale). There was less than 2% of the data missing from each measured construct, therefore any missing data was excluded from the overall analysis.

I hypothesized that each independent variable would significantly predict exercise, impression motivation, and impression construction. Thus, the goals of the analyses were to determine how well each independent variable predicted the dependent variables (impression

management and exercise behaviors) while controlling for age, weight, BMI, race, and ethnicity. Alpha level was set at 0.05 for all three hierarchical multiple regressions.

#### Results

# **Descriptive Statistics**

The means, standard deviations, and correlations of the variables are reported in Table 2. As demonstrated in Table 2, significant, low to moderate correlations were found amongst the predictors. All variables were positively, significantly correlated with the outcome variable impression construction. All variables with exception of body parts satisfaction were positively, significantly correlated with the outcome variable impression motivation. All variables with exception of contingent self-esteem and social physique anxiety were positively, significantly correlated with the outcome variable exercise.

### **Hierarchical Multiple Regression Analyses**

Using the transactional model of social media, body image concerns, impression management, and exercise behaviors to predict exercise. A hierarchical multiple regression was used to examine the ability of the transactional model of social media, body image concerns, impression management, and exercise behaviors to predict exercise engagement (as measured by the LTEQ) after controlling for age, weight, BMI, race, and ethnicity. Preliminary analyses were conducted to ensure that there was no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. In order to control for these variables, age, weight, BMI, race, and ethnicity were entered in Step 1. The initial model explained 2.5% of the variance, F(5,586) = 3.27, p < .05. Weight was a significant predictor in the initial model (p < .05). In Step 2, individual vulnerability characteristics (self-esteem, internalization of the thin ideal, and reasons for exercise) were added to the model, explaining an additional 9.7% of the variance,

F(8,583) = 10.166, p < .001,  $R^2 = .143$ . Once added to the model, all three variables were significant predictors, in addition to weight, from Step 1 (p's < .05). Contingent self-esteem and reassurance seeking were added to the model in Step 3, accounting for an additional 2% of the variance, F(10,581) = 9.655, p < .001,  $R^2 = .143$ . All previously mentioned predictors, in addition to the two added predictors, remained significant (p's < .05). In Step 4, social media (general social media use and use specific to posting health/exercise-related content) was added to the model and its addition accounted for an additional 8.2% of the variance, F(12, 579) =13.934, p < .001,  $R^2 = .224$ . After the addition of the social media variables, only weight, selfesteem, internalization of the thin ideal, reasons for exercise, and the newly added social media use specific to health/exercise content were significant predictors (p's < .05). During Step 5, social, appearance, and exercise comparisons were added into the model. This addition resulted in an additional explanation of 0.9% of the variance, F(14,577) = 12.501, p < .05,  $R^2 = .233$ . Physical comparison and body/exercise comparison became significant predictors in addition to weight, self-esteem, internalization of the thin ideal, reasons for exercise, and social media use specific to health/exercise content were significant predictors (p's < .05).

In the final step, affect, social physique anxiety, and body part (dis)satisfaction were added to the model. Affect, social physique anxiety, and body part (dis)satisfaction uniquely explained an additional 2.7% of the variance. The total variance explained by the model as a whole was 25.9%, F(18,573) = 11.14, p < .001.

In the final model, the following seven variables were significant predictors of exercise behavior: weight, internalization of the thin ideal, social media use specific to health/exercise content, physical appearance comparison, body and exercise comparison, negative affect, and positive affect. Social media use specific to health/exercise content ( $\beta = .274$ , p < .001), was the

most significant predictor in this model, followed by body and exercise comparisons, physical appearance comparisons, positive affect, internalization of the thin-ideal, weight, and negative affect (Figure 3). Based on the beta values, social media use specific to health/exercise content, body and exercise comparisons, positive affect, internalization of the thin ideal, and negative affect had significant, positive regression weights, indicating that women with higher scores on these scales were expected to have higher levels of exercise engagement, after controlling for the other variables in the model. Physical appearance comparison and weight had significant negative regression weights, indicating that women with higher scores on this scale and a higher weight were expected to have lower levels of exercise engagement. Unstandardized coefficients (B and standard error) and beta values can be found in Table 3.

Using the transactional model of social media, body image concerns, impression management, and exercise behaviors to predict impression motivation. A hierarchical multiple regression was used to assess the ability of the transactional model of social media, body image concerns, impression management, and exercise behaviors to predict impression motivation after controlling for age, weight, BMI, race, and ethnicity. Preliminary analyses were conducted to ensure that there was no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. In order to control for these variables, age, weight, BMI, race, and ethnicity were entered in Step 1, explaining 1.0% of the variance, *F*(5, 592) = 1.193, *p* > .05 (not significant). In Step 2, individual vulnerability characteristics (self-esteem, internalization of the thin ideal, and reasons for exercise) were added to the model, explaining an additional 29% of the variance, *F*(8,589) = 31.508, *p* < .001,  $R^2$  = .300. Contingent self-esteem and reassurance seeking were added to the model in Step 3, accounting for an additional 8.7% of the variance, *F*(10,587) = 37.072, *p* < .001,  $R^2$  = .387. In Step 4, social media (general social

media use and use specific to posting health/exercise-related content) was added to the model and its addition accounted for an additional 1.9% of the variance, F(12, 585) = 33.380, p < .001,  $R^2 = .406$ . During Step 5, social, appearance, and exercise comparisons were added into the model. This addition resulted in an additional explanation of 0.7% of the variance, F(14,583) =29.385, p < .05,  $R^2 = .414$ .

In the final step, affect, social physique anxiety, and body part (dis)satisfaction were added to the model. These three variables uniquely contributed an additional 2.3% to the model. The total variance explained by the model as a whole was 43.6%, F(18,579) = 24.9, p < .001.

In the final model, the following five variables were significant predictors of the model: reasons for exercise, contingent self-esteem, general social media use, social physique anxiety, and positive affect. Contingent self-esteem ( $\beta = .319$ , p < .001) was the most significant predictor in this model, followed by reasons for exercise, social media use, positive affect, and social physique anxiety (Figure 4). Based on the beta values, contingent self-esteem, reasons for exercise, social media use, and positive affect had significant, positive regression weights, indicating that women with higher scores on these scales were expected to have higher levels of impression motivation, after controlling for the other variables in the model. Social physique anxiety had a significant negative regression weight, indicating that women with higher scores on this scale were expected to have lower levels of impression motivation. Unstandardized coefficients (B and standard error) and beta values can be found in Table 4.

Using the transactional model of social media, body image concerns, impression management, and exercise behaviors to predict impression construction. A hierarchical multiple regression was used to assess the ability of the transactional model of social media, body image concerns, impression management, and exercise behaviors to predict impression construction after controlling for age, weight, BMI, race, and ethnicity. Preliminary analyses were conducted to ensure that there was no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. In order to control for these variables, age, weight, BMI, race, and ethnicity were entered in Step 1, explaining 2.8% of the variance, F(5, 592) = 3.432, p < .05. In Step 2, individual vulnerability characteristics (self-esteem, internalization of the thin ideal, and reasons for exercise) were added to the model, explaining an additional 24.4% of the variance, F(8,589) = 27.469, p < .001,  $R^2 = .272$ . Contingent self-esteem and reassurance seeking were added to the model in Step 3, accounting for an additional 4.4% of the variance, F(10,587) = 27.048, p < .001,  $R^2 = .315$ . In Step 4, social media (general social media use and use specific to posting health/exercise-related content) was added to the model and its addition accounted for an additional 9.4% of the variance, F(12, 585) = 33.756, p < .001,  $R^2 = .409$ . During Step 5, social, appearance, and exercise comparisons were added into the model. This addition resulted in an additional explanation of 1.5% of the variance, F(14,583) = 30.667, p < .001,  $R^2 = .424$ .

In the final step, affect, social physique anxiety, and body (dis)satisfaction were added to the model. These three variables uniquely added 3.6% of variance to the model. The total variance explained by the model as a whole was 46%, F(18,579) = 27.4, p < .001.

In the final model, the following eight variables were significant predictors of the model: age, internalization of the thin ideal, reasons for exercise, contingent self-esteem, general social media use, social media use specific to health/exercise content, body and exercise comparison, and social physique anxiety. Social physique anxiety ( $\beta = -.217$ , p < .05) was the most significant predictor in this model, followed by social media use specific to health and exercise, body and exercise comparisons, social media use, reasons for exercise, contingent self-esteem, internalization of the thin-ideal, and age (Figure 5). Based on the beta values, social media use specific to health/exercise content, body and exercise comparisons, social media use, reasons for exercise, contingent self-esteem, and internalization of the thin-ideal had significant, positive regression weights, indicating that women with higher scores on these scales were expected to have higher levels of impression construction, after controlling for the other variables in the model. Social physique anxiety and age had significant negative regression weights, indicating that women with higher age were expected to have lower levels of impression construction. Unstandardized coefficients (B and standard error) and beta values can be found in Table 5.

Achieved power and effect sizes. Effect sizes were determined to assess the achieved power for this study. The effect sizes were calculated in G\*Power Version 3.1.9.2. (Faul, Erdfelder, Buchner, & Langfor, 2016) based on the variance explained by the special effect and the residual variance. The effect sizes obtained for the dependent variables are as follows: exercise  $f^2 = 0.126$ ; impression motivation  $f^2 = 0.058$ ; impression construction  $f^2 = 0.088$ . Based on Cohen's (1992) criteria, these are small to medium effect sizes. G\*Power Version 3.1.9.2. (Faul, Erdfelder, Buchner, & Langfor, 2016) was utilized to determine the achieved power for all three hierarchical multiple regressions completed, based on a sample size of 605, alpha level of 0.05, and effect sizes ranging from 0.058-0.126. Post hoc power analyses revealed the power to detect obtained effects at the .05 alpha level was 0.999 for exercise, 0.976 for impression motivation, and 0.999 for impression construction.

# Discussion

The present study aimed to discover how psychosocial behaviors and social media use predict exercise behaviors and engagement in impression management in women. The results of the present study provide support for the use of the transactional model of social media, body

image concerns, impression management and exercise behaviors (Figure 2) in predicting exercise, impression motivation, and impression construction behaviors in women. While the model did yield several significant predictors when assessed for each outcome variable, the hypotheses that all variables within the model would be predictive for each outcome measure was not supported. Additionally, each separate outcome variable yielded different significant predictors. This result was unexpected, as there was not one significant predictor variable that overlapped across the three outcome variables. As a whole, the model was significant for each dependent variable, explaining 25.9%, 43.6%, and 46% of the variance for exercise, impression motivation, and impression construction respectively.

# **Exercise Behavior**

The final model of the hierarchical multiple regression for exercise revealed social media use specific to health/exercise-related content, body/exercise comparisons, physical appearance comparisons, negative affect, thin-ideal internalization, weight, and positive affect all were significant in predicting exercise as measured by the LTEQ. The combination of these seven variables is unique, and provides further understanding for some psychosocial behaviors that may impact overall exercise engagement for females.

Weight and physical appearance comparisons demonstrated a negative relationship with exercise. For example, higher levels of exercise engagement were associated with lower participant weight. Furthermore, higher levels of exercise engagement were associated with lower levels of physical appearance comparisons. It is well documented that type, duration, and intensity of activity are to be considered when using exercise as a weight loss strategy, therefore weight in this regard makes sense as a predictive variable for exercise (Volek, VanHeest, & Forsythe, 2005). It seems logical to surmise that women who are high frequency exercisers might

have lower weights because exercise is their means to maintain a lower body weight. Consequently, it also appears that women who are at higher weights do not engage as frequently in exercise, which could be problematic from a health standpoint considering the abundant benefits exercise has to offer. It is possible that high frequency exercisers use exercise as a tool for weight loss and are therefore motivated to engage in exercise for that reason, hence their higher frequency of engagement (Kilpatrick, Hebert, & Bartholomew, 2005). This can be seen as problematic, as maintaining a lower weight can be associated with exercising for appearancerelated reasons in order to attain a cultural standard. Women who engage in exercise as a means to control their weight for appearance-related reasons have been reported to have higher levels of body image disturbance and disordered eating patterns (Prichard & Tiggemann, 2008). Thus it is important to consider the implication this result may entail. Additionally, it is important to acknowledge possible reasons that women at higher weights might not be as physically active. There has been a body of research supporting the occurrence of weight bias in fitness settings and with fitness professionals (Chambliss, Finley, & Blair, 2004; Puhl & Wharton, 2007; Robertson & Vohora, 2008). Weight bias, which refers to having an implicit or explicit negative attitude towards an individual because of their body weight or body size, has the potential to lead to exercise avoidance in many cases (Pulh & Wharton, 2007). Although it was not of purpose to explore weight bias in this study, it is important to acknowledge that women of higher weights may be engaging in exercise less frequently due to weight bias and it is important to explore how to increase exercise engagement for these individuals if that is the case.

Three meta-analyses (Campbell & Hausenblas, 2009; Hausenblas & Fallon, 2006; Reel et al., 2007) have revealed the increased exercise frequency is positively associated with lower levels of body dissatisfaction. For the present study, this is reflected in the use of exercise as a

means to alter feelings about physical appearance (i.e. decreasing body dissatisfaction) and alternatively, find less of a need to compare one's physical appearance to others. Franzoi (1995) suggests that women often times view their bodies from and object or process mentality. Viewing the body as an object results in higher feelings of body dissatisfaction and internalization of the thin-ideal, and a greater need to compare oneself to others (Fredrickson & Roberts, 1997; Thompson & Stice, 2001). Yet, when women engage in exercise, views about physical appearance change as many times these activities orient women to thinking about their bodies in terms of a process, not an object (Franzoi, 1995; Wasylkiw & Butler, 2015). Wasylkiw and Butler (2015) found that women who engage in talk about exercise had more positive attitudes towards their bodies and viewed their bodies from a body-as-a-process mentality. Thus, talking about their exercise participation encouraged them to have more appreciation for their physical bodies. Homan and Tylka (2014) similarly found that exercise frequency was related to more positive attitudes towards the body in women, but appearance-based motivations for engaging in exercise weakened this relationship. Additionally, Homan and Tylka (2014) discovered that engagement in exercise was strongly related to how the body was able to function for that activity. Hence, as women engage in more frequent exercise, they begin to focus on the functionality of their bodies, as opposed to the objectivity of their bodies, and this results in further appreciation and therefore a decreased desire to compare one's body to another. Those women who do not engage in frequent exercise may not reap the positive benefits that exercise has to offer, particularly the decrease in body dissatisfaction (Campbell & Hausenblas, 2009; Hausenblas & Fallon, 2006; Reel et al., 2007).

The remaining significant predictors, social media use specific to health/exercise-related content, body/exercise comparison, positive affect, internalization of the thin-ideal, and negative

affect, were positively associated with exercise frequency. Regular exercise has been previously documented as a way to enhance positive affect in individuals (Kanning & Schlicht, 2010; LePage & Crowther, 2009; Reed & Buck, 2009). Thus, it was not surprising in the present study that positive affect was a significant predictor of exercise frequency. It was surprising that negative affect occurred simultaneously with positive affect as a significant predictor of exercise engagement. One way to interpret this is that individuals who are stressed or angry may use exercise as an outlet. Thus, higher levels of exercise engagement would be positively associated with higher levels of negative affect. It is also important to consider that the measure asked participants about their affect during the previous week, so it is possible that this frame of mind influenced the way they responded. Thus, some participants may engagement in high levels of exercise, but their affect scores only represented their feelings for one week in time.

Specific to the overarching study purpose, it was interesting that social media use specific to health/exercise-related content was the strongest predictor of exercise frequency. Recent research focused on the fitspiration trend (images posted on social media meant to inspire others to lead a healthy lifestyle) suggest that after a content analysis of 600 "fitspiration" images on Instagram, the majority of the images depicted women who were wearing exercise apparel, engaging in exercise, and displaying a thin and toned body (Tiggemann & Zaccardo, 2015; Tiggemann & Zaccardo, 2016). In a study by Holland and Tiggemann (2016), researchers found that women who were exposed to fitspiration images scored higher on measures relating to disordered eating, drive for muscularity, and most importantly, compulsive exercise. In a separate study, Tiggemann and Zaccardo (2015) found that exposure to fitspiration images on Instagram resulted in greater feelings of body dissatisfaction, negative mood, and lower levels of state appearance self-esteem. Women who also reported posting fitspiration images scored

higher in drive for thinness, alluding to the notion that they may engage in excessive exercise in order to obtain society's ideal standard of beauty (Holland & Tiggemann, 2016). On Pinterest, researchers found that the majority of pins revealed to users after searching for "fitspiration" were related to weight management strategies particularly focused on behaviors that one should perform in order to be thin, fit, and sexy (Simpson & Mazzeo, 2016). Often times fitspiration pins were associated with exercising as a means to look good, lose weight, or improve body shape (Simpson & Mazzeo, 2016). Thus, while it seems that health/exercise-focused content, like fitspiration, is meant to inspire others to be healthy, in reality, these posts are sending messages that perpetuate the idea that one should exercise to improve appearance and one needs to obtain an expected body size in order to be considered fit or beautiful (Simpson & Mazzeo, 2016). Social media use specific to health/exercise-related content seems to lead women to believe that "healthy" means looking thin, athletic, and toned, and, subsequently, frequent exercise engagement is a means to reach this ideal.

This particular variable has strong associations with the remaining predictive variables (i.e. body and exercise comparison, internalization of the thin-ideal, and negative affect), providing an interesting and powerful link between the variables in regards to predicting exercise behavior. It appears that posting and/or consuming health and exercise-focused content on different social media platforms may influence women to engage in body and/or exercise comparisons with peers or internalize the thin-ideal, which may in turn result in negative affect. As discussed previously, social media has the ability to trigger appearance comparisons through the communication of messages related to socially-defined ideals of attractiveness, which seems particularly fitting for what is discussed in the fitspiration literature. Research suggests that women who perceive that they "fall short" in comparison to others will have increased online

and offline body dissatisfaction, envy, and negative affect (Perloff, 2014; Tiggemann & Zaccardo, 2015). Similar to social media comparisons, comparative processes occur frequently in exercise settings. Frederick and Shaw (1995) reported that women felt less confident and more intimidated when exercising with other women who were wearing physique-revealing exercise apparel. Eklund and Crawford (1994) found that undergraduate women who suffered from higher levels of appearance anxiety paid more attention to their appearance during an aerobics class and were more likely to believe that they were being judged by other women while participating in an aerobic dance class. Salvatore and Marecek (2009) established that some women felt discouraged to lift weights at a gym due to evaluation concerns focused both on one's appearance and competence level. Previous research (Siden, Martin Ginis, & Angove, 2003) has indicated that women have negative feelings about their own bodies when shown exercise videos that portray an instructor and exercise participants with lean, toned, physique salient bodies. Thus, it seems that exposure to health and exercise-related content on social media may exacerbate negative feelings towards one's body, leading to further social comparison, higher levels of negative affect, and the desire to increase exercise frequency in order to meet societal standards of beauty. Reflective of the proposed model, this sequence continues in a cyclical manner as long as women continue to engage with social media in this context.

Contrary to the literature, reasons for exercise and body parts satisfaction were not significant predictors of exercise frequency. Research surrounding the benefits of exercise for body satisfaction has been well documented (Campbell & Hausenblas, 2009; Hausenblas & Fallon, 2006; Reel et al., 2007) so it was surprising that this variable was not a significant predictor in this model, especially since the mean score for the body parts satisfaction scale was

relatively low, meaning that women were not entirely satisfied with their bodies. It is possible to conclude that women in this study use means other than exercise to alleviate body dissatisfaction. Potentially, exercise engagement might have led to further comparison, which would in turn result in greater feelings of dissatisfaction. Moreover, it was surprising that the addition of the final cluster of predictors (the effects of social media) resulted in reasons for exercise becoming an insignificant predictor. Both appearance-related and health-related reasons for exercise have been documented in the literature as driving forces behind why women exercise (Strelan, Mehaffay, & Tiggemann, 2003; Vartanian, Wharton, & Green, 2012). Considering the model, reasons for exercise does not appear to be an individual vulnerability characteristic that outweighs comparative processes or social use media in reference to exercise engagement.

# **Impression Management: Impression Motivation and Impression Construction**

Contrary to the hypotheses, not all variables were significant in predicting impression motivation and impression construction, but there was substantial overlap between the variables that were significant predictors. Although there was a difference in the weight each predictor provided to the outcome variable, contingent self-esteem, reasons for exercise, social media use, and social physique anxiety were all significant, positive predictors of impression motivation and impression construction. Social physique anxiety was negatively associated with both constructs, indicating that lower levels of social physique anxiety were associated with higher levels of engagement in the motivation and construction of impressions. Research indicates that selfpresentational concerns often arise when a woman perceives that her body is on display for others to be evaluated, which is at the core of social physique anxiety (Thompson & Fleming, 2007). When women feel as though they cannot present themselves in a way that aligns with

society's standard of beauty, they experience further body dissatisfaction, self-doubt, and feelings of inadequacy (Hausbenblas, Brewer, & Van Raalte, 2004; Thompson & Fleming, 2007). In one interpretation, the findings in this study are somewhat contrary to the literature as those experiencing high levels of social physique anxiety should feel the need to appear successful to others, promoting an image that they are capable and are striving to obtain the thin ideal. It seems counterintuitive that those who are anxious about their bodies are not as motivated to construct particularly favorable impressions for their audience, but this also could be a result of not wanting to put one's body on display for others. Lantz and Hardy (1997) suggest that individuals sometimes feel the need to protect the physical self when being put on display for others. Thus, if a female feels uncomfortable about the way her body looks, she might avoid presenting her body to others in a variety of arenas, exercise and social media included. When one engages in impression management, one is doing so in order to create a favorable impression and avoid negative evaluation (Leary & Kowalski, 1990). Therefore, it makes sense that someone who is high in social physique anxiety would avoid engaging in any sort of scenario that involves putting one's body on display as a way to manage one's impression in order to avoid becoming victim to a negative evaluation. Those women who feel comfortable in their skin do not share the same feelings, and are therefore inclined to present their bodies in ways that will allow favorable impressions to be formed.

Contingent self-esteem, reasons for exercise, and general social media use were also significant positive predictors of both impression motivation and impression construction. Logically, it makes sense that social media use is positively associated with impression management. Social media provides a way for an individual to have a presence in the multimedia world (Perloff, 2014). On a variety of social media platforms, users have the ability to post

photos and modify photos, create tweets, and share videos. Thus, the individual is able to manage one's presence, depicting the self in a particular and chosen way to the specified audience. Leary and Kowalski (1990) suggest that individuals create impressions of all facets of their self-concept from their personal attributes to their attitudes, beliefs, interests, and perceived status. Social media provides a platform for an individual to portray one's desired impression to others, using customizations, editing, and filters to provide the audience with the best image possible. Therefore, it makes sense that higher levels of social media engagement would lead one to feel more motivated to construct a particular impression for one's audience. There appears to be a close ties between contingent self-esteem and social media use, providing a possible rational as to why these are significant predictors of impression management. Contingent self-esteem is based on the approval of others or on social comparisons with others in regards to meeting a particular standard (Patrick, Neighbors, & Knee, 2004). Some women are subject to consuming images through social media that promote unrealistic standards of appearance, encouraging social comparison processes (Patrick, Neighbors, & Knee, 2004). When these images are consumed, it is probable to expect some women to feel motivated to try to create the impression that they too meet this societal standard of attractiveness, or that they are at least making strides towards obtaining this image. Subsequently, women may use social media as a platform to convey this particular impression, and will consequently use "likes," comments, and retweets as a basis for reaching this supposed standard.

It seems logical that women higher in contingent self-esteem might repeatedly check Facebook after posting a new status, obsessively compare Instagram pictures with others, or follow numerous celebrities on Twitter in order to assess how they might measure up to those they perceive as having a high social status (Perloff, 2014). Women use social media as a tool to

not only gain favorable impressions, but also to garner reassurances that they are meeting societal standards. This idea potentially plays into why reasons for exercise is a significant predictor for both of these outcome variables. Literature assessing appearance-related reasons for exercise suggests women may feel motivated to engage in purposeful exercise to mold their bodies into thin, fit, lean physique to match the societal ideal for attractiveness, but some women may also engage in exercise as a means to present themselves to the public as an exerciser (Strelan, Mehaffay, & Tiggemann, 2003; Vartanian, Wharton, & Green, 2012). Some individuals engage in frequent exercise and wear appropriate exercise apparel to create the guise of being an exerciser, as they believe that the label of "exerciser" forms a favorable impression to others in society (Hausenblas, Brewer, & Van Raalte, 2004; Leary & Kowalski, 1990). Individuals who are labeled as exercisers create the impression of being more confident, harder working, fitter, stronger, healthier, and more attractive than their non-exerciser counterparts (Martin, Sinden, & Fleming, 2000). Thus, women may engage in exercise in order to maintain the guise that they are an exerciser in order to obtain positive feedback from their peers. This image may in turn be presented on social media as a means to portray this particular message to one's audience. Considering impression construction in this context, it is logical to suggest that this might be why social media use specific to health/exercise-related content was a significant predictor for this construct. Part of constructing an impression on social media may be portraying oneself as an exerciser by posting photos while wearing exercise clothing, making statuses or tweets about being at the gym, or writing blogs related to exercise behaviors. If presenting oneself as an exerciser to an audience is important, then embracing exercise as a whole might be of importance as well. Women may have strong reasoning for exercising because they want to be perceived as active, athletic, and competent in this arena. Thus, whether a female is exercising for health,

appearance, or enjoyment, it is important to create the impression that they are engaging in some sort of exercise behavior in order to achieve this favorable status.

One variable that was unique to predicting impression motivation was positive affect. Leary and Kowalski (1990) suggest that during impression motivation, individuals are motivated to create favorable impressions that will garner positive feedback from others. This positive feedback often times results in an increase in positive affect. Knowing that an increase in positive affect is tied to uplifting feedback from others, individuals may feel motivated to highlight positive features of the self when attempting to manage impressions (Kim & Lee, 2011). It was previously mentioned that user happiness increased when self-presentations on Facebook were positively reaffirmed by friends (Kim & Lee, 2011). Therefore, it seems that feelings of happiness may motivate some women to continue projecting a highlight reel on social media.

Internalization of the thin-ideal and body and exercise comparisons were significant predictors unique to impression construction. It is important to keep in mind that impression construction refers to adopting certain traits and characteristics that align with favorable identities and then subsequently portraying that identity as part of one's public persona (Leary & Kowalski, 1990). Part of how one learns about what is an acceptable or unacceptable social image is through social comparison. Women tend to engage in upward and downward social comparisons, judging both characteristics of the body and exercise behaviors against projected societal standards (Fitzsimmons-Craft, Bardone-Cone, Bulik, Wonderlich, Crosby, & Engel, 2014). Often times these comparisons result in internalizing the thin-ideal (Dittmar & Howard, 2004). When assessing health/exercised-focused content on social media, researchers suggest that many of the images consumed by women project a thin, fit, toned body as the definition of a

healthy body (Holland & Tiggemann, 2016; Simpson & Mazzeo, 2016). If these are the messages and images constantly being consumed by the general population of women, it makes sense that some women would choose to adopt these identities and the perceived characteristics associated with these identities and try to construct that particular impression as part of their public persona. By creating these somewhat unattainable and unrealistic standards of beauty, society encourages women to make strides towards achieving these standards and subsequently projecting the results as part of their image.

In relation to contingent self-esteem, which was discussed previously, women high in contingent self-esteem are more likely to engage in appearance-related comparisons (Patrick, Neighbors, & Knee, 2004). These comparisons are typically upward in nature, leaving a woman feeling worse about her body and her self-worth (Patrick, Neighbors, & Knee, 2004). Additionally, Hausenblas and colleagues (2004) found that women who pay close attention to how they appear to others, and how others perceive their appearance, are more likely to engage in exercise in order to lose weight. Feeling the need to control one's weight might be a sign of internalizing the thin-ideal. Thus, as peers and media influences prompt body and exercise comparisons, some women may perceive their own body to be subpar to the cultural standards presented before them, which can negatively affect their contingent self-esteem or result in maladaptive exercise behaviors. Considering the previous research, it is plausible that some women engage in impression construction because of their involvement in exercise and body comparisons. When society tells women that they need to fit into a particular box to be considered attractive, some women internalize these feelings and then adopt behaviors to act on these feelings. As Fredrickson and Roberts (1997) suggest, internalization of the thin-ideal leads women to keep vigilant watch over their bodies. Feeling the need to constantly keep surveillance

over one's body may entice women to construct impressions that indicate their bodies and their exercise habits are in line with societal standards and are therefore worthy of approval from peers.

It was interesting that age was significant predictor of impression construction. The lowers one's age, the more likely she is to engage in impression construction behaviors. It is possible that women who are in the age demographic of 18-25 and presumably still area an academic setting, feel a greater need to present themselves favorably to their peer group. Mehdizadeh (2010) found that university women between the ages of 18-25 are more likely to self-promote through posting pictures of themselves on social media. Pictures are one way of constructing an image of the self, so it is likely that women lower one the study's age spectrum might be more influenced to construct particular images of themselves although these conclusions are not clear.

#### **Re-conceptualizing the Model**

The purpose of this study was to assess how well the model constructs from my theoretical model of the transactional model of social media use, body image concerns, exercise, and impression management predicted engagement in exercise and impression management behaviors. It was hypothesized that all variables would be significant in predicting the outcome variables of exercise, impression motivation, and impression construction. The hypotheses were only partially supported though, and many constructs were not significant in predicting the outcome variables. Considering that the proposed model is a re-conceptualization, it is important to explore what constructs might need further examination and if the model should be adjusted for future use.

Based on the results of this study, one avenue warranting further exploration is linear and cyclical manner in which the model flows. Currently, the model progresses forward in a linear manner to the ultimate outcome: influencing exercise and impression management behaviors. Although the model as a whole demonstrated significance during each hierarchical multiple regression, considering the significant predictor variables, it is plausible that the cyclical manner of the model extends beyond the effects of social media circling back towards online reassurance seeking and contingent self-esteem. Instead, one might surmise that there should be additional arrows added to the backend of exercise and impression management that circle back towards the construct box containing online reassurance seeking and contingent self-esteem. It appears that it is possible that engagement in exercise and impression management may lead the cycle to start over, or continue, and thus, this new directionality is worthy of further exploration.

Another concept that might contribute to the re-conceptualization of the model is the placement of online reassurance seeking. In this study, online reassurance seeking was not a significant predictor in any of the three regression equations, but is thought to be a significant predictor of social media use based on other literature sources (Clerkin, Smith, & Hames, 2013; Perloff, 2014; Tiggemann & Miller, 2010; Tiggemann & Zaccardo, 2015). It is unknown why this variable was not significant in this study, but there are two possibilities. One possibility is that the scale used to measure this variable did not adequately capture reassurance seeking might have been more beneficial to explore. Furthermore, a more robust measure of online reassurance seeking might have yielded differing results. It is also interesting to consider how reassurance seeking might have evolved differently if the model was perceived from a differing perspective. Many of the measures relating to social media use in this study examined how an individual acts

as a social media user; not necessarily as a social media consumer. This leads one to wonder how the model could change and evolve to depict both a user's and a consumer's mentality when engaging in social media use, and how these behaviors might differ in influencing exercise engagement and impression management. It is possible that aspects such as online reassurance seeking might only play a role when an individual is using social media, whereas constructs such as social comparisons might play out when using and consuming this content. Likewise, it is possible that using and/or consuming social media content might influence exercise and impression management behaviors differently. Consuming content may have more of an impact on exercise engagement, whereas using might have more of an impact on creating and maintaining impressions. These facets are worthy of further exploration and future research should aim to assess how I might need to re-define and re-organize the model constructs and outcomes.

#### **Strengths and Limitations**

The current study had a number of strengths that should be noted. First, the large sample size contributed to the overall power of the study, decreasing Type II error and increasing the likelihood of finding an effect. Considering the multitude of measures assessed, it was impressive to find that most participants responded fully to the questionnaire and there was less than 2% of data missing from the entire sample. While the model utilized in this study had not been tested previously, there is quite a bit of research supporting the model's constructs in association with exercise and self-presentational behaviors. Thus, the present study was grounded in evidence-based research and the results of the tested model can now fill a gap in the research relating to how psychosocial variables and social media use contribute to exercise and impression management behaviors.

Although there are noteworthy strengths, there are also a number of limitations that should be noted. First, although the sample size was robust, almost 80% of the sample consisted of white women and 86% of the sample self-reported their ethnicity as "Not Hispanic/Latino." Additionally, 55% of the sample consisted of women who fell in the normal range for BMI. Although these variables were controlled for, it limits the generalizability across different races, ethnic groups, and body types. It is very possible that the study may had yielded different results if the sample was more diverse in regards to race, ethnicity, and body mass index. Another limitation was the type and length of the survey. When using self-report measures, one must rely on the participant to be honest and truthful in all responses. There is no guarantee that all questions were answered honestly, although it was the assumption made. Self-report measures are also subject to social desirability. It is possible some participants were biased in their answers, particularly those measures assessing more personal traits, in order to appear a certain way. Due to the number of measures assessed, the survey was lengthy, and participant fatigue likely contributed to participant drop-out and incomplete data sets that ultimately were discarded. A shorter survey might have increased attrition and provided an even more robust sample size.

While the majority of the measures used to collect the survey data were valid and reliable, I did make word modifications in a few select measures. Additionally, one measure, social media use specific to health/exercise-related content, was created by me and has not be thoroughly tested in any other sample. Although it does not appear that there were any major complications with the modifications, it is an important limitation in which one should take note. This study was also cross-sectional in nature, so one is only able to draw associations and trends from the model—the predictors do not necessarily reflect causation. The cross-sectional nature of this study did not allow for the exploration into the direction of these relationships, or if there

is possible cause and effect. The casual nature of this model should be addressed in future research.

Finally, future research should aim to assess the group differences between the sample of participants I collected and the sample of participants collected by the survey system Qualtrics. For this study, I pooled both samples of participants, yet, upon closer examination, there existed a number of group differences between the two pooled samples. Specifically, the sample of participants I collected had statistically significantly lower scores on the following (p < .002): BMI, online reassurance seeking, negative affect, and general social media use. The sample collected by Qualtrics had statistically significant higher scores on the positive affect measure (p < .002). All other variables demonstrated non-significant group differences. Although these group differences were minimal, they were present and are worthy of noting as a limitation and a future need for exploration.

# **Conclusions and Future Directions**

Overall, the current study provides strong evidence and support for utilizing the transactional model of social media, body image concerns, impression management, and exercise behaviors. Although hypotheses were only partially supported, the significant predictors were grounded in previously established evidence, providing further support for using these psychosocial variables and behaviors to interpret exercise behaviors and impression management. It is curious to note that there was not a single predictor that was significant across all three outcome variables. Although there are strong ties in the literature between exercise and self-presentation behaviors, it seems that different psychosocial factors and subsequent behaviors (i.e. contingent self-esteem, social media use, engagement in comparison) result in different

effects that impact how one chooses to engage in exercise, impression motivation, and impression construction behaviors.

Further investigation of this model is warranted. While the model provides an understandable progression through the constructs resulting in the expected behaviors, it is important to explore the model in further detail with different genders, age groups, and racial and ethnic backgrounds. The results of this model provided substantial practical implications for society. Social media is a mainstream trend that grows and evolves every day. The ability to use evidence-based research to harness how different psychosocial factors contribute to social media use, and by default, exercise and impression management behaviors, may create a multitude of interventions aimed at encouraging individuals to adopt healthy exercise behaviors, change perceptions of "ideal" bodies, and construct an overall better impression about body image online. The time to explore social media is now, and the evidence found by testing the transactional model of social media, body image concerns, impression management, and exercise behaviors demonstrates that researchers need to further explore the social media phenomenon in contexts outside of general social media use. This model provides support for the effects of psychosocial barriers and social media use on exercise, thereby presupposing that engagement on social media platforms (when combined with predisposed risk factors) may influence and impact exercise engagement. Because of the body image messages social media sends to women, it is important that one uses social media as a tool to send healthy messages about a realistic ideal as opposed to the universally-shared ideal that thinness is beautiful and exercise is needed as means to be thin. This model provides a platform to help researchers understand the liner and cyclical progression of how social media may influence women to engage in impression management and exercise behaviors. Thus, it is important to harness the results of this study to generate new

approaches that may help women adopt healthier exercise and body attitudes that will transcend across social media into everyday life.

### Study 2

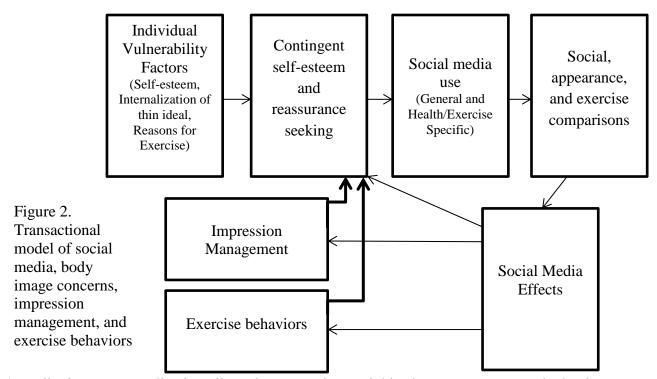
Social media use is guided by a plethora of social and psychological factors (Sundar & Limperos, 2013). Social media provides individuals with a variety of personal spaces to create an identity, each space offering a new way to practice self-presentation (Mascheroni, Vicent, & Jimenez, 2015). When engaging in social media, users present an audience with a carefully, selfselected presence. This behavior, referred to as impression management, involves having an acute sense of self-awareness, one in which allows the users to create and manage a particular self-representation in order to obtain a favorable impression from the audience (Leary & Kowalski, 1990). Individuals are motivated to create particular impressions, and sometimes alter their "presence" in order to receive an appropriate reaction from their peers (Leary & Kowalski, 1990). Despite the customization and personalization offered by social media, many users are apt to creating impressions on social media based on society's socially constructed ideals. Society has created unrealistic and unattainable standards of beauty, and many women internalize these standards and maintain that they need to meet this thin-ideal in order to gain acceptance (Thompson & Stice, 2001). Many images of the "ideal body" portrayed on social media show a woman with a thin, toned, and slightly muscular frame, instituting that this is the definition of fit and healthy (Tiggemann & Zaccardo, 2015). Most literature on social comparisons and body image has focused on mass media sources, asking women to compare their bodies to that of ultra-thin supermodels and movie stars. Yet, unlike mass media sources, many of the images viewed on social media are of the user's peers, garnering even more reason for social comparison (Tiggemann & Zaccardo, 2015). While viewing the "everyday" women

might be a more realistic standard for comparison, it also prompts cause for concern, because even some of the images projected by these women remain unattainable. In today's society, social media functions make it easy for an individual to digitally alter a photo to more closely match society's standard of beauty. Airbrushing, digital modification, and the use of filters allow one to re-touch photos, removing blemishes, enlarging breasts, and thinning out torsos to create the ideal photo of perfection (Tiggemann & Slater, & Smyth, 2013). On social media, opportunities for comparison are endless, and many times, women find themselves comparing their own images to images that have been magically re-touched and altered, aggravating body image disturbances (Tiggemann & Slater, & Smyth, 2013). Research suggests that women who perceive that they "fall short" in comparison to others will have increased online and offline body dissatisfaction, envy, and negative affect (Perloff, 2014; Tiggemann & Zaccardo, 2015).

Much of what is projected on social media in the health and exercise domain is geared towards what the user can gain in regards to appearance (Tiggemann & Zaccardo, 2015). When women engage in exercise for appearance-related reasons, they aim to lose weight, improve body tone, and improve attractiveness in order to adhere to societal standards of beauty and sexual desirability (Vartanian, Wharton, & Green, 2012). Vartanian and colleagues (2012) propose that individuals who choose to exercise for appearance-related reasons, as opposed to health-related reasons, are more likely to experience higher levels of body dissatisfaction and social physique anxiety, greater instances of disordered eating, and decreased levels of self-esteem and overall psychological well-being. Additional research has also noted that when considering the framework of the Self-Determination Theory, individuals who exercise for appearance-based reasons are extrinsically motivated (Sebire, Standage, & Vansteenkiste, 2009). Findings indicate that those individuals who display intrinsic motives for exercise, or exercising for health-related

benefits, have greater physical self-worth, improved psychological well-being, and decreased exercise anxiety (Sebire, Standage, & Vansteenkiste, 2009). Tiggemann & Zaccardo (2015) found that when women observed fitspiration images (i.e. images meant to inspire an individual to exercise and get fit) they had greater body dissatisfaction, higher levels of negative mood, and lower appearance self-esteem. Thus, even when images are meant to be inspiration, many women focus on the images from a social comparison perspective, and instead of finding inspiration, they find dissatisfaction in their inability to obtain that ideal.

It is evident that some women are motivated to exercise for appearance-related reasons because they have internalized the thin-ideal. It is also clear that individuals engage in impression management behaviors on social media sources in order create a highlight reel that is in line with socially accepted standards. Research indicates that when self-worth is contingent on appearance, girls will perceive the number of "likes" or comments on a post as a means of social acceptance and validation for the creation of their online presence (Chua & Chang; 2016; Mascheroni, Vicent, & Jimenez, 2015). Additionally, women choose to create a highlight reel on social media that is in accordance to societal guidelines in order to gain acceptance and avoid marginalization (Mascheroni, Vicent, & Jimenez, 2015). Social media engagement provides a digital, yet tangible representation of peer acceptance, which results in both positive and negative physical and mental health consequences. In Study 1, I attempted to objectively test a modified version of Perloff's conceptual model (Figure 2) in order to assess how well the model predicted engagement in impression management and exercise. Study 2 took on a slightly different approach to better understand social media use behavior. The aim of Study 2 was to use a combination of two qualitative research approaches, phenomenological and photo-elicitation, to learn how women conceptualize the constructs of the model based on their own life experiences.



A qualitative conceptualization allowed me to understand this phenomenon on a scale that is not bound by numbers. It is clear that women use social media, engage in impression management, and participate in exercise for variety of reasons. While it is plausible that one can predict how different constructs contribute to impression management and exercise, using a qualitative approach added another layer of understanding to these behaviors, providing a deeper meaning for how women use social media as a platform to define themselves in a health and exercise context. Previous studies (Chua & Chang, 2016; Mascheroni, Vicent, & Jimenez, 2015; Meier & Gray, 2014) have focused on social media use and body image disturbance in adolescent girls, yet to my knowledge, this was the first study to use a qualitative approach to understand this phenomenon from a demographic of women who are in the 18-35 year old age range. This was also presumably the first study to build upon Perloff's conceptual framework from a qualitative perspective, understanding the progression of constructs through the eyes of social media active, and physically active, women. Thus, building upon Study 1, the purpose of Study 2 was two-fold. Part 1 of Study 2 aimed to use Leary and Kowalski's (1990) impression management framework and literature regarding reasons for social media engagement to explore the relationship between exercise behaviors, frequency of social media use, and health and exercise-related content posted to social media. Grounded in impression management framework (Leary & Kowalski, 1990) and the modified version of the transactional model of social media and body image concerns (Figure 2), Part 2 of Study 2 aimed to gain a better understanding of how social media influences women's thoughts, perceptions, and conceptualizations of a healthy body and healthy exercise behaviors. Specifically, Part 2 of this study aimed to assess: (1) how do perceptions of posts/images on social media influence motivation and construction of impressions and engagement in exercise; (2) how do women use social media to construct impressions of themselves in a health and exercise context; and (3) how does social media influence social comparisons and perceptions of one's body. This study aimed to contribute to a body of growing literature surrounding social media use by assessing the issue through a health and exercise lens.

# Method

# **Participants**

Participants for this study were twenty females between the ages of 18-35 who were active social media users and recreationally active. For the purposes of this study, recreationally active was defined as engaging in 30 minutes of purposeful exercise at least two times per week. Participants acknowledged having a social media account with at least one social media platform (i.e. Twitter, Facebook, Instagram, etc.) and acknowledged accessing at least one of their social media accounts a minimum of five times per day. Additionally, participants acknowledged posting exercise or health-related content to their social media account at least 1-2 times per

week. This could comprise of actions including, but not limited to, sharing a photo, making a status, pinning a pin, or creating a blog post. Health and exercise-related content was defined as any content that relayed a message relating to things such as exercise, nutrition, body image, internal health benefits, exercise activities, and the like. Because this study was qualitative in nature, the interpretation of health and exercise-related content was largely based on each individual participant. While I provided basic examples of this content, participants were allowed to interpret this message in a way that was meaningful for them so that I did not have too great of an influence on their thoughts and perceptions. Participants were excluded from this study if they were male, pregnant, under the age of 18 or over the age of 35, did not engage in purposeful exercise for 30 minutes at least 2 times per week, were currently being treated for an eating disorder or exercise addiction, and were not active social media users or consumers. Of the 20 participants, 9 of them had participated in Study 1 and were recruited via the contact information provided after completion of the survey. The additional 11 participants were recruited via other means that are explained in the Procedure.

## **Materials**

**Exercise log**. In order to monitor exercise behavior, the participants were asked to log their purposeful exercise engagement for one day. The log, which was provided to the participants electronically, asked each participant to document their frequency of exercise for one day (i.e. number of minutes/session), the type(s) of exercise performed, exercise intensity, the location the exercise session took place, and their reason for exercising. The log was returned to me prior to the start of the face-to-face interview as the log would be explored in further detail during this portion of the study. Exercise diaries/logs have been used in previous studies (Lutz, Stults-Kolehmainen, & Bartholowmew, 2010; Yuen et al., 2013) and are considered a validated

method to collect physical activity data (Ainsworth et al., 2000; Allor & Pivarnik, 2001; Stel et al., 2004). Ainsworth and colleagues (2000) demonstrated modest, yet significant, correlations between the use of physical activity logs and physical activity questionnaires (r = 0.26 for moderate activity; r = 0.38 for walking), and accelerometer data (r's = 0.22-0.34 for moderate and hard/very hard activity items), indicating the accurate use of this measure. The exercise log can be found in Appendix Q.

Social media use log. Social media was monitored using an electronic log designed specifically for this study. The social media log assessed (1) general social media use and (2) health and exercise-related social media use. Participants were asked to log their social media activity for one day (the same day as they tracked their exercise behaviors). When logging general social media use, participants were asked to log which social media sites they visited each day and how long they spent on those social media sites. When logging health and exerciserelated social media use, participants were asked to log how many times they posted health or exercise-related content on their social media account, what kind of content was posted, what account they posted the information on, and how many times they checked to see if someone had "liked," "commented on," "retweeted," etc. their post. Additionally, participants were asked to log how many times they consumed health or exercise-related content from a social media source. For the purposes of this study, "consumed" referred to reading an article, trying out a new exercise that someone else had posted, or engaging in some sort of interaction (i.e. comment, like, retweet, etc.) with the content being viewed. The social media use log can be found in Appendix Q.

Selection of three posts/photos. Prior to the face-to-face interview, participants were also asked to assess their recent and past posts on social media and find at least three health or

exercise-related posts (i.e. photos, videos, articles, etc.) that they believed best encompassed how they characterized themselves on social media from a health and exercise standpoint. I asked that the participants choose content that were meaningful to them and best defined the stance they took regarding health and exercise on their social media platform. For examples of posts/photos, please see Appendix R. These photos and posts were utilized during the course of the interview and were discussed in-depth with each participant.

Interview guide. Participants completed a face-to-face interview with me in order to disclose personal experiences regarding social media use from a health and exercise standpoint. Interviews are used in qualitative research to start a purposeful conversation in order to better understand the interviewee's experiences and perspectives (Lindlof & Taylor, 2011). The interview guide was created in consideration of the proposed research questions. In addition, the results from Study 1, specifically, the significant predictors founded in Study 1, also informed numerous questions added to the interview guide. The interview guide was semi-structured in nature, and the questions contained in the interview guide were meant to elicit the participant's subjective perspective on the topic at hand. Interview guides are believed to be more flexible in nature, as the researcher is guided by both topics and questions to cover (Lindlof & Taylor, 2011). While most participants typically received the same questions in the same order, there was some variation based on the experience and narrative the participant chose to disclose. The interview guide for this study can be found in Appendix S. In review of the guide, it is clear that the interview progressed logically, contained open-ended questions to elicit full and deep responses, and covered a variety of topics that were meant to explore the research questions. Questions included, "Describe how this post defines how you conceptualize your health/exercise behaviors or beliefs," "Describe your experience with trying to create an online persona from a

health/exercise perspective," and "Based on the type of social media you consume, how do you think women portray themselves on social media in regards to health and exercise?"

## Procedure

After obtaining approval from University of Wisconsin-Milwaukee's Institutional Review Board, participants for this study were first recruited by contacting the individuals who took part in Study 1. During Study 1, participants had the opportunity to leave their name and email address if they wished to take part in Study 2. Those participants that chose to leave their contact information were contacted first. After this initial round of recruitment, additional participants were recruited via announcements made in a classroom setting by both me and several instructors, email, word of mouth, and social media advertising. Participants were asked to contact me via email in order to complete a prescreening process so that the researcher could determine whether she did or did not qualify for the study. Those participants that qualified for the study scheduled a time to meet face-to-face with me either on campus or at an off-campus location. Prior to the interview, participants were asked to complete the exercise and social media use log no more than two days prior to meeting with me. Each participant was also asked to select three posts/photos that best characterized how they defined themselves on social media from a health and exercise perspective. Selected posts/photos were left up to the interpretation of the participant, which subsequently provided a stark contrast across the spectrum of participants.

Once the participant had completed the social media use and exercise log and selected their three posts/photos, they were asked to return all materials to me. Prior to the face-to-face interview, I reviewed the three selected posts/photos and the data from the participant's logs in order to familiarize myself with the participant's behaviors prior to the interview portion of this

study. The logs and three selected posts/photos were used as a research diary during the interview (Lindlof & Taylor, 2011) and supplemented the semi-structured interview guide.

**Qualitative inquiry.** The interview portion of this study was grounded in a phenomenological approach, but also utilized two secondary approaches: photo-elicitation and the research diary. These methodologies allowed me to explore the environment in greater depth, permitting participants to demonstrate their variable perspectives on a scale that was not bound by numbers (Strachan & Davies, 2015). Much of the research surrounding social media purports its complexity due to its interactivity. Thus, utilizing quantitative approaches alone provides a narrow focus on a very multifaceted issue. Qualitative research hinges on the expectation of retrieving thick description from each participant's life experience (Jackson, Drummond, & Camara, 2007). The richness and detail provided through qualitative data collection provides the researcher with in-depth information about the phenomenon in question, producing results that are unique to each participant's lived experience (Jackson, Drummond, & Camara, 2007). The assessment of subjective experiences, grounded in a phenomenological approach, provides understanding of human action and interaction from a more personal standpoint, acknowledging that individuals may perceive different realities after engaging in the same experiences. The purpose of phenomenological research it to explore an essence that cannot necessarily be observed by the naked eye (Sanders, 1982). For the purposes of this study, phenomenology was used as an approach because I hoped to explore how women used the same platform (i.e. social media) to portray themselves to an audience from a health and exercise standpoint. In basic observation, one might note that women portray themselves on social media as an exerciser, but why might they do it? How does seeing other women exercisers influence their own exercise experiences? How does social media engagement change one's perception about the self? The

general public can dissect a variety of interpretations from a social media post, but many questions remain unclear because users have the ability to self-select what is presented on social media to their audience and their purposes for this self-selection are often times disguised. At the core of phenomenology is intentional analysis, which refers to understanding an experience in its totality (Husserl, 1983; Sanders, 1982). When thinking about intentionality in the context of quantitatively studying social media, often times this analysis cannot take place because of the singular dimensionality of the profile or perspective in question. Instead of being able to assess the entire picture, the social media user provides us with pieces and parts. Understanding these pieces and parts through a numerical analysis does not allow for a thorough analysis of the total experience. It is possible that there are a multitude of underlying mechanisms influencing the participant, but a quantitative perspective cannot reach that piece of understanding. Thus, it seems rational and essential to use phenomenology to expose the intentionality of this particular phenomenon, and therefore better understand the phenomenon of social media at a deeper, more descriptive, level.

In Part 1 of Study 2, participants were asked to complete a social media use and exercise log. The purpose of this log was to act as a research diary (Zimmerman & Wieder, 1977) so that during the interview, I was able to ask the participant to recall the experience the participant had when recording information in the social media and exercise use log to further stimulate discussion and enliven the memory of the experience. A research diary is described by Lindlof and Taylor (2011) as a way for participants to collect data about specific occurrences in their everyday lives (i.e. exercise engagement and social media use) during a specified time period (i.e. one day). Researchers use participant research diaries to guide questions during the interview, as they are able to ask specific questions regarding why certain events might have

been recorded or engaged in during that time period (Lindlof & Taylor, 2011). Utilizing this methodology will provide a tangible reference for the participant to use during the interview in the hopes of deepening the conversation and producing more rigor for the analysis.

In addition to the social media use and exercise log, each participant was also asked to compile a minimum of three posts/photos that she has shared to social media that she felt exemplified how she portrays herself on social media from a health and exercise standpoint (see Table 7 to view the frequencies for type of post used and type of platform used; see Appendix Q for examples of posts/photos provided by participants). This type of research method, referred to as photo elicitation, allowed me to gain a deeper meaning behind why each participant chose their particular set of photos and why these photos characterized who they are on social media from a health and exercise standpoint. By allowing the participants to elaborate on their chosen photos, the influence of the researcher is minimized, and attention is focused on the participant as she shares her story and reality (Harper, 2002). By allowing the participant to choose her own posts/photos to discuss during the interview, the researcher is able to gain a fuller understanding of the data (i.e. the posts/photos) as the participant can fully explain her rationale and perception surrounding the aim of the study (Strachan & Davies, 2015). Harper's (2002) perspective on photo elicitation research provides a unique tie to phenomenology. Harper states: "This procedure is fueled by the radical but simple idea that two people standing side by side, looking at identical objects, see different things" (Harper, 2002, p. 22). From a social media perspective, I thought this approach, albeit unconventional, may provide an interesting lens to view the proposed research questions. As a social media consumer, it is sometimes difficult to determine the underlying messages the poster is trying to convey. Thus, by utilizing this approach, the participant and the researcher were able to delve into the photos/posts from an experiential and

theoretical perspective (Harper, 2002). Harper (2002) suggests that when researchers use participants as part of the study in this way, the participant is able to break the frame, which influences them to take on a reflective stance and "can jolt subjects into a new awareness of their social existence" (Harper, 2002, p. 21). The photos/posts were meant to help me better understand the multiple meanings behind each post, while at the same time allowing the participant to fully expand on their experiences past what the naked eye could see. Throughout the course of the interview, it became repeatedly evident that although the participant and I were viewing the same post, the story behind the post (from the participant's perspective) went well beyond what I was able to determine during her initial assessment. The photo elicitation methodology provided a novel approach to understanding this phenomenon and significantly guided the direction of each participant interview.

Interview procedure. During this portion of the study, I completed a face-to-face interview with each participant, asking questions in a semi-structured interview format (see Appendix P for the interview guide). The semi-structured nature of the interview allowed me to ask broad, open-ended questions in relation to the study purpose, so that the participant could explore past experiences and feelings associated with the questions without feeling influenced to answer in a particular way. Throughout the interview, I also asked different probing questions to each participant based on their responses when more information was needed. The probing questions served to help me gain a richer description of the participant's story (Brinkmann & Kvale, 2015; Lindlof & Taylor, 2011).

In the first part of the interview, the participant and I discussed the social media use and exercise log page by page. In the second stage of the interview, the participant was asked to describe each of the posts/photos she had chosen for the interview in order to gain a deeper

meaning behind why each participant chose their particular set of posts/photos and how these related to her social media persona. The third portion of the interview touched on general insights the participant had about social media. In addition to this general discussion, I also built questions into the interview protocol related to the significant findings from Study 1. The last three blocks of questions asked to the participants related directly to the variables that significantly predicted exercise frequency, impression management, and impression construction. The goal of implementing these questions was to assess the transactional model of social media, body image concerns, impression management, and exercise behaviors qualitatively and explore if the significant predictors were associated with each participant's subjective experiences.

At the start of each interview, the participant was provided with an alias to ensure confidentiality. Participants were given an informed consent document (Appendix T) to sign. The informed consent document contained the purpose of the study, the responsibilities of the participant, and a disclosure about utilizing the participant's tape-recorded interviews and selected posts/photos for the analysis. Each participant interview was tape-recorded to avoid misinterpretations and to enhance accuracy of the statements. All 20 participants agreed to have their interviews audio recorded. The interviews ranged from 48 minutes to 80 minutes in length. At the end of the interview, participants were asked to complete a demographics questionnaire to collect descriptive data (see Table 6). Each participant was provided with a \$15.00 Amazon gift card as thanks for their participation and contribution to this research study.

As mentioned, data for this study was collected through a phenomenological, humanistic approach, meaning that I fully immersed myself in the participant's experience. Unlike quantitative research which supports detachment from the data, qualitative research asks the

researcher to become part of process, utilizing a disciplinary attitude to listen intently and deeply to the participant, so as to understand the participant's perspective and perception of the experience from a disciplinary standpoint (Husserl, 1983; Moustakas, 1995). The participants in this study were asked to reflect on their experiences retrospectively in order to explore the phenomenon as a "lived experience" (Polkinghorne, 2005, p. 138). The combination of qualitative research methodologies used in this study allowed the researcher to live the experience through the eyes of the participant and gain a full understanding of the significance of the experience in question. Prior to the start of the interview process, I bracketed my personal biases, assumptions, experiences, and preconceptions about the phenomenon in question through journaling. Husserl (1983) suggests that bracketing helps the researcher fully take on a phenomenological attitude, as it allows the researcher to recognize the biases that exist and reflect on how those biases may impact the analysis process. Although there is never a guarantee that biases and beliefs are fully removed from the analysis, the bracketing allowed me to bring each participant's experience into focus in the moment, and use the interview protocol as a guide towards finding deeper meanings, as opposed to asking questions out of preconceived notions and judgements.

**Data analysis.** To complete the data analysis, each participant interview was transcribed verbatim. I transcribed 10 of the interviews, while the other 10 were transcribed by an independent company that specializes in transcribing. The interviews that I transcribed were precoded, meaning the researcher created preliminary jottings (both words and short phrases) that either seemed to occur often throughout the interview or that left an impression upon the researcher (Layder, 1998; Saldana, 2013). These preliminary jottings helped me decide upon the best coding method to utilize during the first coding cycle, as well as what codes to anticipate

once the coding procedure had begun. After the initial pre-coding, and once the remaining 10 transcripts had been returned to me, I inputted all transcripts into the qualitative software program, Atlas.ti. Atlas.ti was utilized to help the researcher organize codes, quotations, categories, and themes throughout the data analysis. I was able to use Atlas.ti to code the data, link the coded quotations to one another across transcripts, and deduce themes based on the linkages and code frequencies. Once the project had been arranged in Atlas.ti, I proceeded to use an open coding procedure for the first cycle of coding (Saldana, 2013). Open coding was used because it is descriptive in nature, assisting the researcher in building upon the codes that had been created during the transcribing process (Saldana, 2013). Wolcott (1994) suggests that description coding is beneficial to use so that the researcher can understand what was said and heard by each participant in general prior to exploring the underlying meanings. The descriptive codes in this data set include words or phrases such as "body image," "impressions," and "maintain image." Co-occurring with the descriptive coding process was simultaneous coding (Miles & Huberman, 1994). Simultaneous coding refers to the process by which the researcher is assigning multiple codes to a passage, representing an overlap or various meanings within the passage (Miles & Huberman, 1994). It is suggested to use simultaneous coding with caution, as it might suggest that there is no clear research purpose. For the purposes of this study, simultaneous coding was justified because often times, one sentence contained two different thoughts from the participant. For example, at the beginning of the sentence, the participant may talk about posting social media content because it was an accomplishment, but she ends the sentence speaking about how posting this content got her approval from others in her network. In that case, the participant is talking about "accomplishments" and "approval feedback," two codes that represent different, yet interconnected, ideas.

The second coding cycle involved the use of focused coding. The purpose of focused coding is to examine the most frequently used and significantly mentioned codes in order to decipher which codes from the first coding cycle make the most sense analytically for the study purpose (Charmz, 2006). For the current study, I used focused coding to draw prominent categories and themes from the data. Based on the initial codes, code groupings were created and then further placed into categories. For example, the category "Body Image" contained the code grouping of "defining women on social media," "body image beliefs," and "how social media influence body image."

Data was coded manually. I read through each transcript and coded quotations, using Atlas.ti to manage all code occurrences. The choice to code manually allowed me to fully immerse myself in the responses and absorb the details spoken by each participant. During this first cycle of coding and thereafter, I also participated in analytic memo writing, which refers to the process of making notes about specific codes and quotations as one is coding in order to think further and deeper on the subject matter (Saldana, 2013). While analytic memo writing is often times thought to be separate step in data analysis, in reality, the lines between coding and analytic memo writing should be blurred and the two processes occur parallel to each other, not in a linear fashion (Saldana, 2013). Saldana (2013) believes that it is important for researchers to engage in analytic memo writing as often times these memos contain important reflections that generate and become thematic points in the research. During the coding procedure a second researcher was utilized to implement a peer examination process. The second researcher also specialized in qualitative research and sought to act as a "critical friend," by evaluating the research approach, reviewing codes and code groupings, and providing feedback on the surmised themes (Krefting, 1991). Peer examination is utilized to enhance trustworthiness of the data

analysis procedure and is a method of triangulation. It is important to note that both the researcher and the second researcher coded and themeatized in the same manner.

**Creating themes.** After the coding and analytic memo writing procedures were completed, I began focusing the data in preparation for thematizing the data. Focusing the data occurred in four steps: (1) "top ten" list; (2) codeweaving; (3) comparison to theoretical model; and (4) the touch test. Steps 1, 2, and 4 were adopted from Saldana's (2013) pre-writing procedures. I first parred down quotes from each category so that no category had more than 10 quotes (Saldana, 2013). From there, I proceeded to arrange, rearrange, and remove quotations to observe the most salient ideas from each category. Steps 2 and 3 overlapped. Codeweaving involves writing multiple variations of the narratives to understand how the codes and categories might be interrelated (Saldana, 2013). During this time, I referred back to the proposed model to dissect how the participant's experiences fell into the constructs of the model. Based on Study 1, there is theoretical data supporting the model constructs so it was important to explore if these same constructs appeared in participant's experiences and if those constructs were impactful during their experiences. As the analysis progressed, it was interesting to observe the interplay between the previously established quantitative data and the newly explored participant experiences. The last step involved the use of the "touch test." Saldana (2013) prefaces the "touch test" as a way to progress categories into actual themes, enhancing and encouraging thinking at a higher level. Essentially, if one comes up with a theme that is tangible in nature, try to enhance the theme to something that is conceptual and more abstract. For example, someone can physically touch their best friend. But, it is much more difficult to touch the concept of friendship and all it entails. The latter is much more theoretical in nature and warrants a higher-

level thought process. Through these four steps, the researcher was able create several themes and subthemes that fit the data.

Trustworthiness. Validity of a qualitative analysis is determinant on whether or not the method "investigates what it intended to investigate" (Brinkmann & Kvale, 2015, p. 282). Thus, are the researcher's observations of the data a reflection of the variables of interest in this study and the phenomenon the researcher is trying to capture (Brinkmann & Kvale, 2015)? Researchers believe that validity has more of a place in qualitative research than reliability (Lindlof & Taylor, 2011). Reliability refers to the consistency of the responses as they relate to the interpretation of responses (Brinkmann & Kvale, 2015). If something is repeatable, it is considered reliable. Reliability is hard to document in qualitative research, as many of the questions asked during the interview, particularly in an open discussion, are non-repeatable (Lindlof & Taylor, 2011). Often times, occurrences in an interview many only happen once. Reliability is less of a concern in qualitative research because qualitative research aims to capture multiple realities, meaning that it is expected someone's reality or perception of an event might evolve and change over time (Lindlof & Taylor, 2011). In this study, validity was demonstrated through the use of triangulation. Patton (2002) describes triangulation as a process which uses a combination and application of various research methodologies that are brought together in order to focus on the same experience. Triangulation within this study included the incorporation of a combination of qualitative research approaches (i.e. phenomenology, research diaries, and photo elicitation), utilizing a second coder to facilitate checks and ask questions during data analysis, and facilitating a member checking process with the participants. The coding procedures and analysis of themes was collaborated on and discussed with an additional qualitative researcher who served as a "critical friend." During this peer examination, the third party researcher coded

passages from the raw transcripts that were selected by the researcher. The selected passages were chosen by me based on the re-occurring themes discovered during her own analysis of the data. After coding the passages, the second researcher critically reviewed my research strategy, codes, and themes to ensure credibility and dependability of the methods and procedure (Krefting, 1991). The peer examination procedure enhanced the trustworthiness and rigor of the data analysis process, and provided a more thorough analysis of the data that expanded past its original conceptualization.

After the interviews had been transcribed and coded, I conducted a member checking process with each participant. The purpose of member checking is to establish trustworthiness of the collected data, giving participants an opportunity to review and clarify their statements (Creswell & Miller, 2000). Participants are able to confirm the credibility of their accounts, while also confirming (or refuting) the interpretations the researcher has made during the analysis process (Sanders, 1982). During the member checking process, a summarization of each participant's transcribed interview was returned to the participant. The summarization consisted of direct statements the participant had made during the interview. I provided each participant with a brief narrative account, comprising of 5-8 direct quotations that she had labels as major "take-away" messages from the interview (Creswell & Miller, 2000). These take-away messages were thought by the researcher to best define each participant and the message she was trying to send during the interview. All of the participants found their accounts to be accurate and agreed with my assessment of their interview.

## Results

After conducting the face-to-face interviews, transcribing the interviews verbatim, coding the transcripts, and thematizing the discovered codes, I discovered four overarching themes: The

Highlight Reel, "Digital" Exercise, Building a Brand: Your Self vs. Your Selfie-Self, and The Filtered Body vs. The Real Body. These four overarching themes, which contain several lower order themes and subthemes (Figure 6 and Figure 7), continually re-emerged and articulated the participant's perceptions of their experiences on social media from a health and exercise standpoint. Throughout the course of this study, the 20 female participants were able to formulate a narrative surrounding their experiences on social media, and how their experiences interacted with their exercise behaviors and impression management goals.

Drawing on previous experiences, the participants discussed their experiences on social media as it related to four overarching themes: The Highlight Reel, "Digital" Exercise, Building a Brand: Your Self vs. Your Selfie-Self, and The Filtered Body vs. The Real Body. Within the first overarching theme, the following themes and subthemes emerged: Reassurance Seeking (subthemes: "Likes" as Reinforcement and Feedback from Audience), Post Worthy, and Celebrating Accomplishments. The second overarching theme, "Digital" Exercise, included the following three lower order themes: Social Media Influences the Exercise Experience, Exercise Comparisons, and Bad Exercise Advice. The third overarching theme, Building a Brand: Your Self vs. Your Selfie-Self, contained the following three lower order themes: Maintaining a Brand (subthemes: Commit to the Lifestyle, Authenticity and Relatability, and Meet Audience Expectations), Exerciser Identity, and My Two Personas. The final overarching theme, The Filtered Body vs. The Real Body, contained the following three lower order themes: The Societal Norm Box; Body Appraisals; and Healthy Body Portrayals. The overarching themes and their corresponding lower order themes and subthemes are examined in this section.

## **Highlight Reel**

"The reason we struggle with insecurity is because we compare our behind-the-scenes with everyone else's highlight reel." –Steven Furtick

The first overarching theme derived from this study is a popular term used in social media language: the highlight reel. A highlight reel on social media depicts the person at their best. The majority of social media users are inclined to represent themselves on their platforms by highlighting the best portions of their lives, whether it is related to an accomplishment, a major life event, or a huge transformation. The issue with highlight reels is that they often times cause individuals to fixate on the lives of others, drawing comparisons and creating unrealistic expectations. Ultimately, individuals begin to garner feelings of inadequacy when they find that their lives do not reflect the lives of others in their "friend" list. As Leary and Kowalski (1990) suggested, individuals are motivated to create impressions that will garner favorable impressions from others. In creating these impressions, individuals hope to gain boosts in self-esteem and positive feedback from others. Thus, like the general population of social media users in society, women in this study fixated on creating a highlight reel in order to gain approval from their social media audiences. Highlight reels were reflected through posting major accomplishments and content that was considered "post worthy." Highlight reels were approved of by receiving feedback from audience members often times in the form of "likes." Participants discussed feedback and obtaining "likes" as a form of reassurance and many participants actively posted in order to continually acquire that positive reinforcement.

Within this overarching theme, I uncovered three major lower order themes: (1) Reassurance Seeking (subthemes: "Likes as Reinforcement" and Feedback from Audience); (2)

Post Worthy; and (3) Celebrating Accomplishments. A discussion of the themes and subthemes appears below.

**Reassurance Seeking.** Previous research suggests that individuals seek out reassurance in order to verify their value and self-worth (Miura & Yamashita, 2007). Perloff's (2014) research suggests that basing self-worth on the amount of "likes," comments, and retweets received is a reality and common practice for many individuals. This notion was reflected in this sample of women as they repeatedly spoke about using social media as a platform to obtain "likes" and positive reinforcement from others. Erica presented this concept best by saying:

I feel like it's a very informal way of sharing things, but yet everyone knows. It's a way of telling mass amounts of people about it without having to talk to every single person. I can't help but think the people who do share that stuff, that they are trying to brag or they are trying to look for reactions out of people to sort of motivate them. I know for a fact my friend, she's always looking for people's feedback. She wants to hear compliments because she's very self-centered and that's important to her.

One participant, Sheena, also reflected this sentiment by mentioning how addicting it was to constantly check notifications on her phone to see that instant gratification, stating: "...it's kind of addicting to keep looking back and seeing, oh, who approves of this? Who approves of me?" Many participants mentioned posting content that they knew their audience would "like" and often times the driving force behind posting content was knowing someone would interact with their post and provide them with the sought out attention. As suggested by Perloff (2014), reassurance seeking came in the form of "likes," which reinforced posting behavior, and feedback in the form of approval.

*"Likes" as Reinforcement.* Participants discussed receiving "likes" as a means to warrant further posts about similar content. Aria mentioned, "...had I not had a positive response like that I think I would post less...I always get very positive feedback from the people that I have on my social media, so I think that almost warrants me to post more about the fitness things that I do." Erica stated that when she receives "likes" she feels good: "I think the more "likes" I'd get on the posts makes me feel more motivated to post things like that. I feel in a weird way, confidence." Kari had a stronger response to this idea, stating:

I think a lot of people are looking for some type of feedback where they feel like if they post a certain thing and it gets a lot of "likes" then they are positively reinforced. If I post pictures of myself doing this, or wearing this, or with this person I get a lot of attention. And I think they just like are insecure and so they feel the need to constantly get that attention. So the "likes" are reinforcing the fact that they are like ok this is what people want to see, so when they find people who are popular on social media whether it's famous people or someone that they know and they see what are they posting that's getting the most "likes" and they're going to feel the need to look that way or act that way.

In this sense, Kari discusses how some women construct particular impressions of themselves in order to obtain positive feedback, which is a notion supported by Leary and Kowalski's (1990) previous research. Thus, it appears that some women actively seek out others on social media to observe how they might be obtaining their "likes," proceed to mimic those behaviors in order to receive validation about their own selves, and then proceed to continue to post this similar content in order to receive more "likes" (i.e. more reassurance). Colleen echoed these feelings by discussing how often times she observes women posing in a particular fashion, angling the

mirror a certain way to change one's appearance, and then proceeding to only post when they look that way. She noted that women do this to obtain reassurance from others, and the reinforcement they receive only feeds their desire to continue these types of posts.

Women also talked about "likes" in the sense of causing one to reassess, or second guess, her post. Emma said that once when she posted, she only received a few "likes" on her post and it made her question whether or not her "friend" base agreed with her opinions. This in turn caused her to question herself. Julia stated that it can be kind of depressing when you post a picture and no one likes it, but conversely, when people "like" it, it reinforcing that the individual does in fact have friends. One participant, Amy, discussed how she once posted a picture of herself that she really liked, but it did not receive as many "likes" as she was expecting; in her words, "not near the number" she normally gets. She went on to say,

I got discouraged, and I was like, maybe I don't look that good in this picture and I deleted it. I was like I don't like it anymore. Which is crazy because before I was like, 'I look really great in this picture, I'm going to post it,' but it didn't get that many "likes" and I was like nevermind.

It seems that receiving "likes" weighs quite heavily on social media users. Often times, it is the driving force for self-worth and understanding how one perceives interactions with others. Alyssa finds "likes" extremely important to her self-worth and interprets the opinions others have of her through the amount of "likes" she receives on a post. She stated:

If I were to post something that I was really happy about, I would be absolutely shocked if I didn't get that reaction. I'd say, 'guys, I thought we were friends, I thought you were supporting me. You don't even care.' ... If I only got 5 "likes" on a marathon post I'd be like what the heck? Was there a setting I messed up, did you not see this?!

Alyssa had a very strong response to utilizing "likes" as a means to demonstrate support and encouragement from others. From the discussions with the participants, it seems that many share Alyssa's views and use "likes" as a means of reassurance, a pat on the back, a high five. When receiving "likes" it often times prompted the participant to post similar content because they knew they might garner the same positive feedback. Additionally, the amount of "likes" had a rather large bearing on how individuals perceived themselves, often times influencing the women to question their appearance, accomplishments, and opinions. "Likes" carry a significant amount of weight during interactions, and they seem to contribute quite a bit to feelings of reassurance.

*Feedback from Audience*. In the realm of reassurance seeking was also this idea related to obtaining feedback from one's social media audience, both in the form of "likes" and general commentary. Participants discussed only posting the "good ones" (in terms of photos) in order to show off, get a self-esteem boost, and be congratulated on progress made towards a goal. Aria expressed:

I would say that I don't post anything unless I know that there's going to be some interaction. Like someone's going to comment on it, that sounds really ridiculous. There are very few things that I post solely for myself, because if I wanted them for myself then I would just copy the link and keep it on my computer. So I do kinda post things to spark a comment, spark someone to say something, or to have some kind of discussion about it. Likewise, after receiving a negative comment about her body from someone at work, Mary discussed how she purposely crafted a Facebook status about the incident because she knew her network would comment on the status and provide her with the self-esteem boost she needed. She said that "this was another way of getting it out to a lot of people and getting the feedback I

needed at that time. Not to be selfish, but I needed the positive feedback. What better way to do it than social media?" In this case, Mary used social media as a way to seek out positive reassurance about her body. Although she made herself vulnerable by posting about an extremely personal experience, she knew that she could obtain positive feedback from her peers in this way and therefore, had no reservations in sharing her story.

Other individuals discussed posting accomplishments with the intention of receiving approval from specific individuals. Ashley mentioned that after running an ultra-marathon, she posted a photo of herself finishing the race in the hopes that some members from her friend list would acknowledge her accomplishment and say "good job, you're part of our club now." Similarly, Hannah posted a photo of herself on the finisher's podium as a second place finisher in a mountain biking race. Her intention with posting was to relay to her audience that she almost beat the top finisher, who is known in this racing world as a "very good rider." Hannah hoped her audience would perceive her a "good rider" as well since she finished so closely with her competitor. Hannah did not care if the feedback was implicit or explicit, she just needed to convey the message so that it would make her peers perceive her in a certain light. Alyssa shared similar sentiments when discussing her reasoning behind why she posts about achieving her goals:

I usually get quite a few "likes" and responses on my posts when I'm saying I did well towards achieving a goal...It feels good to get "likes" and comments and I look at those. I came in a little slower than my pie in the sky goal, but better than my A goal, and I just wanted everyone to see that I got those results. I wanted them to be happy for me. There seems to be an underlying theme that individuals post expecting to receive feedback and the feedback they expect to receive should reflect their value as an individual. Ashley, Hannah,

and Alyssa all mentioned posting because they wanted others to acknowledge their successes and they want others to form opinions about who they are (as racers in various contexts) by reacting positively to their posts. Sheena suggests that desiring feedback in this way seems somewhat narcissistic and she questions whether or not it comes from a place of insecurity. Many of the women spoke of wanting and liking the attention their posts garner, and it seems plausible to suggest that this feedback feeds their desires to post more and post often so that their audience can continue to engage with their posts. It was interesting that only one participant mentioned this need for reassurance coming from a place on insecurity. More often than not, participants discussed that they chose not to post in a way that would make it seem like they were bragging about their life's accomplishments. Yet, it appears that there might be an inherent contradiction in that regard. As Mary said,

It felt good, I mean people actually do like what I post, people are happy I finished, but it's almost like, why did I post this? Did I post it just to get all these "likes," just to get these comments? I don't know. I hate social media. I could have just not posted and been happy with me finishing and that's it, but maybe I did want that like superficial gratification.

It seems that participants are willing to actively seek out gratifications and obtain reassurance, but their reasons for doing so are variable.

**Post Worthy.** Considering what it means to create a highlight reel, it makes sense that many participants would talk about their reasons for posting in terms of creating something that is "post worthy." Erica talked about post worthy content in a sense that it was unrealistic—that individuals constantly strived to create these particular impressions that made them appear

"looking great" with a "great filter on it," when in reality she does not believe this is the case. She stated:

She [referring to a person she follows on Instagram] always posts these grandiose pictures of her in Thailand doing these yoga moves. Don't you ever get sweaty and nasty doing yoga? Where are those pictures? People only show when they're doing great things. When people post pictures drinking a green smoothie, there's no way you're actually enjoying that. Green smoothies, they don't taste amazing, they're expensive. Your whole paycheck is going towards your green smoothie obsession. I feel it's just unrealistic.

To Erica, these women she viewed on social media went somewhat out of their way to create a narrative about their lives. From her perspective, although the photos conveyed a health message, it was just a post crafted for the purpose of having a socially worthy image. In another perspective, Alyssa spoke about planning her work-outs in a way that will help her produce something that is post worthy. Although other participants shared similar sentiments, Alyssa described her thought process behind this in an interesting analogy:

So if I were to run 14.89 miles, my body would be satisfied that I had a 15 mile run. But you better believe I'm going to complete that so that it says 15 for when I post it. I'm not going to stop at 14.89, and that's not because I think 15.0 has a material difference to the quality of my work-out that a 14.89 does, but when people look at they're gonna be like, oh you ran 14 miles versus you ran 15, so. I want something post worthy. Or if I'm on the border line of a pace I'll have some motivation to pick it up at the end so I can post that my pace was a little better. But if I wasn't posting that stuff I'm sure I'd just stop at 14.89 because I'm not a detail oriented person. That kind of stuff just doesn't bother me. I'd be like 14.89 and I reached my destination great. But if I'm posting it, I want that 15.0. It's

easier to relate to I guess. It'll look like a more substantial work-out, because again you know it becomes like pricing at the store. You see that something is \$14.97, you're going to latch onto the 14. You're gonna be like oh it's \$14.00, it's not \$15.00. Well, you know, I ran 15 miles not 14 miles—no one's going to notice the .89 on there. So I want them to see I finished 15 miles.

Women in this study appeared to want to perform well so that they would have content worthy of posting about. Once again, this reflects the idea of creating a highlight reel. By creating post worthy content, individuals are showing themselves in a favorable light, highlighting their best parts, even though some of the content posted may be superficial or achieved by maladaptive reasoning. It was interesting to observe that when some women talked about posting post worthy content, they spoke about it in the sense that they purposefully crafted the content. Like Alyssa, they might have completed the activity they were posting about, but it also led them to pick up the pace, run an extra 10 minutes, or lift five more pounds than normal because that would garner more attention from the audience. Thus, post worthy content was not just about having something worthy of posting about, it was about creating a scenario that allowed one to obtain post worthy content. Thinking back to Erica's example, it is interesting to think that an individual might do the same yoga pose in Thailand that she does in her bedroom, but will only post the image of her in Thailand because of the preconceived notion that it is more socially worthy. The activity remains the same, but some women believe that society will perceive them in a better light if a photo or a status contains that little extra bit. Considering the idea of post worthy in this context, worthy content come from the extremes, not necessarily from the average. Thus, women on social media strive to create impressions that are above average.

**Celebrating Accomplishments.** The last theme warranting discussion in this category was the importance of celebrating accomplishments. The women in this study were very obvious in their support of posting accomplishments or achievements on their social media accounts. Ashley even said, "for some reasons I feel like it's socially acceptable to post after a really, some sort of big achievement." It seems expected, and almost encouraged, to post big achievements and it is not surprising then, that these achievements become part of one's highlight reel. Erica stated, "I don't think people post things that are negative, so I feel we're so accustomed to seeing real, positive, celebratory things on Facebook. I feel our natural instinct is to "like" it." Participants talked about posting achievements in the context of just wanting their audience to know about their accomplishment—not necessarily the back story behind it. Aria and Mary both discussed instances where they posted a photo documenting the finish of a race where their captions were only one word. In discussing both of the photos in length with the participants, each participant stated that their minimalist approach to creating a caption was because the audience did not need to know how they achieved the finish, just that they did it. It was more important that the photo spoke for itself because the "finishing" part was the main focus, the main message they wanted to send to their audience. Regardless of the means it took to get there, it was displaying the achievement that was important. Mary had described her reasoning for not elaborating on the post was that she was not happy with her finishing time. Thus, she did not want her audience to know how poorly (in her mind) she completed the race, she just wanted them to know that she had completed the half marathon. Social media is interesting in this way because users are able to self-select what content, and how much content, they share with their audience. While Mary received a lot of positive feedback because she finished her first half marathon, the underlying story that no one knows is that she cried the last two miles of the race

and she was disappointed with her time. Yet, this is not the message projected to her audience. This leads one to question how authentic highlight reels are in reality.

Often participants spoke about posting accomplishments with a sense of value. Sheena, when discussing one of her photos, expressed that "...it felt more like an accomplishment that I could brag about in all honesty. It's like okay, the former runner is now doing a 34 mile bike ride." In this sense, she valued being able to brag about her skill, and her transformation as an athlete, and did so through her post. Likewise, Alyssa discussed why she felt such a strong need to post about her marathon time finish:

I said, 'I did what I came here to do' [in regards to the status she posted]. So I had this goal in mind, I achieved it, I noted that I was feeling strong, and then to make that relative I noted that I had a PR of a half hour and that I felt really good about that. So I wanted everybody to know hey this is a really big deal to me and if it's somebody who doesn't run marathons, or is quite a bit faster, just so you know, I think that this time I just posted is really good. So they know what it means to me.

Posting accomplishments is often times extremely meaningful to the individual and while many said they did not want to come off as bragging about their achievements, they also still continued to post hoping for some sort of acknowledgement that their actions were positive and worthy.

Something of interest to note when talking about accomplishments was the lack of support women had towards individuals that chose to make every day posts about their exercise regimens. These conversations reflected major annoyances the participants had towards other users who appeared to be "fishing for likes" (Claire) as opposed to trying to achieve an actual goal. Ashley conceptualized this by saying,

The daily, I was at the gym for 30 minutes today, that kind of thing, I go, now you're just posting to post. I don't know why there's sort of a fine line, but I think the daily exercise is what everyone should do anyway and I don't want to clap for you because you ran today. When you finish your 20 mile run and you feel like you're ready for a marathon...that is when you should be asking for praise.

Similarly, Aria mentioned that constant posts from Map My Run (i.e. an app one can use to track runs and upload run times and routes directly to a social media platform) are so frequent that she no longer views them as a viable accomplishment. She would rather have someone share one accomplishment that happened over a timespan of several weeks than knowing what happened every day over those several weeks. Both Claire and Sheena shared strong sentiments against individuals that posted about their weight loss journeys. Sheena expressed that it drives her crazy to see individuals on Instagram post selfies and then a long post about how "exercise has changed their life." She said it is not so much that she does not believe them, but rather it is exhausting to continually be bombarded with that sort of message. Additionally, Claire said:

Do you really need somebody to tell you that you look beautiful? I feel like at this stage in your weight loss journey, or even your continuous butt pictures, you should feel confident in how you look. You don't need somebody to tell you that you look good, because I feel like you obviously know that you do...

This was an interesting, and unexpected, develop in the data analysis process as many of the women shared very strong views against supporting women who tried to post for "likes" or tried to play off all their exercise endeavors as major accomplishments. One participant even said she often times thought less of an individual for oversharing. This dynamic was a bit curious, as many of these same participants spoke about their strong desires to garner feedback from social

media posts, yet they were not supportive of those who they perceived as "over sharers" or "fishing for compliments." It seemed that their perceptions stemmed from personal biases and were independent of their own social media use behaviors. This also leads one to question the importance of what society defines as a major accomplishment. To someone who has never exercised before, walking on the treadmill for 30 minutes might be a huge accomplishment. Yet, in the eyes of some social media users, it is either not an accomplishment that is worth celebrating, or it is only worth celebrating only if the audience knows how much said individual has struggled to exercise in the past. How social media users define "accomplishments" is unclear and variable, and it seems that understanding the persona of the person posting is of utmost importance when deciding if their accomplishment is worthy of celebration. Regardless, celebrating accomplishments on social media has been deemed socially acceptable by other users and according to the women in this study, it is expected and encouraged.

## "Digital" Exercise

"If you go to the gym and you don't take a selfie, did you really go to the gym?" –Social Media Users Everywhere

The second overarching theme that emerged from the interviews was how exercise influences connections, motivation, accountability, and comparisons on social media. Considering the proposed model and the outcomes from Study 1, it seems logical that social media behaviors might have an influence on exercise outcomes and based on this sample of women, it appears to have a strong effect. During the discussions with these women, it was not surprising that many posted and consumed health and exercise content on social media and this shaped their exercise experiences (both positively and negatively). Within this overarching theme, three lower order themes were discussed: (1) Social Media Influences the Exercise

Experience; (2) Exercise Comparisons; and (3) Bad Exercise Advice. These lower order themes are addressed below.

Social Media Influences the Exercise Experience. Many of the women in this study discussed how social media influenced and shaped their exercise experiences. The overarching idea of "influence" was tackled from multiple perspectives. Some women discussed using different social media platforms to find new work-outs, exercise facilities, or classes to attend, and new races in which to compete. Some women discussed using social media as a means to find inspiration for themselves or inspire others to engage in exercise. Many women talked about how different aspects of social media helped them connect to others or find different ideas about exercise that fostered exercise engagement. Ultimately, as Julia expressed, "I check social media every day. You're always looking at what other people are doing to be healthier, live an active lifestyle...It's like, 'oh, what is that? I want to do that. That looks good,' you know?" Another participant, Aria, discussed how her newly initiated interest in CrossFit led her to consume and post more exercise-related content on social media. She mentioned that CrossFit has defined her as a person and she follows CrossFit individuals on all of her social media accounts so that she can continue to consume CrossFit-related fitness content. In the discussions with the participants, it seemed that what they were consuming on social media did impact how they chose to exercise, and often times, social media prompted their engagement in exercise. For this theme, there were three main topical areas that continuously occurred during the discussions: using social media for inspiration and motivation; accountability; and creating social media connections for exercise engagement. Upon further examination, I decided to lump these topical areas together, as the interconnectivity that existed between the three thought patterns had too much overlap to

consider them their own separate groupings. The following discussion entails a look at this lower order theme and its associated topics.

Social media is a unique ground to gain inspiration and motivation because of its variability. Participants alluded to the notion that they liked social media because there was so much "stuff" to consume. Pinterest, for example, was a favorite for many participants when searching for inspiration. Erin mentioned that on Pinterest it is very easy to look around and find different ways to motivate oneself, which makes it fun and enjoyable. Likewise, Erica mentioned that she uses Pinterest to find pictures of people "being really fit," and she pins them because while she may not be there now, it is an image that she ideally aspires to be in the future. Claire also mentioned engaging in Pinterest for the purpose of finding inspirational quotes that encourage her to go out and "do it." While Pinterest was a very popular platform, Amy much preferred using Instagram and YouTube as a source for inspiration and the platforms where she adopts the majority of her exercise practices. Amy stated: "I follow a lot of people who are in the fitness industry and are sponsored by fitness companies, they get paid to work-out pretty much. And a lot of them have YouTube channels and they post a lot of their work-outs so I get a lot of inspiration from that." She mentioned that she was drawn towards this type of content because they post pictures of themselves and post pictures of their work-outs, which was very inspirational for her. Likewise, Colleen mentioned that she too found the most inspiration from viewing pictures posted by individuals themselves. In Colleen's case, she was most drawn to individuals who had organized exercise regimens and often times posted about their transformations. That type of messaging really spoke to her and encouraged her to continue her own exercise habits.

One participant, Rachel, had an interesting summation about how she is coming to realize that social media motivates her in a negative way:

When I am practicing I don't think about the pose I am going to be doing for the day [referring to yoga]. It's more moving so I have the accessibility to pose in a safe way. I feel like it [referring to social media] has changed my practice in a way because my motivation to get to the studio is because I need to take a photo of the day. Which is strange. I have never thought that way before so it's something new. I am considering it not to be the best thing...if that is my biggest motivation, I feel like that is defeating the purpose. Which is a big part I noticed with social media...it's kind of embarrassing to say.

Prior to this statement, Rachel had discussed how she had just started a "pose a day" challenge, in which she was to perform a new yoga pose every day. She chose to document this journey on social media. In doing so, her motivation became less about engaging in the challenge and more about getting to the studio in a timely manner so that she could set up the lighting in an aesthetically pleasing way for the photo and practice the pose a few times before she captured it and posted it to social media. In this sense, Rachel began viewing a negative side of social media, as her practice, which is meant to focus on mindfulness, became about making sure her viewers were able to see her pose. Previous to this challenge, Rachel performed many of her yoga practices at home, but now she said she is focused on going to the studio for yoga because the thought of being able to post on social media is her main motivational factor. Sheena also shared a feeling of negative motivation. Sheena talked about how she used social media as a means to say to herself "maybe I should step it up so that I can look like this. Then I get through my work-out and I feel good on the inside, but I know when I look in the mirror I'm not going to

look like so and so. It can be a little bit demoralizing." While many have found solace in using social media as a means to find inspiration, it does appear to have negative consequences do to obsessing over pleasing one's audience or meeting the standards of one's audience.

In addition to talking about using social media as a means of motivation and inspiration, many participants discussed their ability to be motivational and inspiring on social media through their exercise posts. Dana, who works as a fitness instructor, often times posts on her social media accounts about a class she is teaching. It is her hope that by doing this people will be encouraged to come join her because she promotes her class as being fun, a good work-out, and healthy. Additionally, if she attends a class at a new yoga or cycling studio, she tends to post about that in order to inspire other individuals to join her in the future. Ashley prefers to document her exercise experiences on social media as a way to demonstrate that, "I look like a normal person, but I can make my legs go for this long, you can too." She continued by saying:

...just trying to get more people into a healthy lifestyle that maybe are not. That maybe I could be driving them in a positive way kinda thing, that's kinda, one of the hopes I guess. Cause I don't, it's only for praise from the people I'm competing with. From an exercise perspective. For everyone else, I don't want them to be jealous, I want them to think oh maybe I should do something. Cause that's what I use other people's posts for. I said that mom that was running her 18 miles [referring to a story she told previously], I always go I really should register for something you know, and I think that's a positive outcome of social media with exercise stuff.

Amy shared similar sentiments and said that she enjoys joining Facebook groups and Instagram pages where she can post content that is geared towards "regular moms or students or someone in their 50s who decided they wanted to just start working out for themselves." She said that she

tries to promote outlets like this to help others realize that exercise can be any activity that keeps their body moving. While using social media as a means to influence exercise was discussed in multiple lenses, it appears that consuming content does leave an impression on the consumer and can in turn impact one's ability to be physically active.

A common topic that the majority of women spoke about was the idea that social media was used as a means to hold them accountable for their exercise behaviors. In a way, accountability was discussed as motivation in the sense that posting on social media kept them on track to complete certain exercise behaviors. Essentially many participants acknowledged that by posting continuously, their audience members began holding them to certain standards and therefore, they needed to prove they were living up to those expectations. Emma discussed how if she did not post about her exercise triumphs and struggles on social media she would have quit her exercise journey a long time ago. She mentioned,

It's just to help me stay motivated or on track when other people are watching my journey...I either put my struggles or what I'm proud of like non-scale victory, little things, or what I'm doing for workouts, what doesn't work...It could be literally anything active. It's like a reward for me to be like, 'oh, yeah. I did do that. Yeah, this is a step in the right direction.'

Alyssa shared a similar perspective, noting that she performs better when she knows people are watching her, which is why she is so adamant about posting her race training and race results. She mentioned that people do not come to actually watch her race, but rather they follow her on social media and therefore know she is racing. Since no one comes to see her in-person, it is important for her to document her results because she wants people see how well she did. Alyssa also shared that knowing one of her work-outs could be post worthy also drives her desire to go

exercise. She talked about how she has previously tried to talk herself out of going to the gym, but then kept in mind that she would post about her work-out and social media would give her a positive result. This was reflected by her saying, "But if I didn't have anyone to share that with then I might not care. I might just say yup, didn't feel like going to the gym today and no one's ever going to know otherwise." She believes her ability to post about her exercise on social media really motivates her and holds her accountable for her actions.

In a similar regard, Erin went on to mention that she posts her Map My Run results on her Facebook page so people knew she went for a run. She stated, "I know that when you make your goals public, you're more likely to follow through with them." One participant, Emily, discussed posting about a run the day before she actually had to complete the run in order to hold herself accountable. In doing so she said, "...it definitely holds me accountable because I'm like dude, I already wrote that I'm doing this. I better get my butt out of bed and do that work-out." Claire enjoyed posting about her results because it made her feel affirmation for what she did. Posting helped her to keep going in the days to follow. Mary reflected a slightly different perspective stating that joining groups on Facebook has helped her stay accountable for running. If she sets up a time to run with someone in the group, she has to be there. Had she not been a part of these groups on Facebook, she could easily "blow off" the run because she is "not accountable to anyone."

Aria had an extremely interesting perspective about posting to social media for accountability and motivational purposes. Her purpose for posting, she found, really aligned with the identity she was trying to maintain in the CrossFit world. She felt pressure to live up to this expectation she created for herself, and so posting held her accountable for the persona she created online. Here are her thoughts:

...this is going to sound ridiculous, these posts are almost like a motivational thing for me because if I'm posting all this and people are seeing this and I'm not living that lifestyle and I'm not living up to those expectations, they're going to think less of me because I'm kind of like saying one thing and doing another. So if I was like at home, not that this is something I don't want to do, like sitting on the couch eating a gallon of ice cream that's not representative of these posts. So I think it kind of keeps me on track because people know. People know I do CrossFit they expect me to be fit, and eat well and all these things that fitness entails, and if I'm going to post about it I better live that. So I think if I wanted to not be identified by the things I post, I wouldn't post at all if that makes sense. It is a very like identity thing for me, I do find it like motivational in the fact that I have to keep this up, because I've defined myself as a person on social media like I can't be the opposite in real life if that makes sense.

This was a very unique perspective and touches on the third overarching theme found in this data. Social media seems to be a way to document, and hold oneself accountable, for the impressions created. As Emma and Alyssa mentioned, if an individual is going to track their progress online and demonstrate to their audience that they are a runner, they are on a fitness journey, they do CrossFit, whatever it might be, they must continue to make steps in the right direction to live up to that persona. It seems that social media not only holds an individual accountable to staying on track with exercise, but also for making sure this exercise identity is maintained (which is discussed later).

Along similar lines of accountability and motivation, was that social media helped individuals make connections that furthered their exercise experiences. Being able to connect with others on different platforms and across networks was not only beneficial for discovering

new ideas about exercise, but also beneficial for holding maintaining accountability. Some connections participants made were through directly consuming information from a platform and initiating it in one's life. One participant, Ashley, said that she had approximately 500 pins on her exercise Pinterest board and often times took screen shots of these ideas so that she could perform them later at the gym. Claire and Erin also mentioned using Pinterest to find new running work-outs as they prepared to begin training as beginners for a 5K and half marathon race, respectively. Colleen mentioned using Instagram to follow other women who post exercises, saying that this is where she often times gets new ideas. These are direct social media connections that ultimately influence ideas about exercise behaviors.

Dana enjoys connecting with friends on social media who have tried out new exercise classes or new fitness studios. She said it influences her to try new things, particularly new types of exercises. Hannah says that she uses Facebook to see what other "friends" have done racewise. Similarly, Alyssa mentioned that she likes how many people post their statistics to social media because otherwise it would be awkward to ask someone for their race statistics. If she did not have social media she said that she would have no idea what kinds of work-outs her friends were doing and how they are reaching their results. Julia talked about how she joined an all-girls Facebook group where women can post and consume different articles, recipes, and motivational quotes. She likes this group because it is private and it provides a nice support network for her healthy living habits. One participant, Amy, even spoke about how she joined a Facebook group called XX Fitness whose focus is to connect women so that they can generate ideas about exercise and act as a support system. Although this group consists of women all over the country, Amy was able to connect with a subset of women from this group in her hometown. This smaller group organized an exercise meet and greet so that these women could meet each other and complete a work-out together. Amy mentioned that she never would have been able to connect with these women if she had not started weight lifting because she would have never had a need to seek out exercise ideas on social media to further her weight lifting progress. Since joining this group, she has been able to try out Olympic weight lifting and aerial yoga because she has been able to make new connections online that have in turn connected her with these women in real life. Building a social media network founded in exercise seemed to be important for these women. By creating connections, they were able to enhance their experiences, learn new techniques, and build relationships that held them accountable for continuing their exercise regimens.

**Exercise Comparisons.** The second theme that arose from these discussions was using social media as a tool to compare exercise progress. Many participants did not blatantly say they believed they were comparing themselves to one another, from an exercise standpoint, but their inferences were clear. It appears that some women were motivated to use and consume social media as a way to compare their exercise routines to others. This notion was also evidenced in Study 1. Julia even mentioned using exercise comparisons as a way to judge how healthy someone is: "It's like, oh, she went to yoga class or that girl can stand on her head and do that. In my mind, it's like oh, she's a healthy person. If I could do that it would make me a healthy person too." Comparisons brought forth from social media engagement are tricky to navigate, as it is very easy for someone to only post their highlight reel, and once again, this leads one back to comparing the natural self to someone's best life moments.

Mary discussed her comparisons in terms of using the "faster people" as a measuring stick. Those she has met in the past from racing who fall into the "fast" group of runners often times motivate her to get off of the couch and get moving. She says they influence her to work

on things like speed because she knows she is not as fast as they are, but she wants to increase her speed so that one day she can be. Ultimately though, she said this also puts her down at the same time because she is not labeled as a fast runner, so sometimes it is hard to get motivated despite her desires to do better.

On social media, Kari tries to seek out individuals who look more like her and take cues from their exercise experiences:

...so if I see someone who posts things that are motivational and looking natural, there's a certain body type that if I see I'm more like 'you look like you work really hard and eat healthy and you're not like fake, plastic-y looking.' I don't know, I like to see people who work hard and see the results naturally so I think if someone posts uplifting, honest things I'm more likely to follow them because I feel like they, it's a tangible standard...it's like okay I can do that, I can see your work-outs I can do that too and it actually does help me because a lot of time I'll screen shot things and then at the gym, this is a new exercise I want to try.

Instead of comparing herself to individuals that appear to meet unrealistic standards of beauty, she tries to seek out individuals who she perceives to be natural and real. She finds this comparison much more realistic and therefore more attainable. Kari acknowledged that there is a subset of women on social media who get paid to exercise, so naturally, they are going to be at the highest level of "fitness." She said it is easy to compare her own exercise to theirs, particularly when she can only make it to the gym three days a week, but she has to keep in mind that she exercises for herself to be healthy; it is not something she is being paid to do so overall she cannot compare her exercise habits to theirs.

Alyssa prefers when other women post their stats about work-outs on social media so that she has more to compare herself too. She said, "If somebody just posts that they had a great training run, what's great? I don't know. I can't quantify how great it is." In this sense, she also pays close attention to how similar others are performing compared to her own times. If she perceives someone is at a lower fitness level than she is, yet they proceed to have a faster time than her, she said it forces her to go back and re-evaluate her own strategy to figure out why she is being outperformed. Bluntly, she stated, "…I don't think they should be able to run faster than me because I'm more fit than they are." In this regard, comparing herself to others makes her question her own training methods. Lydia shared similar sentiments, expressing that "…someone will post something and if they're like way ahead of me in their progress, I'm like shoot, am I behind? Am I doing something wrong? Did I not work-out hard enough?" Comparisons appear to lead one to question their own progress and results, and acknowledge that they might be subpar to others, which can ultimately have impacts on self-esteem and motivation.

**Bad Exercise Advice.** Women had very strong opinions regarding the advice that was given on social media and how this advice can sometimes take a stronghold in the digital exercise world. While the majority of the women in this study appeared to be able to sift through and filter out the "bad" exercise advice, they cautioned against others buying into the gimmicks and ultimately questioned the character of their friends when they did so. For example, Aria stated, "And I'm just sitting here like do people really take this and think that you're going to lose six inches off your waist by doing 10 jumping jacks before they get in the shower?" Dana talked about how many of the titles attached to this "bad" advice served as a trigger for consumption for many women. She believed that individuals really respond to hearing that they can lose large calorie portions: "…everyone posts the five-minute work-outs that burn however

many calories, and the calorie component is bogus." Yet, even though it is bogus, women see those messages and choose to engage in that content. Colleen echoed this by saying:

I think that a lot of it is quick fix. Even the exercises they will post you will need to get up to do it, but there are a lot of 'get rid of flabby arms with these three moves!' And I know it takes more than that. And it plays into the role that if I do this, I will look like her. I think the quick fix plays into it and a lot of quick dieting or 30 day plans verses changing your lifestyle.

Ashley believes that women who are not educated about fitness activities, or do not have experience exercising often times turn to celebrities to obtain advice. She referred to their ideas as "cloudy" stating that women who consume this type of content should not use a celebrity as their measuring stick because they do not know the amount of work that goes into getting a body "like that." Erin said that she struggles with images that she sees because she believes that these images turn a lot of women away from exercising. She said, "I try not to post the skinniest of all skinny girls because I don't think that is what most people are and I think it turns a lot of people away from exercising because they'll try so hard and they won't achieve it." Erin went on to say that in her eyes, very rarely does social media show individuals like Serena Williams who have a lot of muscle. Instead, social media projects a message about doing your best to be fit while simultaneously projecting an image of a slender girl. Lydia shared a similar thought and expressed that social media is too focused on weight and getting scale numbers down, so for her, trying to sort through positive exercise advice will be a lifelong struggle.

Claire discussed how she struggles with understanding the message social media wants to send about health and fitness. While she believes that there can the potential for positive

messages, as individuals grow and change their bodies through exercise, so too does their message change:

I love the ones where they're now fitness instructors that were once very overweight, and they wanted to change for themselves. I almost feel like their message has changed in the aspect of they're not just changing for themselves anymore. They've become Instafamous or Facebook famous, and it's more along the lines of 'okay, well, you guys like my body now, so I'm going to continue posting these exercise routines, basically half naked.' Put some clothes on first off. That really frustrates me. I don't know, I feel like social media has really skewed the correct way to be fit and healthy.

This reaction was formulated from the types of images Claire views on her own social media accounts. In discussing this idea, she talked about how women find it acceptable to pose in their sports bras and spandex shorts and she did not find that acceptable for someone who is trying to promote health and exercise. This seems to be an underlying theme throughout the interviews as a whole. The perceptions users form of others shapes one's opinions and further consideration of exercise practices. Her sentiments, and the experiences of others shared previously, also share a dangerous message about suggesting exercise be used for weight-loss and aesthetically-pleasing purposes only.

### Building a Brand: Your Self vs. Your Selfie-Self

# "You will never have a second change to make a first impression." –Will Rogers

The third overarching category worthy of discussion refers to the theoretical framework of building and maintaining impressions. Impression management is at the foundation of social media use. Users engage in social media in order to reflect authentic selves, and sometimes to project highlight reels that project only the positive and prominent part of the self. How one

chooses to project themselves on social media is a tricky and complex task. There must be a balance between realism and perfection; achievement and struggle; attention-grabbing headlines and avoidance of being "too personal." On social media, it seems that often times society creates impressions with caution and seeks to maintain those impressions with attentiveness to detail. There are variable opinions as to why one might feel the need to create and uphold a particular impression online. Women in this study voiced clear and strong opinions about what it meant to construct impressions and why it was important for people to perceive them in a certain light. Within this overarching category, three main lower order themes containing several subthemes emerged: (1) Maintaining a Brand (subthemes: Commit to the Lifestyle, Authenticity and Relatability, and Meet Audience Expectations); (2) Exerciser Identity; and (3) My Two Personas. A discussion of the themes and subthemes occurs below.

Maintaining a Brand. Emma conceptualizes this theme best by saying:

I want to discover my own brand, my own person, and how I do things. It's hard to pinpoint who you want in your circle, who you want to inspire, and who you want to follow you, I guess, because usually you attract your tribe. Yeah, that's one of the things that I've been trying to figure out, who I want to be and who do I want to portray and who do I want to be in this industry.

On social media, one has the unique power to create a persona. As an individual, one has the capacity to be whoever and whatever one wants to be. There are no guidelines about structuring the self and no rules about defining oneself in any particular way. The only standards set forth are socially constructed ideals, and even these ideals fluctuate fairly consistently based on the new trend or craze. Thus, with social media, one has the power to create impressions and subsequently, goes through certain processes to maintain those impressions. It seems of utmost

importance to the women in this study that they were able to portray certain messages about themselves to their audience, and often times, they went through great lengths to get those impressions across to others. It is not just about portraying oneself in a certain light—the individual must also be able to "keep up with appearances" online and continue to project this image time and time again. By creating a brand, a woman is defining herself, and the constant question becomes, who do I want to be? Within this theme, three subthemes emerged. The women voiced opinions about (1) committing to the lifestyle "in real life" so that there was not a discrepancy on social media; (2) trying to appear authentic and relatable to others so that their content remained likeable and consistent; and (3) attempting to maintain their impressions in order to not let their audience members down.

*Commit to the Lifestyle.* One way in the which the women in this study spoke about conveying their impressions accurately on social media was by voicing how they adopted the same lifestyle in real life. Essentially, their posts on social media were direct representations of activities they had actually done and lifestyles they had actually committed to. Dana discussed that her representation on social media mirrored what she valued and her values have led her to a variety of new experiences. But, because she has committed to this lifestyle, she is comfortable portraying that as her identity: "I definitely value trying new experiences, being active in whatever ways, and I value traveling. [Referencing her selected photos] I got to travel to do this hike. I got to try out a new yoga studio, and I got to be active through both of them...that's a lot of what I hold my identity in." Ashley also spoke about her experiences in building a persona through things that she values and has thus committed to in her life. For Ashley, it was important that her pictures and posts not only portrayed her as "outdoorsy" and "adventurous" but also that she does activities with her son in tow. She has chosen to commit to an active lifestyle, and

portray that lifestyle to her audience, because she wants to show that she is already building healthy habits for her child and setting a good example for him. By documenting her experiences on social media, it in a way holds her accountable for continuing to pursue this lifestyle. Ashley stated:

...you want to look a certain way to the community...I want my social media to represent the things I'm actually doing. I want to be realistic and representative...I think I've been relatively successful, but I think that's because I've had a lot to back it up. I do feel like

I've committed to the lifestyle. It's not just an image.

Hannah shared a similar opinion in regards to her athletic endeavors, voicing, "I feel like I'm reflected accurately. It's a lot of actual fitness that occurred in my life that I'm posting about." Hannah spoke about how what she posts is not any different than who she actually is (in real life) and she does not actively try to look a certain way to her audience. She did mention that she feels like a lot of women only post the good things that happen to them, and it is hard to believe that everyone's lives are only made up of those good things.

Susie shared a bit of a different experience, talking about how she became an ambassador for a race (specifically a local half marathon) and part of being an ambassador involves posting on social media about her own training and progress. She discussed how she had to commit to this running lifestyle in order to continue to serve as an ambassador because she accurately needed to represent the company she was working with. In acting as an ambassador she has not only committed to running, but also to eating healthy. Susie mentioned, "…I'll either post myself when I'm doing a work-out or what I'm eating or drinking to prepare myself for this run next year...I think it's just showing people what I'm doing and how I'm bettering myself…" In her quest to lead a healthier lifestyle, she also discussed the variety that appears on her Pinterest

boards, voicing that she wants her audience to know that she actively tries the exercises and healthy recipes she pins about. Thus, committing to a brand on social media also translated into real life. If an individual chooses to represent themselves online in this way, it was important to reflect these stances and actually live these activities in their day to day lives.

Authenticity and Relatability. A second underlying theme worthy of noting was the spoken desire to appear authentic and relatable to one's audience. It was important for some of the women that the content they posted was relatable to their general audience, and not too specific that it only spoke to a small subset of their followers. Alyssa discussed how the majority of her friends on Facebook are more so into wellness and fitness, not specifically running, so while she does make some running-specific posts every now and then, it is also important that she makes most of her posts appeal to her general network. Her end goal is to make her posts interesting for all, whether they are mothers, runners, or those working in a corporate environment like she is.

The majority of the women talked about the importance of showing themselves "across the spectrum." It was essential to them to show balance, providing proof that they experience both the ups and downs of trying to live a healthy and active lifestyle. Dana described her journey in constructing her online persona by saying:

My mentality in life is a very much what you see is what you get. That's my concept in person. I guess online I have a very similar stance. I don't necessarily try to create something that I'm ... I don't try to give one image of me. If you were to look at my entire social media account, you'd see both healthy and unhealthy behaviors on there. Unhealthy behaviors being a little bit more related to diet aspects, but I don't think I necessarily go into a social media site and say, 'okay, I'm trying to portray this.'

Sheena shared very similar thoughts stating, "I am going to indulge from time to time, but at the same time, I am balanced, because that is something I do try to strive for in my daily life. I feel like I do represent that fairly well online." She went on to say that it is important to own those behaviors and she does not want to portray a lifestyle that is unrealistic or unattainable. Erica echoed these statements expressing, "I just try to post things that I feel are honest and true to who I am. I feel I've never tried to create, or represented, a profile that isn't who I am and things I don't do."

In regards to displaying an image about exercise, Emily stated that she has previously posted the full spectrum of training pictures, from her finishing races and being happy, to showing herself "hunched over on the ground" saying that she just completed the worst work-out ever. Amy also mentioned that she too, had previously shared photos of herself online where she depicts herself as someone who works out and eats healthy all the time, but then in another breath will post photos of herself looking "bloated" with a caption that says she indulged over the weekend. Both women found it important to be honest so that they can be a bit more relatable to their audiences.

One of Emma's biggest concerns in her impression construction was portraying an image that appeared genuine. Thus, she finds it extremely important to share her struggles:

It will probably be worth it in the end and just it's rewarding to enjoy your journey, like the beginning, the end, and especially the middle. I hope that I portray that. It's okay to struggle, it's okay to be different, it's okay to do your own thing. You don't have to do this diet to be ... Because when you do a diet, it already has that negative connotation on the word so it just makes it seem like it's going to be a miserable time in the first place. I never say that I'm on a diet or I never try to put that societal norm twist in there, like we

have to do this to be happy. We don't have to do this to do this. This is generally like what makes me happy, or how I feel, or my struggle. It's just genuine.

Women in this study seemed to find it important to portray themselves in a relatable light, where they demonstrated struggles and triumphs alike. It was meaningful to them to depict balance, because if they did not, they believed that their lifestyles would come across as unattainable or fake. By portraying the spectrum, it appears that they were showing off their most authentic selves, and could therefore be more relatable to their audience. Although many women discussed these facets, the conversations with some women did seem a bit contradictory, considering the first overarching theme, as many women also voiced the need to craft post worthy content. It is possible that authenticity and post worthy are one in the same for some women in this study, but it leads one to question the ulterior motives behind posting the content—is it truly to appear authentic or is it to appear favorable? It is possible that some women find more importance in buffering their highlight reel while others find higher importance in being relatable. The highlight reel and the authenticity/relatability factor seem to be competing ideas worthy of further exploration.

*Meet Audience Expectations*. In line with the previous discussion, participants spoke about using their constructed image to meet the expectations of their audience. Previously it was mentioned that one participant, Aria, felt that since people knew she did CrossFit, they expected her to engage in healthy behaviors and be fit. She felt that because she posted those behaviors, she defined herself on social media, and that was how her audience would interpret her moving forward. Essentially she felt pressure to continue these behaviors in order to meet their expectations. In trying to meet audience expectations, Claire mentioned that "…this may sound bad, but I seem more active on social media than I might actually be for that day." This was an

interesting statement, and Claire went on to explain that sometimes she posts about doing activities that she might have done previously (i.e. completed on a different day). She said sometimes she "saves them up" (meaning photos she has taken previously of herself being active) and she might post about completing a run that she really completed a few days prior. She said that although she does try and do everything she posts, "...it's almost like a fake advertisement of my person or personality," because she does not choose to post things in the moment, but rather saves them for later use. For her, it was important that she saved some posts so that whether she was active that day or not, she had something to post about to maintain her image because her audience perceives her to be an active person.

Aria voiced her opinion about maintaining her persona on social media by stating: I mean if I'm taking something from Pinterest and putting it on basic social media it's gonna be something I qualify as being badass or something that more people can relate to. Like I don't want to be sappy or soft on social media, so I definitely have two different personas. I will pin pictures of kitties all day long, but I won't sit there and be like, look at this kitty on Facebook, especially in the CrossFit world. I think more and more women are becoming more powerful and more okay with what their bodies can and can't do and I definitely adhere to that when I post on social media. So it's never gonna be like, 'oh I went for a two mile power walk today,' because in my mind, not that that's a bad thing, I don't see that as being ultra-powerful. So the CrossFit world has definitely ingrained that in me. This is what power is, this is where we get it, this is what women are expected to adhere to...I think people on my Facebook, my friends, expect that from me...

In this case, Aria states that her chosen type of exercise, CrossFit, has defined who she is and because she engages in social media from this perspective, she wants to maintain audience approval by being "badass" or having a hard outer shell. To her, posting pictures of "kitties and otters" did not fall in line with her persona, and she did not want her "friend" base questioning who she is.

Dana and Alyssa talked about meeting expectations in a slightly different context, voicing that how their audiences react to their posts demonstrates that they have met their expectations. Dana described that her friends see her posts and tell her that she "seems adventurous" and she "always tries different things." When she gets reactions like that, she said that she believes she has successfully made her impression and continues to post things along those lines because that is what she wants to be known for. Alyssa discussed it in a slightly different way stating:

...so I post when I'm having good results and it's pretty evident how I've got to those good results because they've seen the path. You know they've seen I've been eating healthy, they've seen that I've been training, so it shouldn't surprise them when it works at the end.

In her description, Alyssa talks about how the path she has laid out on social media accurately reflects her results, and her audience expects her to get these results because she has so consistently described her progress. Thus, there should be no surprise that she met their expectations.

Creating a brand is an extremely complex procedure on social media, and often times it is a carefully thought out process. The problem with feeling the need to create and maintain a brand, or a particular impression, is that, as Kari put it, "...for whatever reason girls feel they

have to prove themselves...nobody ever feels good enough, so they're insecure and they try to act like they feel good about themselves." This leads one to question whether or not women actually commit to the lifestyles that they portray in an attempt to be relatable or authentic, or if they commit to lifestyles because they feel pressure to meet the expectations of their audience members. Regardless, there appears to be an incessant need to portray oneself in a particular light, and there are multiple avenues that one can take to achieve that end goal.

**Exerciser Identity.** There is a plethora of literature supporting the notion of an "exerciser identity" (Hausenbals, Brewer, & Van Raalte, 2004; Leary & Kowalski, 1990; Martin, Sinden, & Fleming, 2000). Often times individuals try to convey this identity because they believe their audience will view them as harder-working, more confident, and healthier (Hausenbals, Brewer, & Van Raalte, 2004; Martin, Sinden, & Fleming, 2000). The majority of the women interviewed had a strong desire to portray themselves on social media as active, healthy individuals. They achieved these personas by posting about their exercise results, promoting health-related messages, and sharing their experiences as exercisers. These personas could not be achieved in words alone, they needed to be supported with evidence of the actual activity. The exerciser identity was present in this subset of women, and it appeared that it was of utmost importance to portray themselves to their social media audience from this lens.

Hannah was one participant who really prided herself on her athletic accomplishments. She mentioned that while she has a lot of other great things going on in her life, "...it's like I want people to know that I'm athletic and good at what I train at, and they would definitely get that sense about me if they were to look through that [referring to her Facebook profile]." She went on to say that people who follow her on social media all know that she competes in races, whether they are running-related or mountain biking-related, because she always posts any time

she races. For her life, "the competition factor and the racing is a big part of it and it's how I think about being fit." Thus, her definition of what "fit" is has been the driving force in shaping how she presents herself on social media. Hannah summed up her social media persona by saying:

...I just always put how I did because I'm proud of how I did, because I spend so many hours of my life dedicated to do things like that...If someone doesn't know much about me, I want to come across as someone who is athletic, works out, has results and accomplishments because of the time spent. I would say a lot of my posts do have to do, I'd say a third or a half of them, usually center around training or race results. That's who I am. I take pride in it because it takes effort and I could so easily not do it, like, it's so easy to not be active and to say, like, you don't have time, and I've made an effort that I will not be that way. So I do take pride because it is a lot of time invested, that I stick to that and maintain that. In my opinion, it's a great trait to have, so I want people to know I have this great trait, I guess, because, again, it's like I'm portraying all the good about me, not necessarily bad.

Hannah talked about this topic very passionately and appearing in this manner to her audience was very important to her. Not only did she want to appear this way because she had actually committed to this lifestyle and got results, but she also wanted to maintain this impression because she values the traits and characteristics that came along with it.

In Lydia's efforts to create an exerciser identity, she discussed that she typically posts things that "make her seem more fit than not." She said she gravitates more towards making posts that show her looking fit and participating in athletic activities as opposed to those that convey her being lazy. Lydia went on to say, "Like a lot of people, even if it's just tagging

yourself at the gym, I mean you obviously want someone to know that you're working out...I guess the main thing is portraying that they are active because they think that is appealing to people." In her summation, she believes women actively try to post pictures and statuses of themselves online to demonstrate they that have adopted and live out this active lifestyle because they perceive it to be appealing to other audience members. Social media make it easy for individuals to seek out content that is of interest, so it makes sense that if an individual is invested in exercise, she might be prompted to post more about exercise because that is what her surrounding network is doing. In consuming that type of content, it is easy to surmise that "exerciser traits" are of value and it is important to strive towards adopting and subsequently presenting those traits to others.

Other women in the study talked about how they went about constructing their images on social media from a health and exercise perspective. After running her first 5K race, Erin posted pictures from the race labeling herself as a "runner." She said it was as if completing this race all of a sudden made her a runner, even though in reflection, she presently did not feel that completing one 5K necessarily warranted her that label. But, at the time, this was a race that she thought defined her as a runner. Ashley voiced that she aspires to beauty that embodies strength and vitality. Thus, for a long time she kept a profile picture of herself on her Facebook page of her outside, in athletic attire, with her headphones in. She believed that she "looked a little like a North Face catalog ad," and she liked that her audience could see her in this way. Mary said that the majority of her social media network consists of individuals involved in running, so there are no surprises when she posts about running. She said that this is how she has portrayed herself on social media, and this is who she surrounded herself with on social media, so making posts consistent with her running persona fall in line with who she is. Sheena discussed that part of her

image construction involves making sure that her posts reflect something that she believes in. Specifically, she likes to promote that she is physically active, but she also has fun being active and she involves other people in her activities. During the conversation she mentioned that she had been labeled a runner for so long, in an attempt to move away from that label, she surrounded herself with people who "excel at different things" and adopted some of their exercise habits, like cycling and slacklining, to re-create who she is from a health and exercise standpoint.

Emily shared a unique experience, as she has been trying to build a brand as an ultrarunner for the past few years. She said running started off as a personal journey, but as she became more involved, she began posting about it more on social media and started receiving quite a bit of positive feedback. Thus, she started a blog, began promoting her brand, and now she expresses, "I like that people respect me as a runner and ask my advice, granted I'm not an expert, I'm not a coach, I don't have the training, but I'm happy to tell you what has worked for me and others that I know." She felt that in sharing her stories and experiences on social media, she became more relatable to others in the running world, so much so that people actively seek out her advice and she now posts almost every day about her training or run for that day. Running is her identity and she makes it very clear on all her social media platforms, as have all of these participants. Exercise has become ingrained in their lives and it has become valuable for them to project those messages to their virtual audience. Embodying this identity is not just about the label, it is about living the experience and being able to provide evidence for being labeled as an exerciser.

**My Two Personas.** The last major lower order theme to discuss came as a bit of a surprise to me. Although one of the benefits of social media is that each individual user can self-

select content, it was interesting to observe how some women in this study not only self-selected the content they consumed, but also selectively chose the parts of themselves to share with others. It is plausible that the reader will read the previous statement and think nothing of it, as society does tend to convey only highlight reels, but it was the manner in which these women chose to self-select that was unexpected. This theme was of great interest, and had strong ties to the previous low order theme of the Exerciser Identity.

This theme defined the essence of social media from the perspective of building personas. Because one is able to be whoever and whatever she wants to be on social media, it seems reasonable that she might strive to develop two different personas: one that defines her general life, and one that defines her health and exercise habits. Several women in this study discussed purposefully creating two different social media accounts that were meant to speak to two different audiences. Whether it was on Facebook, Instagram, or Twitter, these women spoke about developing two separate accounts: one that was personal, and one of which was dedicated solely to their exercise and health social media persona. What was most interesting about this phenomenon, was that many of the women who had two accounts kept their personal account private, selectively choosing who could and could not follow them, and left their health and exercise account open to the public, choosing not to regulate followers and allowing any random person to follow them and view their content. This act led to quite an interesting discussion. Here were Emma's thoughts:

When I did my before and after picture, like a year transformation, I didn't post them on my Facebook [she has a personal Facebook profile and an Instagram account specific to her fitness journey] because I was ashamed of who I was before and I don't want to have people see me before. Then on Instagram, I had no problem. I don't know why but for

some reason, I couldn't do it on my Facebook. I suppose it's something to do with how people perceive you and you always want to look good, I guess...I don't care about the strangers, but family, I will second guess what I'm posting or I'll take into consideration what I write more so than if it's to strangers that I don't really care about their opinion in the long run because I don't really know them.

From Emma's statement, it appears that social media is perceived as a personal, private entity, a place a judgement, but in the same breath, a place where one can be vulnerable and raw. Other participants shared Emma's thoughts, stating that they were willing to be vulnerable and post their fitness conquests to the public, but when it came to the private domain, an area in which one's "friend" base consisted of closer friends and family, it was important to remain reserved and hold back on content due to avoiding feelings of shame and embarrassment. Amy projected:

I made a separate Instagram account for my fitness so I have my one Instagram account where I like post pictures of my cat...and then I went and made this second Instagram account which I use my full name for so people can easily find me...and I think just because maybe I'm embarrassed. Because it did start as a personal thing; I did want this to just be like for me, strictly my fitness journey. Like I don't want all my friends following me, so I don't like post on Facebook ever, about my fitness stuff. It's just on Instagram. And now, a ton of my friends follow me on that so now it's kinda like, cat's out of the bag. It's probably just out of embarrassment—like I'm embarrassed to be posting a picture of me like flexing you know what I mean?...I don't know, it puts this pressure on me like I have to, if my friends are following me and they see that one day I look like this and the next day I look like this, like I feel like there's a pressure if I see someone every day, I don't know. I'm not exactly sure where the embarrassment comes

from, I just don't want that attention for myself I think...I wanted to hide it for as long as I could the fact that I was posting about—cause there's all these jokes, you don't need to post every time you go to the gym.

This presents an interesting paradox. Amy put herself out there publicly on a separate platform to avoid having her Facebook friends follow her. She mentioned she did not want the attention and she was embarrassed of what she was posting, yet she was content with having the public consume these images. Social media creates a world where one can adopt and present any persona, and it is almost strange that Amy was fearful of projecting this persona to her friends and family but had no qualms toward being "this" person to the public. It leads one to question why one might post these images to begin with and what it is important to fall in line with two perceived sets of societal norms. In an observation, it is almost as if Amy wants to appear "average" to her close friends and family, but wants to maintain a societal ideal, an exerciser identity, within her network because those are the message society sends to users. Interestingly, when Amy was describing her selected posts/photos during the interview, one of her photos, a meme about "leg day," was posted because she wanted people to know she had leg day that day. While the meme was meant to be humorous, she said that her main intention in posting was to tell her audience that she had a tough leg day—it was important that her audience knew this about her. Again, it is interesting that one might feel shame towards projecting themselves as an exerciser to close friends and family, yet, deliberately post in order to convey specific messages about who they are as an exerciser.

Rachel, Emily, and Susie all mentioned creating separate social media accounts as well. Rachel has a personal account and an account that documents all of her yoga ventures and meditation practices. Emily has a personal account and a Facebook page and blog specific for

posting running content. She mentioned that she got tired of her family always commenting on her running posts on her personal account, so she created a new Facebook page that anyone who is a runner can follow. Susie created two separate Twitter accounts: one for her personal use and the other so that she can tweet and re-tweet nutrition articles and healthy recipes. She also created a blog separate from her Facebook account where she tries to build her brand as a healthy and active individual. All participants who discussed making separate accounts said their main motivation for doing it was to avoid being "annoying." Yet, because of the public nature of their accounts, it appears that there might be underlying ulterior motives to engaging in this process, one that aligns more so with upholding their health and exercise identity.

While there was this interesting phenomenon surrounding creating two separate accounts, there was also quite a bit of discussion surrounding selectively choosing posts and only choosing to share certain parts of one's life. Aria mentioned that she did not start posting frequently about CrossFit until almost after a year of being involved in the sport. She said she posted a photo of her one year CrossFit anniversary and many of her followers commented on the photo that they had no idea she even did CrossFit. She went on to say that she did not know how CrossFit was such a big part of her life (her "real" life) and no one on social media knew about it. This prompted her to start sharing more because this was a part of her life she wanted to especially highlight because it was such a big part of who she is. Julia shared a similar experience stating, "I never post anything about playing tennis and that's such a big part of my life. I feel like that's almost like this separate part of my life that doesn't make its way onto social media." She went on to express that she did not know why that occurred, but for whatever reason she chooses to self-select in that way. Amy had the reverse experience, stating that "I don't flex in real life. I feel like I don't even talk about it, how much I work-out in real life. Like I talk about it on social

media—I had leg day today..." Social media provides two different worlds for individuals to live in and it appears that these words do not necessarily overlap, which is an interesting concept. Rachel summed up this concept nicely stating, "...it is a strange opportunity that you get to choose what you want them to see. It is a little difficult." Erica echoed this by mentioning that she feels like she can only share "overly highlighted and ideal capstones" in her life. Keeping those thoughts in mind, it makes sense that individuals might choose to selectively share themselves, not only to document their successes, but to avoid pressure from significant others. It also makes sense that one might develop two separate personas, due in part to what one perceives as relevant, valued, and appropriate in their platform. Creating and maintaining two personas was markedly an important task, and it leads on to question why there is a need to have two personas, outside of being an "annoyance."

### The Filtered Body vs. The Real Body

"I just got back from a great vacation, came online and saw apparently it's shocking and unheard of to be a woman and have cellulite. Lol." –A Tweet from Iggy Azalea

The fourth and final higher order theme derived from the interviews referenced the third research question in this study. There was much discussion surrounding how social media defines women's bodies and healthy bodies, and how women perceive bodies on social media. While opinions on this topic varied, there was a consensus between all participants that in one way or another, social media did have an influence over how women viewed their bodies and social media encouraged them to compare themselves to others (although this was not always described in a negative connotation). Within this overarching theme there were three low order themes: (1) The Societal Norm Box; (2) Body Appraisals; and (3) Healthy Body Portrayals.

The Societal Norm Box. It is not a new idea in Western culture to perpetuate a message that in order to be beautiful, a woman must have a thin, lean, and toned body. Since the introduction of social media, these messages are more robust than ever before. Thus, it was not surprising that many women discussed how social media messaging projects a message of needing every woman to fit into a certain "box" or body type in order to fit this societal norm. To put it bluntly, Mary said, "Social media is always just shoving down your throat how women should look, what women should do to look a certain way exercise-wise, health-wise and this and that. And it's like, everyone's not cookie cutter." Aria mentioned that she believes women are more likely to consume bad exercise advice on social media, like doing 10 jumping jacks before getting in the shower to lose weight, because they have social stress from having to fit into a societal norm. Julia believes, "that's the world we live in...where you have to look perfect all the time and it's like, oh no, we just have to have a filter on this all the time." While messages about what women should and should not look like continue to cycle through, Julia expresses that many of these images females consume about what healthy bodies look like may in fact be filtered and not real images at all. Regardless though, Sheena said it was a bit unsettling to know that women actually feel the need to express what they should look like, meaning, there is an (un)spoken definition about what a body should look like that some women use as a measuring stick when comparing their own body to the bodies of others. Ultimately, Sheena said she has trouble openly supporting individuals through social media who try to build followings based on how "they look good in a bikini based on what society deems."

When asked what general messages these women received about body image on social media, women responded with the following:

"I definitely think that people think in order to be healthy and beautiful, you need to be skinny." (Emma)

"Most ladies want to be the very, very skinny, slender, so they don't eat as much...I guess direct everything towards being very skinny whereas I would like well-balanced...I would like to be slender but also I want to be muscular..." (Erin)

"I'd say one with muscle tone. Not even necessarily lean. There's people that look healthier that are probably carrying an extra 20 lbs. but I guess having a shape of a person, not rolls, not having a waist, so like a normal human figure and I think adding a bit of muscle tone, like arms and legs..." (Hannah)

"...everyone wants to be skinny. You want to be skinny, have a thigh gap, and all these weird things people want to have." (Kari)

"...they more portray it as a skinny person that can wear a sports bra and spandex and look great. Not somebody that actually has muscle." (Susie)

Although many participants said that the messages about body image are "getting better" on social media, the underlying thought is that many women should want to reach a skinny figure that has some muscle tone in order to be deemed socially desirable. As Dana mentioned, when women are able to transform their bodies to meet this standard, they "like themselves more" and "feel better" about themselves. Social media is almost obsessive about sending messages associating happiness and body size, elucidating the notion that it is important to be skinny, to fit into this societal norm box, so that one can also be happy. Erica shared a somewhat unsettling story about this thought:

I feel we have very unrealistic perceptions of how our bodies should be whether or not we embody that image or not. I'm sure you have friends, I have friends, that are perfectly

healthy and their bodies look great, but they continue to want to be skinnier or they want to be different than who they are. I definitely feel those feelings sometimes. I don't think I'm by any means as thin or as fit as I could be, but I feel like, again, having that negative attitude and holding that over myself it gets me nowhere...I wanted to post this picture of us [talking about a friend] from the summer and she freaked out because we were in our swimsuits. I told her calm down. 'You're skinnier than me so you look better in this photo. Don't worry, everyone will see you on Facebook looking skinnier and better than me.' She got shaken up over it. I didn't end up posting it just because I know it made her uncomfortable. Part of me is I know I shouldn't care and I should post it anyways because it's a great picture of us. I feel sad and sorry for her.

Social media has become a place of judgement and comparison when it comes to our bodies and it is hard to project messages about an ideal body, or fight the norm of an idealized body, without feeling sad about one's own appearance or feeling fearful about the perceptions one's audience might form. Many women in this study did not want to abide by the societal norm box, but that did not stop them from expressing that these are the types of messages they consistently receive.

**Body Appraisals.** Women in this study discussed how social media prompted them to compare their own body to the bodies of other women on their social media platforms. For a subset of women who focus on exercise activity and live healthy lifestyles, comparisons were particularly salient. Almost all participants discussed engaging in some sort of body comparison, but the connotations were reflected both negatively and positively, dependent on the participant's degree of body acceptance.

In her experience, Alyssa has found herself, and many of her friends, engaging in body comparisons on social media. She voiced:

They're definitely checking each other out. Comparison is everything. So somebody posts a picture, a gym selfie, you're taking notice of 'oh hey she's got really rockin' arms,' or 'hey she could probably stand to have a little less sugar in her diet cause she's rounder around the middle.' Totally looking at that, that's super important and I think I don't post many selfies myself because I just don't like any of them. And when I post them I want them to be perfect because I guess I just assume everybody else is taking that same critical lens to them.

In this instance, Alyssa acknowledges taking a critical lens to view the bodies of other women in her social media network. She is also fearful of posting photos of herself because she assumes that she will receive the same critical commentary. Julia shared a similar vision, expressing that individuals get too caught up in comparing their overall lives to others: "...when I'm scrolling through, you're comparing your life to all these people...it's like oh, what are they doing? What am I doing? What does she look like? What is she wearing? How do I look, what am I wearing?" Ashley mentioned that she often times compares herself to other women who post their Weight Watchers results on social media. As someone who did Weight Watchers in the past, Ashley said that she becomes disappointed in herself when her results (in terms of weight) are not as successful. Although she said at times it can be motivational because it forces her to re-evaluate her game plan, it also can be degrading and decrease self-esteem.

Kari has a very difficult time understanding the reasoning behind the need to socially compare on social media. She said that while she sees more women understanding that a lot of photos are photo-shopped or filtered, it is hard to not look at those pictures for comparison. She said:

It's hard for a woman I think to look at something that's beautiful and not instantly compare yourself to that and question your own beauty. It's difficult to see that. Especially if you see like how many "likes" they're getting or they're Instagram famous, and you're thinking well if I looked like that I would also have this. It's kind of all meaningless anyways. I don't understand the cool thing about being famous on social media.

## She went on to say:

I think it used to be everyone wanted a thigh gap, and to have long legs and be skinny, and there's so many models that are famous from Instagram and people follow those...and I'm like why do you even follow that person? Why do you care what they're doing? Their life is to pose for a camera and you're comparing yourself to that person whose life is to model. And that's like their career, which is fine. But, that person is trying to like make a career for themselves and they're comparing themselves to someone whose career it is modeling-they're supposed to look skinny or whatever. And I think too now it's about being curvy and people see messages about which celebrities are the most popular right now. There's the Kardashians, or whoever it may be who's in the spotlight and has that certain body, and they use like waist trainers and have their own personal trainers every single day, and they have pretty much an unlimited amount of money to do those things. And so, to even compare yourself to somebody whose job is like being famous, is just like irrational to me, but I think a lot of people do that and I see certain bodies and they're like I definitely don't have that shape and somehow that makes them feel that their body is not beautiful anymore.

When some women engage in body comparisons, it seems logical that they might find themselves inadequate or not as beautiful. Kari had a very strong reaction to these body comparisons, but she was not alone in her thoughts. Claire discussed that when she was younger, she would compare her body and her fitness activities to others, trying to lose as much weight or body fat as her friends. She said it took her awhile to stop focusing on what other people we doing and start focusing on "her own thing." Colleen shared similar sentiments, observing that the more she learned about her body, the more she began accepting that she was meant to have a bigger frame and no matter how many women she tried to compare herself with, their bodies were just naturally more petite and lean because of how they were built. Like Kari, Amy discussed that it took her a while to stop comparing herself to women on Instagram who got paid to exercise. She explained:

Personally I had to stop following a lot of people on social media because they have like fake boobs, and they got paid to exercise and they looked immaculate. But, also it's good lighting, it's a good angle, like a good picture. So I think a lot of women think 'oh I'll never look like that,' and you probably won't, but I've grown to start following women who are strong and powerful and move a lot of weight and by default they look great because they are just so athletic.

It seems to be a process and it takes a bit of reflection on the self to really understand the negative side of comparison and recognize how to self-select on social media to avoid harmful images and messages about the body.

For Emma, who talked quite a bit about her current fitness journey, she struggled with comparing her progress and transformations to those that she sees online. When she started her fitness journey, she said that she began following women who were body builders or

CrossFitters, because they were so determined and focused and she too hoped to adopt those traits. After a while she said, "It seems like everybody has this amazing transformation that happened in five months, and that's never been a thing for me." So, she began following other women on social media who were on a similar fitness journey as hers and she began feeling more motivated to compare her journey to other like-minded individuals. She said it was easier to compare herself to women who were like her because she could commiserate in their struggles and use their successes to improve her own journey. She closed by saying:

I guess it's been an experience mentally for me to compare my journey to other people's because I was using it negatively at first and now, I incorporated people that are on the same journey as me or who have the same body type as me. That's where body positive people come into play because they weren't on my Instagram before. It was always the superficial skinny person who I suppose really never was fat.

Erin shared a similar thought, expressing that self-selecting images and individuals who she can relate to was more beneficial to her own psyche, because it helped her believe she could go out and achieve what she wanted to. Sheena also found it was much more encouraging and empowering to "look at other people who are just out having fun and enjoying it and doing it for the health benefits."

While there seemed to be a surplus of messages regarding what social media tells women their bodies should look like, consequently encouraging body comparison, participants voiced that recently, there has been a slow shift away from messages about the thin-ideal towards messages about body acceptance, body appreciation, and anti-body shaming. Many of participants expressed that they hoped to be champions of this type of messaging, showing their audiences that anyone can be active and healthy bodies do not come in one size. Ashley

described that when she is in what she considers her "peak shape" she does not look cut or skinny. She said that she hopes people will see her exercise posts and realize that she does not have the "ideal body" when she is in shape, but her body still works and she is still active and healthy. Ashley went on to discuss woman that she follows on Instagram who practices yoga. This woman, who is considered famous on Instagram and in the blog world, is not what Ashley would describe as the stereotypical yogi. Ashley said she is a larger individual and "...she's African American, so she's not this willowy, tall, white woman." Ashley went on to say how empowering it was to have this woman as an example as it led her to believe that she could do yoga just as well as anyone. She said that "stuff like that is really positive because she is showing her level of fitness which is very high, but her body is not what you would expect it to look like at that level of fitness. But the stuff she's doing takes amazing strength, flexibility, and stamina." From her perspective, Ashley believes that seeing real people do activities like that and watching people that she knows make transformations are more positive images. She is more apt and willing to compare her body to these types of individuals because their ideals are attainable and their ideals also break the norm.

Emma discussed how social media was somewhat beginning to normalize and the message about healthy bodies was shifting towards ideas of size acceptance. She expressed:

The more real people are more raw and authentic. I tend to be more drawn to them even though I like having somebody who's on the farther stages still there to remind me of what could be or to help me make goals...If you hashtag weight loss journey, it seems like there's more real people who are actually doing a journey like me. I guess it's becoming more okay to be different sizes on social media now so than before where...I would never post when I was back in the beginning of my journey. I have too much

anxiety about them. I guess there's more normalcy in posting nowadays in what is seen in the media because it's not just the figured women or men with abs and muscle. It's more like normal people just trying to be healthy and not skinny or bulky. I guess it's just becoming more normal now. I'm seeing that in my social media but that's who I get drawn to even if you have to search for them.

Despite the seemingly incessant messaging about needing to compare one's body to another to see how well one fits into a societal norm box, many participants did acknowledge the shift that is occurring towards body positivity and more realistic comparisons standards, although there is much work to be done.

Healthy Body Portrayals. The third and final lower order theme divulges a discussion about how a "healthy" body is portrayed on social media. Many participants openly voiced that it was a "weird" question or that they "did not like the question," mostly because they a) did not know what a healthy body looked like, and b) they did not think they could define what a healthy body was because there were too many variations. The conversations that ensued were therefore insightful and encouraging as participants made clear that not only do healthy bodies come in all shapes and sizes, unhealthy bodies do as well.

When participants were asked to describe the stereotypical "healthy body" that they see displayed on social media, these were their responses:

"I think for the healthy body component, I think they view the intense workouts as a way to get a more thin or fit body and I think the thinner and more muscular bodies are looked at as being more of an ideal healthy body, but then there's also the point of people being too muscular, especially for women especially in their arms and in their back I think is not always appealing or healthy to other women." (Dana)

"...people are really into like eat nothing and be really skinny. And I think as social media has grown and expanded, it has gotten to the point where they stop seeing that as something desirable, but like okay, you can be skinny but let's put some substance behind it...Pinterest things have stopped going from 'do you want to eat that bag of chips or do you want a six-pack,' to being like 'strong is the new skinny...'" (Aria)

"...a healthy body that they portray is one where you can post a picture in your sports bra and yoga pants..." (Claire)

"To me I think it looks like a slimmer physique. I feel I like looking strong. I think it looks good, not necessarily to have stick-skinny legs, but to have when you can see muscular outline on your limbs." (Erica)

"Flat stomach. I feel like if I don't have a flat stomach I'm not healthy." (Amy) Many of these women expressed that healthy bodies reflected being stereotypically fit, indicating that this individual was an active exerciser and healthy eater. While these were the messages these women were receiving on social media, they also discussed that some individuals on their social media networks were starting to display more realistic healthy body images. Emily for example said that "...they're starting to get better, more realistic ideals of what exercise can do for them and should do for them...it's getting better than the unrealistic everybody can be skinny model idea that it used to be." Alyssa said that what has really helped her define a healthy body is following "real people that I really know, who are local, who are having real training programs, and real struggles, and working and having families and stuff." By choosing to look at close friends and not Olympians (who she also follows on social media) she rationalizes that this is what healthy women who have families and have jobs outside of the home look like, and she is one of them. Kari expressed that many individuals think about healthy bodies in terms of being skinny or having a certain body type, while she believes that a healthy body comes from committing to the lifestyle and having a good mindset. People might body shame, but she believes it is important to understand that every body can still be unique and healthy at the same time.

Rachel discussed at length her perception of healthy bodies on social media. Her perspective was unique due to her heavy involvement in yoga. On her social media she observed:

I think there have been some cool pages on larger yoga practitioners, who are doing amazing things, and people find it very inspiring. On the other perspective, there are thousands of tiny yoga instructors doing the same thing, so there is a skewed view of what health is in that way, relating to yoga... I don't think social media does the best job with giving the diversity of a healthy body because when I have students coming in for a class, they are all different bodies, all different shapes, all different levels of expertise. And a lot of people in their fifties are more athletic than people in their twenties. It is interesting to see that because people generalize young, tight, toned, skinny, means in shape, which you would see in pictures and apparel, but when you see the actual human...I have seen plenty of yoga instructors who have a tummy or like larger breasts, and they are much more talented than someone who is just a twig. I am not trying to be degrading to them, but the media chooses the twigs who are the people that can get in these poses and hold them for a picture and look great in them, but they aren't showing the person who can also do that, but that has the everyday body that women have, which can give you that skewed view. Which is why with yoga it is hard to rein in on what yoga is. You see all the gurus with the big bellies and their skinny arms and legs, and you're just like that's another yoga body. You wouldn't see someone like that advertising yoga

leggings or things like that. So I think social media is still really skewed with that. I feel like people are trying to get that body positiveness, but I don't think it's there.

Despite the positive trends happening on social media, and the movements to embrace all bodies, it still appears that many women hold a stereotypical view of what a healthy body is. And many times, that stereotypical review equates healthy bodies as one's that are thin, trim, lean, and slightly toned. Rachel is correct in saying that the diversity of healthy bodies is not well represented on social media, although many of the women in this study believe that by continuing to view more "real" people and more "real transformations," it is possible to shift this skewed vision.

## Discussion

The present study utilized a mix of qualitative research methodologies to better understand how social media influences women's thoughts, perceptions, and conceptualizations of a healthy body and healthy exercise behaviors, as well as to gain more knowledge regarding how women choose to self-represent and create impressions in this context. This study, which was grounded in impression management framework (Leary & Kowalski, 1990) and the transactional model of social media, body image concerns, impression management, and exercise behaviors, sought to explore how women used social media to consume information about their bodies and healthy exercise practices, and also how women used social media to create impressions from a health and exercise standpoint. Previous research (Grammage, Hall, Martin Ginis, 2004; Hausenblas, Brewer, & Van Raalte, 2004; Martin, Sinden, & Fleming, 2000) has documented the extent to which individuals try to achieve an exercise identity, but to this date, no studies have sought to explore how women create and maintain these impressions on social media and why these impressions are important for them to create and maintain on social media. The results from this qualitative analysis fill a gap in the literature regarding how these health and exercise impressions are created on social media, why these impressions are created, how social media influences the perceptions about the body, how women interpret healthy bodies on social media, and how women use social media as a means to engage in exercise. By examining this phenomenon from a subjective lens, I was able to gain an in-depth perspective of these women's experiences which in turn provided a unique perspective to understanding social media from a health and exercise standpoint.

#### **Understanding the Highlight Reel**

Women in the present study described their interactions with social media in multiple contexts. One of the most heavily discussed topics included the act of creating a highlight reel on their social media platform. Highlight reels were spoken about in regards to posting accomplishments that documented proud moments in their exercise endeavors, participating in exercises activities (i.e. weight lifting, races, and CrossFit) to produce content that might be considered post worthy, and seeking out reassurance from their "friend" base, which included friends, family, and strangers alike. A recent study by Sung and colleagues (2016) found that individuals are highly motivated to post selfies on social networking sites in order to seek out attention. To do this, Sung and colleagues (2016) suggested that individuals self-select particular photos that highlight favorable characteristics and behaviors. These photos, which essentially comprise the highlight reel, are then used to gain admiration from followers in the form of "likes" and approval-focused commentary. This process was heavily reflected in the present study. Women in this study were motivated to display post worthy content on their platforms in order to gauge a response from their online audience. Considering the impression management literature, Leary and Kowalski (1990) suggest that often times individuals try to convey

admirable and desirable impressions in order to gain favorable acceptance from others and avoid unfavorable outcomes. Additionally, many times individuals are motivated to construct impressions in order to boost self-esteem. Self-esteem is enhanced through receiving positive feedback and evaluations from others, and typically, obtaining positive feedback is interpreted to mean that the individual has successfully conveyed a likeable impression (Leary & Kowalski, 1990). Thus, women in this study sought out attention from others in their network by constructing a highlight reel that consisted of elements conveying their most ideal self and then waited for approval from their peers.

Considering my proposed model for this study, women are thought to be predisposed to seeking out reassurance seeking on social media in order to enhance their contingent self-esteem. By definition, contingent self-esteem refers to a tendency to base one's self-worth on other's evaluations, often times resulting in that individual trying to meet certain expectations and standards set forth by their peer group or other societal members (Patrick, Neighbors, and Knee, 2004). Bearing in mind the experiences women in this study shared, it seemed that the need to create a highlight reel may also be motivated by the need to obtain a desirable impression in order to enhance contingent self-esteem. Thus, women know that their impressions have been conveyed through positive feedback (in the form of "likes") and continued to use social media as a way to reassure themselves that their highlight reel is falling in line with societal standards. The ability to meet these societal standards feeds self-worth, and as Chua and Chang (2016) suggested, sometimes self-worth is determined by "likes," "comments," and "re-tweets" received. Women in this study aligned with these assumptions, stating that "likes" were of high value to them, it was important for them to post content worthy of "likes," and often times

participants paid close attention to what kind of posted content received a positive response so that they could post similar content in the future to obtain the same outcome.

The incessant need to find reassurance on social media was prominent, and one way that women achieved a "stamp of approval" on their self-worth was by tailoring and expanding their highlight reels. Many women in this study discussed the need to only post positive content on their social media platforms, and more often than not, they were doing this in the form of creating post worthy content (by engaging in some sort of health-related activity) and then posting their accomplishments. Participants believed it was important to share accomplishments with others in their social media audience because it helped define their persona on social media. This notion aligns with previous research (Chua & Chang, 2016; Toma & Hancock, 2013), as an accomplishment creates an explicitly favorable impression of that individual. What better way to show the ideal self than by posting about one's highest achievements and successes? This seemed to be the best way for participants to convey themselves as competent and capable beings. Although many participants said that they were not sharing their accomplishments to brag, they also spoke about finding ways to perform an exercise to make it post worthy, and then valuing the "likes" and positive feedback that were attached to posting an accomplishment. There seemed to be an inherent contradiction in the need to create and share their highlight reel with others. As previously discussed, this feeds into the need to seek out reassurance regarding one's behavior from an online audience. But, it also exposes an intricacy of social media surrounding this underlying desire to satisfy one's conscience by convincing oneself that they measure up to societal ideals and standards (Perloff, 2014). Toma and Hancock (2013) found that individuals gravitate towards using Facebook because it meets their ego needs. Ego needs were described as the aspiration to appear socially desirable to a network of individuals whom the user

has found meaningful connections with (Toma & Hancock, 2013). Thus, while many women in this study stated that they did not need to post for anyone else—they were merely posting for themselves—there was discussion of a constant motivation to achieve "likes," positive feedback, and acknowledgement of their accomplishments which may feed into this desire to satisfy their ego and appear attractive to their network. Yes, participants were motivated to post about accomplishments because they wanted to share that content with others in an act of gaining support, but this feedback only served to feed self-worth, as participants did mention feeling down when a post did not receive as many "likes" or sometimes even deleting posts that did not receive an expansive response. One participant, Alyssa, even went as far to say said she would be "shocked" if no one interacted with her post and she would interpret that to mean no one is supporting her.

Previous research has documented that the need to seek out reassurance on social media platforms does not only stem from one's desire to satisfy their ego—it also is derived from their narcissistic tendencies. Narcissists have a tendency to focus strongly on their appearance, paying close attention to the clothing they are wearing, how their body appears to others, and how their audience perceives their appearance (Vazire, Naumann, Rentfrow, & Gosling, 2008). Due to the constant need to appear a certain way to others, it has been demonstrated that individuals with narcissistic traits are more likely to: (1) post statuses that reflect their major accomplishments and their diet and exercise routines (Marshall, Lefringhausen, & Ferenczi, 2015), (2) frequently update their status to gain validation from others (Carpenter, 2012), (3) use social media as a way to attract favorable others to their social media profile (Davenport, Bergman, Bergman, & Fearrington, 2014), and (4) engage in posting more self-promoting content (Mehdizadeh, 2010). Specifically, in regards to exercise, Marshall and colleagues (2015) found that narcissists tend to

display exercise and diet information on their social media platforms as a nod to the high value they place on physical appearance. This line of research has interesting ties to the present study, as many of the women voiced that they did not want to post out of vanity. Although women tended to want to remain authentic and honest in their posting, the need to post about health and exercise accomplishments may lead one to question if posting is coming from a place of information sharing or a place of narcissism. It was interesting how heavily documented narcissism is in the social media literature, and it does appear that it has implications for posting from a health and exercise standpoint as well. This topic is worthy of future, and more in-depth, exploration, as many women in this study did say that they were not posting to brag yet still continued to post exercise accomplishments and hope to receive some sort of validation.

While some participants nonchalantly discussed "likes" in a manner of rarely checking back to see how many people clicked "like" or the lack of weight a "like" holds for them, the evidence from their interviews and the posts/photos they brought to the interview, suggests otherwise. As suggested by Chua and Chang (2016), individuals use social media feedback as a way to observe how much attention their peers are giving them and where they might fall relative to their peer group. Several participants discussed that they knew they got their impressions across when specific individuals "liked" or commented on their posts. Some participants mentioned looking for specific followers to acknowledge their accomplishments and when that happened, it almost felt as if they were part of the club. Social media engagement provides a tangible representation of peer acceptance, and it is clear that participants wanted to show themselves in their best light so that others would be proud of them and find their endeavors worthy. As a society, it seems very unlikely that we post just to post; there is an ulterior motive present, and in discussions with these women, it seemed that the point of creating a highlight reel was to garner positive feedback from others, gain reassurance that their personas and actions were aligning with societal views, and using the feedback to formulate further posts to begin the cycle again. As suggested by Leary and Kowalski (1990) individuals who choose to display their behaviors publicly are more likely to engage in impression management so that their goals and accomplishments are clearly defined to their audience and they can obtain the desired feedback needed to maintain high self-esteem. Despite their contradicting statements, women in this study conveyed social media behaviors that aligned with the current research in this area, demonstrating that reassurance and attention seeking is an imperative part in constructing and continuing their highlight reels.

# **Exploring Exercise Perceptions on Social Media**

Considering the transactional model of social media, body image concerns, impression management, and exercise behaviors, it was thought that social media engagement may have an impact on exercise behaviors. Based on the interviews conducted in the present study, women described their experiences with social media as significantly contributing to their exercise experiences in a variety of ways. There were a multitude of ways in which the social media user was able to use different online platforms to connect for exercise including using Pinterest to pin healthy food recipes and new exercises, following other women on Facebook or Instagram to observe their work-outs and transformations, and joining certain Facebook groups or pages to learn about new races or exercise-related activities in the area.

Women in this study expressed that using social media to document their exercise endeavors held them accountable for following through with those behaviors. Again, as Leary and Kowalski (1990) suggested, displaying goals publicly motivates individuals to manage impression to a higher degree. When personas are put on public display, individuals must find

ways to continually support these personas as they know their behaviors will be observed by others. Documenting exercise endeavors online allowed women to publicly display their goals and aspirations, which in turn not only become part of their identity, but also made them accountable for following through on these endeavors in order to meet the expectations of their followers. Not following through with the public display may result in embarrassment or failure, which individuals want to avoid (Leary & Kowalski, 1990). Some of the women expressed that documenting their training routines online held them accountable for following through with long runs or a CrossFit "work out of the day."

Other women utilized social media to connect to others with similar interests. In doing so, these women found common ground with others in the network, planned exercise activities with them, and then felt obligated to honor the plans to exercise. Social influence on social media became a heavy tool in holding women accountable for being physically active. It seemed that being able to put accomplishments or training routines on social media sites publicly provided them with extra incentive to follow through because they wanted to "save face" with their audience. Park and colleagues (2009), suggest that individuals are motivated to join and use Facebook groups as a means to socialize, gain peer support, and find a sense of community within their network. Thus, it is plausible that women in this study choose to join these Facebook groups in order to identify themselves as part of this particular exercise community. In doing so, the group held them accountable for upholding that identity by encouraging them to continue on in their exercise behavior. Considering Leary and Kowalski's (1990) research, this makes sense, as individuals are motivated to convey favorable impressions. If women desire to be labeled as exercisers, they must continue these exercise behaviors otherwise they will not be able to

document that particular image on social media, nor will they be able to continue cultivating meaningful relationships with individuals in their social media community.

Women in this study also discussed how social media influenced their exercise habits by providing them with inspiration, motivation, and new ideas for exercise. Many women expressed that being able to follow similar, or "more fit," others on social media encouraged them to stay active. Previous studies (Holland & Tiggemann, 2016; Simpson & Mazzeo, 2016; Tiggemann & Zaccardo, 2015) have documented similar trends in terms of the recent "fitspiration" phenomenon. "Fitspiration" (which is a joining of the words fit and inspiration), is a term used on social media to promote healthful living behaviors and encourage others to exercise and become fit (Tiggemann & Zaccardo, 2015). Tiggemann and Zaccardo (2015) have documented the positive effects of "fitspiration" imagery on Instagram, finding that women who are exposed to these images are more inspired to engage in fitness activities and healthy eating and seek out health-related behaviors. Although women in this study did not specifically talk about the "fitspiration" craze, their "fit" comparisons were reflective of previous research (Holland & Tiggemann, 2016; Simpson & Mazzeo, 2016; Tiggemann & Zaccardo, 2015). While the positive effects of "fitspiration" have been documented, there are also numerous negative effects of this inspiration to take note of. Based on content analyses of "fitspiration" on Instagram and Pinterest, researchers found that many of the images display idealized and often unattainable standards for fit women, indicating that women were often times finding inspiration from women who met the societal ideal of fit: extremely beautiful, slender, toned, athletic, and lean (Simpson & Mazzeo, 2016; Tiggemann & Zaccardo, 2016). One participant, Kari, even discussed how she actively seeks out a "particular type of body" on social media, typically one that looks strong, toned, and fit. Many of the messages in this "fitspiration" mentality revolve around appearancerelated reasons for exercise, which is known from previous research to result in body image concerns and disordered eating patterns (Prichard & Tiggemann, 2008; Strelan, Mehaffey, & Tiggemann, 2003). Women in this study discussed using Pinterest and Instagram as a means to find motivational quotes related to exercise, and based on the "fitspiration" literature, many of these quotes often times promote messages similar to "thinspiration" or messages that promote negative attitudes towards exercise (Boepple & Thompson, 2016). Although the women in this study spoke of finding inspiration and motivation when viewing these quotes and images, it is important that these perceptions are viewed with caution. Tiggemann and Zaccardo (2015) found evidence that exposure to "fitspiration" imagery on Instagram results in higher levels of body dissatisfaction, lower levels of state appearance self-esteem, and negative effects on mood. Additionally, Holland and Tiggemann (2016) discuss that women who post "fitspiration" images have attitudes associated with excessive exercise and disordered eating. These are severe consequences of posting and consuming this type of imagery, and therefore it is important to keep in mind that while women do draw some inspiration from these messages, it is important that these messages are being interpreted in positive, healthful ways. Women in this study did not suggest that "fitspiration"-type imagery had led them to exercise compulsively or engage in disordered eating, but their consumption of these images was prevalent and it is important to take note of the possible negative side effects this can create.

Women in this study also discussed using platforms such as Facebook, Instagram, Pinterest, and YouTube to find new exercises to complete. As active social media users, these women were able to use social media to connect to a variety of networks that provided them with new ideas about exercise and also information about training programs, nutrition, and exerciserelated events to partake in. Some women in this study expressed that viewing posts from other

women who documented trying out a new yoga studio or a new cycling class encouraged them to seek out those same activities. Using social media in this way has been reflected previously by Ellison and colleagues (2007) who found that college students use Facebook as a means to build upon their social capital. Social capital refers to the broad range of resources an individual has available to them, often times accrued through building and maintaining relationships in one's network (Ellison, Steinfield, & Lampe, 2007). Thus, had that information not been available via social media, the connection would not have been probable and those resources would not have been accumulated. Additionally, women took to social media promoting exercise classes and races to compete in, in order to encourage and inspire others to be active. Many women mentioned that exercise was more enjoyable with a group of individuals, so often times they would promote a new yoga studio, for example, and encourage others to come to the next class with them. Sung and colleagues (2016) found that women are motivated to use social media for means of communication. Particularly, women like to post selfies in order to connect with others on their network and start a dialogue (Sung, et.al, 2016). This notion aligns with the women in this study, as many of them brought in personal posts and photos that reflected times when they created a post in order to promote an activity as a means to encourage others to be active.

With reference back to the need to satisfy one's ego (Toma & Hancock, 2013), women also discussed that consuming posts about exercise influenced them to be active, and the subsequent documentation and feedback re-affirmed their identity as an exerciser. Based on these experiences, it appears that social media influences exercise engagement and adoption in a cyclical pattern: women consume content on social media, which influences them to exercise, and then women document their exercise, obtain feedback, consume more, and engage again. Interspersed in this process was using social media as a way to hold oneself accountable for

exercise endeavors. The public display of oneself reinforces the need to continue exercise patterns to maintain favorable to the audience. Public documentation of exercise not only influenced the exercise experience, it enhanced it, particularly when exercise garnered positive feedback.

While many women took to social media platforms to consume information about exercise, it was made clear that not all information consumed was good advice, and many times information delivered via social media was deemed "bogus" or questionable. Participants voiced that often times they consumed content that was heavily focused on weight, diet, and calorie aspects of health. This observation aligns with previous research (Simpson & Mazzeo, 2016; Tiggemann & Zaccardo, 2016) that suggests many health messages on Instagram and Pinterest relate to using exercise for weight management strategies or to improve appearance. Women in this study expressed the questionable nature of the content of these messages, determining that there was a discrepancy between the exercise suggested and the number of presumed calories it would burn or inches it might take off one's waist. The majority of the women in this study chose to self-select the images and content they consumed, and many of them voiced the opinion that they had enough knowledge to ignore and filter through the bad exercise advice, but it is important to note that this is the type of content that is readily available for the general population of women to consume. It is very difficult to spread evidence-based messages about health and exercise when then are a plethora of messages on various social media platforms commending twenty-day juice detoxes, unapproved dietary supplements, and calorie counter exercises to get rid of flabby arms or thunder thighs. The language used by many of these social media outlets can contribute to appearance-based means for exercise, meaning, feeling the need to use exercise as a tool to lose weight. It is important that women either find ways to seek out

evidence-based exercise practices or learn to identify discrepancies between healthy and unhealthy exercise practices. Women in this study stated that many of their friends bought into these exercise ploys and because of the hoard of messages available to consumers, these messages become easily accessible and believable.

The last message expressed by women on the topic of exercise was how social media has exacerbated the need and want to compare exercise regimens with one another. It is well documented in the literature that exercise arenas prompt exercise comparisons (Prichard & Tiggemann, 2005; Prichard & Tiggemann, 2008; Wasilenko, Kulik, & Wanic, 2007). Thinking about this idea from a social facilitation standpoint, Triplett (1897) discussed how the presence of others influences one to increase exercise intensity and output. Women in this study felt a similar way, voicing that often times being able to view others exercise routines and results on social media led them to comparatively review their own exercise routines and results. Some participants mentioned that they used Facebook to observe the events other women were competing in and then would view their Facebook page after the event was completed to compare times (typically in reference to running race times). Other women utilized platforms such as Instagram and Facebook to track the training programs other women were engaging in. One participant particularly mentioned that knowing the stats of how other women performed was extremely beneficial for her because she could then compare her own progress and figure out how to perform better. While this approach might be motivational and helpful, it does provide grounds for obsessive and compulsive exercise behavior. Using social media as a comparison tool to view others could lead one down a negative path psychologically and emotionally, especially if one feels as if she does not stack up to her counterparts (Perloff, 2014). Festinger's (1954) Social Comparison Theory suggests that individuals are more likely to seek

out similar others for comparison. Social media is a prime arena for canvassing similar others, as many individuals in one's network are peers (Perloff, 2014; Tiggemann & Miller, 2010). This becomes problematic as peers on social media have the capability of digitally altering and filtering photos to display their best self (Kramer & Winter, 2008). Thus, as one engages in social comparison, they are comparing their "average" self to someone's highlighted self. Many times these comparisons can lead to body dissatisfaction, negative affect, and low self-esteem (Perloff, 2014). It is important not to become obsessive about comparing exercise routines because, as many women in this study mentioned, everyone is on their own fitness journey and running marathons or doing CrossFit might not be the best activity for everyone. Additionally, Schreiber and Hausenblas (2015) suggest that these obsessive comparisons can lead to compulsive exercise behaviors which often times is the starting point for exercise addiction. Women in this study acknowledged comparing exercise behaviors with others on social media, and while many times it prompted exercise engagement, it also increased the need to document the behavior on social media, contributing to the desire to gain positive reinforcement from others.

### Maintaining an Impression and Developing an Identity

The impression management framework suggests that individuals are motivated to construct impressions in order to present favorable and admirable personas to an audience (Leary & Kowalski, 1990). When constructing these impressions, often times individuals take on certain personality traits and characteristics that align with the identities they wish to form (Leary & Kowalski, 1990). In doing so, they are essentially committing to a certain type of lifestyle in order to convey this particular impression, making sure they continue to engage in certain behaviors and demonstrate particular traits to live up to the expectations of their audience. This

framework was an underlying thread during the conversations with the women in this study. Women discussed how they used social media as a place to form a specific persona or brand. They found that they were best able to display this persona by committing to the lifestyle in "real" life. Many women expressed that much of what an audience would see on social media was a direct reflection of their actual life—a 'what you see is what you get' mentality. For example, women who were self-proclaimed runners posted incessantly about their training and race accomplishments. These were direct representations of actual events and work-outs they had completed, which in turn, led them to believe that they could accurately label themselves as "runners" on social media. Many times, impressions were constructed and then maintained by the continual documentation of the lifestyle they had committed to. This in turn allowed them to develop a brand for themselves and many participants expressed that because of the online identity they created, their audience was not surprised about the health and exercise-related content they posted.

Zhao and colleagues (2008) discuss that individuals create identities online by publicly announcing the identity and then proceeding to wait for others in their network to endorse the chosen identity (presumably through "likes" and comments). Zhao and associates (2008) goes on to explain that in the online world, individuals cannot create totally anonymous accounts of themselves because often times, their networks consist of individuals who are close friends and family members who know the individual in the offline world. In this sense, individuals try not to deviate too far from their offline identities, creating personas online that are reflected of their offline selves but often times promoted in a way that highlights themselves in an idealized manner. In creating these possible, or idealized, selves, individuals are constructing what they believe to be socially desirable images; images that they hope come to fruition in their real lives

(Zhao, Grasmuck, & Martin, 2008). Zhao and colleagues (2008) found that in a social media setting, individuals did strive to be truthful and honest in their online representations in order to avoid others finding discrepancies in identity. But it was also determined that online users seemed to embellish their images a bit, making their online personas align better with socially desirable lives (Zhao, Grasmuck, & Martin, 2008). Essentially, these individuals on Facebook were trying to promote better, and more elaborate, versions of their "real" selves. These findings have important implications for the current study, as these were behaviors I saw reflected in these women's experiences. Many women discussed that they attempted to be authentic and relatable in their imaging, discussing that they chose to commit to healthy lifestyles offline in order to be able to project those messages and images online. But, simultaneously, many women in this study also chose to only post the "good" that happened to them and focused heavily on posting post worthy content or important accomplishments. There were a few women who expressed the need to show balance in their online identity, posting both unhealthy and healthy behaviors, triumphs and struggles, but all in all, these women too, posted major accomplishments and hoped that these were the prominent messages being conveyed to their audience.

Keeping in mind Zhao, Grasmuck, and Martin's (2008) findings, it was also extremely interesting that some women in this study chose to document their "real" selves and their "fitness/healthy" selves by creating two separate social media accounts. As Zhao and colleagues (2008) expressed, this might be because these women had a desire to blend their nonymous (i.e. compilation of friends, family, and strangers alike) and anonymous online environments, depicting a persona that more closely aligned with their real self in one account and projecting a persona that more closely aligned with a hidden identity that was not necessarily translated to the real world. One participant, Amy, mentioned that she created two accounts because she "does

not flex in real life." She was embarrassed that her friends and family might see that pictures she took of herself flexing in the mirror or showing off her body transformation progress, so she made an account specifically for those posts. This is an interesting complex. In one sense, it appears that individuals are fearful of others in their "real life" network judging their commitment to health and fitness, which should be an admirable quality (Martin, Sinden, & Flemming, 2000) and something one would want to share with close friends and family. Yet, these same individuals are comfortable sharing this health and fitness self in an "anonymous" environment. Although it is uncertain why this might be the case, it is plausible to believe that women in this study, like Amy, who want to project an identity strictly reflecting health and fitness, might do so anonymously because there are more individuals in the public sphere who find these types of behaviors socially acceptable. Additionally, posting publicly allows and individual to reach a broader audience. In Tiggemann and Zaccardo's (2016) content analysis of "fitspiration" images on Instagram, they found that in searching #fitspiration, or #fitspo (the shorted version of fitspiration), over 28 million images used these associated hashtags. Thus, it is not abnormal to suggest that women on social media consume a plethora of images relating to topics like "fitspiration" and therefore, aspire to mirror those types of posts to construct their own online identity from a health and fitness perspective. This was certainly the case in this study. Women not only created two separate personas, but actively sought to maintain those personas by posting weekly and daily to the two different social media accounts. In the creation of the separate social media account (relating to health and fitness) participants expressed that they no longer felt ashamed or embarrassed by their posts, and they no longer felt that they were being annoying to their "friend" base (the network that constituted their nonoymous audience). They also felt that by creating a health and fitness account, they were able to reach a broader

base of similar others by promoting their images through the use of fitness-specific hashtags or by tagging fitness-specific groups. In doing so, they were able to gain more followers, obtain more "likes" and feedbacks, which in turn can be presumed to feed their self-worth and enhance their contingent self-esteem. Branding oneself as an exerciser in this way created a desire to seek approval from others who posted similar content and this approval reinforced that the impression was conveyed successfully to this audience.

It should not be too surprising that the women in this study who chose to create two separate social media accounts chose to base their second account in a health and exercise framework. Previous literature (Hausenbals, Brewer, & Van Raalte, 2004; Leary & Kowalski, 1990; Martin, Sinden, & Fleming, 2000) suggests that individuals strive to adopt an exercise identity as individuals who exercise are more admirable because they are perceived to be harder working, stronger, healthier, and more confident. Grammage and colleagues (2004) found that those who engaged in frequent exercise found high importance in presenting themselves as an exerciser and were more likely to believe that they could successfully convey the impression of being an exerciser to an audience. Essentially, confidence in being able to convey the impression of an exerciser influenced one to engage in exercise more frequently. This has important implications for the present study, as the women in this study could be defined as frequent exercisers based on Grammage and colleague's (2004) definition, which was defined as exercising at least three times per week. Grammage and colleagues (2004) also suggested that women who believe they can give the impression that they are in-shape, toned, and competent in exercise are less likely to feel anxious about presenting their bodies for evaluation and less concerned with the possibility that others many judge or comment on their physique. This too, was reflected in the present study, as women were not ashamed to document their exercise

endeavors because they identified as qualified and capable exercisers. These findings have important implications from an exercise standpoint, as it appears that if women are able to successfully document themselves as exercisers, it not only decreases body-focused anxiety, but it also increases their desire to engage in exercise because the exercise identity wrought positive feedback from peers.

On social media, many women in this study expressed the importance of documenting their exercise endeavors in an attempt to display their athletic abilities. These women were proud of these abilities and wanted others to be proud of these achievements. Ultimately, they wanted those in their social media network to view them as active, healthy, and fit. Embracing identities often times results from interactions with others in the social environment (Ryan & Deci, 2003). These interactions influence individuals to not only adopt the identity, but also adopt the beliefs and values of that identity. Women in this study used their cohort of friends as a support system for adopting and reinforcing an exercise identity, and consequently, they began to value the characteristics associated with being an exerciser. Hannah, for instance, discussed that she documented her exercise endeavors on Facebook because she wanted people know that she worked hard to train for these events and she was good at them. It was extremely important that people saw her in this light. It was previously documented that being able to consistently display an exercise identity resulted in higher levels of positive affect (Strachan, Brawley, Spink, & Jung, 2009). Women in this study expressed that they were consistent in their postings, which is why they believed that others saw them as exercisers (interpreted by participants as runners, CrossFit participants, weight lifters, etc.). Being able to document their exercise experiences online therefore, not only fed their self-worth, but also increased their positive affect through the approval feedback they received from their peers. Many participants acknowledged that they

"felt good" when others acknowledged their exercise accomplishments and it contributed to why they continued exercising. These types of attitudes towards exercise are reflected in a study by Hardcastle and Taylor (2005) that sought to examine how an older demographic of women defined the exercise identity after engaging in a 10-week exercise program. The women interviewed in Hardcastle and Taylor's (2005) study, characterized the exercise identity by promoting exercise to others, prioritizing exercise in their lives (including scheduling time for purposeful exercise), committing to an active lifestyle, finding personal meaning from success and achievement, and feeling a sense of belonging in a community of other self-proclaimed exercisers. Women in the current study (although representing a younger demographic) expressed these same characteristics as aspects that were important to them in maintaining their exercise identity. These women committed to an active and healthy lifestyle, shared their achievements with others to promote exercise, and heavily prioritized exercise in their lives. Exercise defined many of these women and it was heavily ingrained in their real lives and in their social media presence. For these women, it was not enough to just be active, they had to document their activity so that others would know the extent to which exercise was a prime part of their lives.

For women in the current study, the exercise identity was constructed in a variety of ways, but essentially the goal was to document training experiences, accomplishments, and future goals to their audiences. Documenting exercise endeavors not only held them accountable, but it added strength to their online exerciser profile. Being able to "practice what was preached" allowed individuals to feel confident displaying their identity as an exerciser because these were real races they had run, CrossFit work-outs that they did, and yoga poses they had completed. Defining oneself in this way was empowering, and much of the content posted on social media

served to bolster this image. While much of the self was accurately displayed, participants did allude to the notion that sometimes they were cautious of posting photos that did not necessarily align with this exercise identity. For instance, photos in which the participant looked "bloated" or had "ugly legs" rarely made the cut, and photos documenting alcoholic beverage consumption or pizza eating were heavily avoided. Additionally, participants also acknowledged adding filters to photos or setting up the lighting in a room such that it would enhance the quality of the photo. These concessions are reflected in previous studies (Chua & Chang, 2016; Lee, Kim, & Choi, 2016), as individuals strive to create favorable impressions and avoid unfavorable impressions at all costs (Leary & Kowalski, 1990). These narratives were a stimulating topic of discussion, as many participants were adamant that they would never photoshop a photo prior to putting it on social media, but they had no qualms about adding a filter that would make them look less sweaty, brighten their eyes, or help the photo appear more aesthetically pleasing overall. Some participants even acknowledged taking multiple photos of the same pose so that they could choose the best one to put on social media. While some participants did appreciate the rawness of exercise photos, most expressed that they did try to post photos that made them look aesthetically pleasing or that had been the product of crafting a scenario in which the lighting, camera angle, and camera position provided a unique lens. Again, it seemed of utmost importance to create a highlight reel that showed each woman as a prime example of what it meant to be an "exerciser" and this message could not get across accurately without displaying the positives of one's exercise engagement-digitally altered or not.

### **Investigating Body Discrepancies and Defining a Healthy Body on Social Media**

Due to its popularity and accessibility, social media is a powerful communicator of cultural norms surrounding body image and what is means to be healthy (Boepple & Thompson,

2014). Often times on social media, women receive messages about how their body should look to be considered socially attractive, and as mentioned previously, from a fitness standpoint this typically means being naturally beautiful, fit, toned, lean, and athletic looking (Simpson & Mazzeo, 2016). Women in the current study reported consuming, and being exposed to, these messages, conveying that more often than not, they feel social media tries to put them in a societal norm box, promulgating a message that they must look a certain way to be considered socially desirable. As suggested by Perloff (2014), exposure to attractive images leads to the internalization of the thin-ideal which often times triggers appearance-focused comparisons. Appearance of the body, which is thought to be a major determining factor of self-worth, can influence feelings of low self-esteem, depression, and body dissatisfaction (Perloff, 2014; Prichard & Tiggemann, 2008; Wasilenki, Kulik, & Wanic, 2009). Experiences regarding body and appearance comparisons were particularly salient in this group, perhaps due to their highly active social media and exercise behaviors. Women in this study mentioned engaging in comparisons with individuals who were similar and different than they. Viewing individuals who were "more fit" either prompted motivation or feelings of despair, which is not dissimilar to previous research (Tiggemann & Zaccardo, 2015). Women in this study also acknowledged comparing their bodies to individuals they knew personally and strangers. This alludes to a very unique aspect of social media. Social media has the power to connect an individual to a network of strangers. It is not uncommon to interact with individuals who one does not know "in real life" but it is interesting that these strangers have such an impact on one's self-worth. As mentioned by Tiggemann and Zaccardo (2015), individuals tend to socially compare themselves to others on social media, not tending to acknowledge that these comparisons might occur against photos that have been digitally altered. Comparing one's raw and unfiltered life to someone whose

profile comprises of manipulated photos taken specifically to enhance their highlight reel can be particularly damaging, especially since social media does project images of "real" people. One participant Kari, struggled when trying to explain this concept because she expressed there are real people on social media (as in raw, natural) and then people who are also real, but their real in encumbered by altered photos that remove blemishes and cellulite. She said it is hard not to view the manipulated photos of these beautiful women and not question her own beauty. Being able to collect insight on how others perceive one's body through "likes" and comments only exacerbates the issue, as acquiring too few "likes" may result in the need to seek out more comparisons to obtain positive feedback (Chua & Chang, 2016).

After completing qualitative interviews with a sample of adolescent females, Chua and Chang (2016) found that many of their participants believed social media comparisons to be "stupid," "unhealthy," and "unnecessary" (p. 194). This rationalization was reflected in the older demographic of women in this study, particularly when it came to discerning how social media presented healthy bodies to the public. Tiggemann and Zaccardo (2016) found that many images of fit women on Instagram lacked diversity in body size. Women appearing in these images tended to be thin and toned, alluding to this notion that only a certain body type can be deemed healthy (Tiggemann & Zaccardo, 2016). These sentiments were heavily reflected in the interviews from the current study, some women upset with the lack of body diversity in health and exercise content, others internalizing the thin, trim body as something they needed to have if they wanted to be considered healthy. The problem with the lack of a diversity of body shapes and sizes on social media is that society begins to associate health and fitness with one type of body (Tiggemann & Zaccardo, 2016). This association creates bias, particularly towards individuals who do exercise but do not reflect this specified body shape. Assumptions regarding

health become pervasive, and those not meeting the body and appearance standards set forth by Instagram photos and Pinterest pins are considered unhealthy or not socially desirable. Noticeably, this is problematic as health can come in a variety of forms and there are a multitude of organizations that focus on health at every size.

While the lack of diverse fit bodies is prevalent on social media, some women in this study expressed that they believe social media is beginning to shift the focus away from a healthy body being one that is seemingly unattainable but still idealized by society, to being more about living a lifestyle. Many women described how a healthy body was typically portrayed on social media (the standard, thin, fit and trim) but then also provided evidence for this shift towards body acceptance and lifestyle change. Participants discussed finding inspiration from close friends and family who documented exercise endeavors and body transformations online. To them, personally knowing the person, knowing their lifestyle, helped them better understand and appreciate the transformation their body was going through. Additionally, many women discussed how they thought it was positive that there has been new focus on showing women of larger body sizes being physically active. Participants stated that this type of messaging makes engaging in fitness more relatable to the general population of women who do not have stick-thin figures or six-pack abs. It gave them the attitude that 'if they can do it, so can I.' Women in this study also sought to promote these messages of body positivity by using their own platforms as a means to discuss and display what a healthy body was to them. Many participants discussed that they were willing to share "the whole spectrum," meaning that they sought to display both their healthy and unhealthy behaviors to demonstrate the importance of balance. Other women discussed that they will always have body image issues but that will not stop them from posting about their successful exercise endeavors online. Women also talked

about trying to project being thankful for the body that they have, talking about health in terms of legs being able to work and the ability to exercise on one's own accord. Often times society's focus about health gets wrapped into an idea associated with appearance, when in fact health also refers to the functionality of the body and the absence of physical disability. Women in this study tried to be thankful for their bodies and used this as motivation to ignore society's perception of what a healthy body "looked like." It is important that woman start focusing on and embracing these messages of body positivity on social media. Andrew, Tiggemann, and Clark (2016) found that appearance-related media content was associated with higher levels of self-objectification, social comparison, and internalization of the thin-ideal, which proceeded to lead to lower feelings of body appreciation. Additionally, the perception that others accepted their body lead to greater levels of body appreciation (Andrew, Tiggemann, & Clark, 2016). Knowing that consuming less appearance-focused media content can lead to higher levels of body appreciation is an important implication. It is beneficial for women to surround themselves with peers that also share a similar message of body acceptance as it can have a positive effect on one's own body appreciation. Additionally, frequent engagement in exercise is related to higher levels of positive body image when weight loss and appearance are de-emphasized (Homan & Tykla, 2014). It is important to emphasize that frequent exercise engagement provides a positive body image for all, independent of body size. The focus of exercise does not always have to encompass a message about weight, and this is the type of messaging society should strive to suspend on social media. Women must strive to accept each other in an exercise environment, and on social media, by understanding that exercise is not for a selective few, and body positivity can only grow when begins to accept bodies of varying shapes and sizes. It seems that although

some women are striving towards body acceptance and appreciation, the pervasive messages of an idealized healthy body are still at the forefront of one's definition of health.

## **Implications and Future Directions**

This study has brought to light the experiences real women have trying to navigate social media from a health and exercise perspective. Although many women enjoy using social media as a means to create an identity that they are proud of and document important accomplishments and life events, the negative side effects of social media engagement do not go unnoticed. Messages of a thin, fit, ideal are extremely salient on social media, particularly in a subset of women who are active exercisers. While these messages may express some form of motivation and inspiration, they also provide a springboard for social and body comparisons, objectification, and incessant reassurance seeking. The increased accessibility of social media expands this issue, as women have the potential to be exposed to these images and messages instantaneously at any point of the day. Access to social media feeds into desires to constantly check for "likes" and comments, and construct posts and craft photos that will warrant positive feedback. It seems as if the lives of women are becoming more and more dependent on their social media presence and it leads one to question if social media is really beneficial for a person's physical and mental health.

One thing is for certain, social media is entrenched in American culture and it remains as a fluid, ever-changing entity. New applications and platforms are created daily, and as networking sites expand, these applications become smarter, connecting individuals consciously and subconsciously. It is important for researchers to continue studying the underlying effects of social media and how these effects may damage or promote health for women. Future research is needed to explore how women find meaning in the things that they post. One of the most

interesting parts of this study was conversing with the participants about their selected posts/photos. While these posts/photos need further analysis, it is clear that "health and exercise" has multiple meanings for women, and while there are similar opinions, each woman attempts to construct impressions in different ways based on what is meaningful to them. It is important to dissect these posts/photos further and gain an even deeper understanding of how particular posts contribute to one's image as an "exerciser" and how one's behaviors reflect this identity in real life and online.

An interesting area worthy of exploring in the future might also include implementing more body positive interventions. Halliwell (2013) found that in a sample of university women, having a positive body image and appreciating one's own body effectively protected women against internalizing negative body appearance messages. Additionally, Homan and Tykla (2014) found that when messages about exercise de-emphasized weight loss and appearance as a means to obtain positive body image, women were more likely to engage in exercise more frequently. Thus, future social media interventions might focus on sharing messages about exercise in regards to promoting the health and enjoyment benefits associated with exercise. Focusing on exercise for health independent of weight loss it might encourage more women to be active and decrease the pressure of trying to meet an unattainable body standard. This might be achieved on social media by displaying a diversity of body shapes and sizes being active and accompanying those images with non-appearance related messaging.

Future research should also aim to assess health and exercise in this manner from the perspective of males and older demographics. Throughout the course of the study, particularly during the recruitment phase, I received a lot of buzz from these demographics regarding their interest in this topic. Many women outside of the selected age demographic expressed their

desire to be involved in this type of research because they were active social media users. While social media is thought to be primarily used by millennials, there are older demographics that are dependent and active on social media as well and their perspectives are important to explore. Lastly, due to the perceived shift occurring on social media to more body positive messaging, it may be important to explore how women of differing body shapes and sizes perceive health and exercise messaging on social media. The sample interviewed did not vary much in weight, as many of these women fell in the normal range for BMI. It would be beneficial to explore the views of overweight and obese women to understand the messages they are receiving about health and exercise and how they document their health and exercise behaviors on social media. This type of information would be particularly salient for future interventions aimed at enhancing body positivity and body appreciation.

In conclusion, this study filled a gap that exists in the research regarding how women use social media from a health and exercise standpoint. By exploring this topic qualitatively, I was able to gain valuable descriptive information that clues society in on how women use social media to construct impressions, why they do it, and how they are using social media to guide their exercise behaviors. Social media is still a seemingly new research topic in this field, and much more exploration is needed before researchers are able to draw concise conclusions about the nature of social media use in a health and exercise content. This study provides a sound basis for exploration into this topic and provides helpful insights as to how active female exercisers use social media.

### **Strengths and Limitations**

This study has a number of strengths and some limitations. One of the main strengths of this study was completing face-to-face interviews with the participants and using their verbatim

transcripts for the analysis. The face-to-face nature of the interviews allowed me to easily build rapport and the majority of the women in this study opened up about their experiences. The women felt comfortable in discussing their behaviors and this led to a thick description of the phenomenon in question. Data saturation occurred relatively quickly, and the themes were prominent during the analysis. Additionally, the use of three different qualitative research methods provided a unique perspective and helped guide the interviews. The combination of the approaches used was novel for this area of research and strengthened the study.

Regarding study limitations, the sampling of women was not very diverse in regards to physical activity levels, weight, ethnicity, race, and occupation. It is quite possible that a more diverse sampling of women may have yielded different results, as their experiences may have differed. Although each woman in this study made her own unique contribution to the data, there was not much talk about being discriminated or biased against due to weight, race, or ethnicity. The homogeneous nature of the sample was somewhat purposeful, as I did want women who were active social media users and frequent exercisers, but more diversity in the sample might have prompted even more unique conversations that explored different topical areas that may not have been thought of during the study conception. Additionally, the sample was a younger demographic of women. Thus, the results of this study are not generalizable to the wider population, but this is not typically a main concern in qualitative research as the study was meant to explore unique experiences. A third limitation was that although each participant was sharing their unique experience, it is possible that they were answering in socially desirable ways so as to appear a certain way to me. Socially desirable answers can be problematic as they may skew the essence of the topic at hand, but it is important to keep in mind that prior to the start of the

interview, all participants were asked to respond as openly and honestly as possible and were given the option to opt out of any questions they did not wish to answer.

Something interesting to note that can be viewed as a strength or a limitation, was the wide spectrum of social media engagement between participants. During this study, I did not delineate between heavy and light social media users; the only criteria was that each participant accessed their social media account at least five times per day and posted health and/or exerciserelated content on social media at least one time per week. Thus, the variety of the sample in regards to social media use was vast. Some women posted about exercise every day, sometimes multiple times a day, others posted health-related content in the context of pinning a pin. Some women consumed health and exercise-related content by going on Instagram, others by reading articles found on the Facebook pages they followed. The variety of use was reflected in the posts and photos each participant chose to bring to the interview. Some participants brought photos, others brought Facebook statuses, others brought pins. Due to the variety, the interview proceeded a bit differently for each participant. The interview remained semi-structured in nature, with each participant receiving generally the same questions, but some questions had to be modified or altered on the fly to reflect the posts and/or photos the participant provided. Taking that into consideration, it was extremely beneficial that I chose to use an interview guide as opposed to a scheduled interview for this portion of the study. Responses differed quite a bit when discussing images posted on Instagram versus pins pinned to a Pinterest board. One was much more personal, whereas the other was more of a general collection of ideas. This provided uniqueness to the study, but it might be seen as a limitation by some because there was a lack of consistency in regards to how each participant defined a health or exercise-related post.

### **General Discussion**

The purpose of the current project was twofold: (1) to test the transactional model of social media, body image concerns, impression management and exercise behaviors and (2) to use a qualitative approach to better understand how social media influences women's thoughts, perceptions, and conceptualizations of a healthy body and healthy exercise behaviors. Study 1 sought to determine which constructs of the transactional model of social media, body image concerns, impression management and exercise behaviors significantly predicted exercise frequency, impression management, and impression construction. Study 2 sought to develop a deeper understanding as to how women used social media from a health and exercise standpoint. Through exploring their experiences qualitatively, I was able to establish a narrative as to how women constructed an exercise identity on social media, how social media influenced women to be physically active, and how social media impacted the perceptions women had about what it means to be healthy. These studies filled a gap in the literature by providing both quantitative and qualitative means to understanding the current phenomenon. After completion of Study 1 and Study 2, not only was it interesting to observe the overlap that existed across the results, it was enticing to observe how spoken experiences deepened the meaning of the results. These observations are explored in this section.

Social media has become mainstream technology. Facebook alone houses over 1.5 billion users worldwide, while Instragram, Twitter, and Snapchat report having 400 million, 284 million, and 200 million users respectively (Croiser, Brian, & Been-Zev, 2016; Facebook, 2015; Lee, Lee, Moon, & Sung, 2015). It is projected that 93 million selfies are taken on smartphones daily, and over 800 billion photos are shared online yearly (Brandt, 2014; Zigterman, 2013). While many of these numbers reflect general social media use, researchers report that 72% of

internet users have used online sources to find health information in the past year (Pew Research Center, 2013). An additional 21% of those users also state that they use some sort of web-based tool to track exercise and health behaviors online, while 26% of internet users acknowledge watching or reading about someone's else's health experiences online (Pew Research Center, 2013). The accessibility and feasibility of social media provides a variety of opportunities for women to consume and post about health and exercise-related content. It is clear that the social media network is broad and expansive, and while much of social media revolves around taking selfies and fitting deep thoughts into a 140-character limit tweet, it also provides and outlet for the creation and maintenance of identities. Because social media represents somewhat of a disembodiment from one's social environment, an individual is able to self-select pieces of the self, sharing only desirable and favorable highlights. Through self-selection, an idealized version of the self is created, and this identity is reflected fully, partially, or not at all in "real" life. Social media users can choose to be real and authentic, or they can choose to provide a manipulated and filtered impression of their lives, establishing a narrative that depicts an embellishment of the life they truly live.

Social media allows us to exist in a weird reality. In the world of social media, individuals can create personas and develop a social environment of one's choosing. The created environment thrives on viewership, which prompts instantaneous feedback in the form of "likes," comments, and follows. Many external forces exist in our social media environments, including one's audience (real or imagined), societal pressures to look or be a certain way, and stress to achieve a particular impression in order to be perceived in a certain light. These external forces may impact individuals to a greater extent than what might be perceived at the surface level. For some, social media is just a tool to network with friends and family; to others, social media is part of one's existence. The latter group of individuals have become so dependent on their social media presence that is it difficult to separate themselves from reality, and thus, self-worth has become contingent on obtaining "likes" and receiving commentary on day-to-day tasks. These broader forces that exist in one's social media realm have initialized a commodification of the individual, prompting an incessant need to seek reassurance through social media audiences, evolve to be like one's "friends," and feel the need to belong and be accepted within a social networking community. This leads one to question if social identities are becoming standardized as one strives to fit the ideals presented on social media. It seems as though the continuous need to be socially accepted by one's "friend" base is slowly blurring the lines between expressing oneself online as an individual and shamelessly engaging in self-promotion in order to reap the perceived benefits from social media engagement. Social media pulls us quite powerfully into a weird reality, on in which may have deleterious effects. Thus, it is important that society proceeds with caution when engaging in social media use as it is hard to ignore the weird power that social media has over us.

While social media is a powerful networking tool and has provided fun and novel ways to share information and stay connected with friends and family, it is not without its downfalls. As observed in the literature (Clerkin, Smith, & Hames, 2013; Perloff, 2014; Tiggemann & Miller, 2010; Tiggemann & Zaccardo, 2015), social media provides grounds for excessive reassurance seeking, social and body comparisons, and internalization of the thin ideal. Associated with these issues are a multitude of factors including body image dissatisfaction, negative affect, low self-esteem, social physique anxiety, and disordered eating (Clerkin, Smith, & Hames, 2013; Perloff, 2014; Tiggemann & Miller, 2010; Tiggemann & Zaccardo, 2015). Much of the literature in existence on mass media influences explores sources such as magazine ads, television

commercials, and music videos (Grabe, Ward, & Hyde, 2008). In a meta-analysis exploring the link between body image concerns and media exposure, researchers found that exposure to media images depicting a thin, somewhat unattainable, body were related to body image concerns (Grabe, Ward, & Hyde, 2008). Although the type of body projected on media sources is unattainable, some women still engage in comparative processes, becoming dissatisfied with their own bodies. Additionally, the constant display of thin-ideal images leads women to surmise that this body is normative, socially desirable, and expected of them in order to be accepted by societal members (Thompson & Stice, 2001). Exposure to these images and messages in the media leads to the internalization of the thin-ideal and can further result in body image dissatisfaction, low self-esteem, and disordered eating behavior (Fredrickson & Roberts, 1997). As mentioned, much of this research revolves around observing how women interact and react to objective media sources (i.e. television, magazines, billboards, etc.). Social media provides a more dynamic and complex scenario as women are able to consume content, interact with content, and create their own content on these platforms. Due to the complexity and interactivity of social media, few studies have delved into how social media images influence women's perceptions about their bodies and what types of constructs contribute to the social media experience. This study sought to fill this gap by exploring this phenomenon from a health and exercise standpoint.

The available studies that do explore how social media influences women from a health and exercise standpoint mimic the results from studies that observe how mass media content impacts women. Tiggemann and Zaccardo (2016) found that many of the images on social media meant to inspire women to be fit and exercise depicted a female that has a thin, toned, and athletic build. Similarly, Simpson and Mazzeo (2016) addressed that on Pinterest, the same type

of body was prevalent, indicating that a thin, trim, and fit body translated to health and an active exerciser. When exploring how this type of imaging influenced women, Tiggemann & Zaccardo (2015) found that like typical mass media sources, viewing bodies that were "fit" lead to a negative mood state, body dissatisfaction, and lower appearance self-esteem. These results are particularly discouraging, as individuals have access to their social media sources all day, every day. The opportunities for consumption and comparison become endless. The difference with these images compared to those found on traditional mass media sources is that while some of these images can be manipulated and altered, many of the images a female consumes are of her peer group (Kim & Lee, 2011). Peer groups provide a whole new realm for social comparison, as women are able to compare themselves to others whom they perceive to be like them. Additionally, as Winter and Kramer (2008) suggest, many individuals are encouraged to only post highlight reels of themselves, depicting only the best parts of their lives. Thus, a woman may find herself trying to compare her "average" life to someone else's sensationalized life, prompting further comparison that may impact one's overall self-concept.

Due to the personal nature of social media, it is important to look at this communication platform through a much more detailed lens to understand the underlying mechanisms of one's social media experience. The present study aimed to explore this complexity through the use of a mixed methodological approach. After the completion of Study 1, the resulting significant predictors were incorporated into Study 2's interview protocol to gain a deeper understanding as to why some of these processes might be significant predictors of exercise behavior and impression management.

In regards to exercise behavior, of particular interest was exploring how the frequency of posting health and exercise-related content on social media influenced how much one engaged in

exercise. This variable was the most significant predictor of exercise behavior, and its significance was reflected in the participants' social media experiences. Women interviewed as part of Study 2 acknowledged the importance of posting exercise-related accomplishments on social media to most importantly document their identity as an exerciser. Being identified as an exerciser appeared to be of prominent importance to the women in this study and often times, this identity was achieved by posting health and exercise-related content on their social media platforms. It was also determined during the interviews, that women used health and exerciserelated content on social media to influence their exercise engagement. Women discussed seeking out pins on Pinterest to help generate new work-out ideas, joining Facebook groups with like others as a place to share recipes and training programs, and following complete strangers to observe their transformations and find inspiration from their work ethic. As women engaged in this type of consumption, they also spoke about the comparative processes that come along with it. Reflective of this was the second most significant predictor of exercise behavior, body and exercise comparisons. This too, was heavily reflected in these women's experiences. Women in this study articulated that they did compare their own exercise results to the results of others and often times this prompted the need to re-evaluate training programs if they found that a similar other was outperforming them. Consuming information about the exercises others were performing motivated these women to "get off the couch" and be active, while at the same time eliciting negative feelings of self-worth because once again, someone was outperforming them. The ability to compare exercise accomplishments on social media had a mixed effect on women in this study, some finding the comparisons motivating and enlightening, others perceiving the comparisons as a judgement for how far they still needed to go. The two most prominent predictors of exercise behavior from the model were also two themes that were heavily disclosed in the interview process, strengthening the argument that this finding is "real" and present in this subset of women.

Another significant predictor of exercise behavior in Study 1 was societal attitudes towards appearance, otherwise known as the thin-ideal internalization. There has been a plethora of research documenting how internalization of the thin-ideal prompts appearance-related reasons for exercise (Prichard & Tiggemann, 2008; Tiggemann & Zaccardo, 2015; Strelan, Mehaffey, & Tiggemann, 2003). It was interesting that when testing the model during Study 1, reasons for exercise was not a significant predictor of exercise. During the interviews however, women talked about wanting to be active in exercise in order to be healthy (health-focused reason for exercise) and because they wanted to have "toned" or "athletic" looking bodies (appearance-focused reason for exercise). This appearance-related reasoning for exercise found in Study 2, could be interpreted from Study 1, as internalization of the thin-ideal was a significant predictor of exercise. This is only a loose interpretation and possible connection. There was quite a mixed response though in terms of how many women in the second study had internalized the thin-ideal. It was evident that some women chose to exercise to maintain a particular body shape and size, and these messages were clearly expressed during the interview. Other women stated that they appreciated the body diversity social media provided and often times alluded to the notion that they themselves do not have the thin, trim, fit body of the idealized healthy person, but they still thought themselves to look healthy and be healthy. This was an interesting dynamic and it leads on to question how some women avoid buying into the thin-ideal internalization and why some women embrace the thin-ideal internalization. Based on the interview responses, this notion can be interpreted by stating that some women accept and appreciate their bodies for the functionality it provides. Homan and Tylka (2014) discovered that

engagement in exercise was strongly related to how the body was able to function for that activity. Hence, as women engage in more frequent exercise, they begin to focus on the functionality of their bodies, as opposed to the objectivity of their bodies, and this results in further appreciation and therefore a decreased desire to compare one's body to another. Fredrickson and Roberts (1997) also suggested that a focus on the functionality of the body results in lower levels of self-objectification, which is known to be related to appearance anxiety, body shame, and a reduced flow experience. Those women who do not engage in frequent exercise may not reap the positive benefits that exercise has to offer, particularly the decrease in body dissatisfaction (Campbell & Hausenblas, 2009; Hausenblas & Fallon, 2006; Reel et al., 2007). When women become more engrossed with being labeled as someone who exercises and the achievements they can garner through exercise, they may tend to worry less about a socially defined ideal of health and fitness. To them, their engagement in exercise meant that they were healthy and fit, and they wanted their audience to acknowledge that a healthy body does not fit into one singular box.

While there are benefits to focusing on the functionality of the body during exercise, there was a subset of women in this study who mentioned training specifically to achieve muscle tone and a particular body shape, indicating some internalization of the thin, or athletic, ideal. These women were a bit more stringent about their views of a healthy body, ascertaining that an athletic build with some muscle equated to health. This was an interesting distinction because all women in this study were frequent exercisers, yet their body types varied. Thus, in one sense it seems as if the frequency one engages in exercise has no bearing on health if the body does not match. These types of messages are synonymous of what is projected on different social media platforms (Boepple & Thompson, 2014; Simpson & Mazzeo, 2016; Tiggemann & Zaccardo,

2016) and it leads one to question what it will take for society to stop associating health with one specific type of body. This mentality is seemingly apparent in some women, as reflected by the varying definitions of the healthy body described in this study, but it appears that the dominant thin-ideal message still stands as a cultural norm.

Previous research (Grabe, Ward, & Hyde, 2008; Simpson & Mazzeo, 2016; Tiggemann & Zaccardo, 2016) has documented that thin-ideal or fit-ideal images can negatively influence body satisfaction, affect, and appearance self-esteem, and lead to disordered eating, internalization of the thin-ideal, and a preoccupation with thinness. In a social media context, images are worth a thousand words, and as Sung and colleagues (2016) suggest, creating a visual representation by means of displaying photos is much more impactful for impression management. The introduction of applications such as Instagram and Snapchat allow users to share photos of themselves almost instantaneously. These photos can also be archived or only on display for a few seconds, making each application preferable in its own way. Due to the efficiency and ease of sharing photos, it would make sense that this type of content is consumed, and posted, most frequently by women. During Study 2, more women selected photos as their content of choice when asked how they best defined themselves on social media from a health and exercise perspective. These women discussed how they spoke through photos, and how more often than not, when consuming health and exercise-related on social media, they were more drawn to images than words. Marwick (2015) suggests that photos allow for a sense of credibility and validation, proof that the moment actually took place. Users tend to post photos because they believe that photos are able to best convey who they are and what they do. Women in this study felt that photos helped them relate to others better, and they received a better reaction from audience members when they posted photos. As suggested by Sung and colleagues

(2016) posting photos, such as selfies, helps individuals showcase the best parts of themselves, while at the same time allowing for them to seek out approval from others to validate their selfworth, subsequently enhancing contingent self-esteem. Photo sharing must be understood with caution though. Although the women in this study spoke about using photos as a means to communicate and gather information most often, it is important to keep in mind the negative ramifications of consuming media images that have been documented previously. Photo sharing is quite prominent on social media outlets, and it appears to be surpassing that of textual content. As suggested by women in the present study, users do not always react positively to words—it is much easier to skim and glance at a photo than take time to read a post. While photo sharing provides a feasible and fun way to construct an image of oneself, it also opens the door for greater body and social comparisons, internalization of the thin or fit-ideal, and lower levels of self-esteem (Grabe, Ward, & Hyde, 2008; Simpson & Mazzeo, 2016; Tiggemann & Zaccardo, 2016). Despite these consequences, photos take an obvious precedent on social media outlets. It is clear that photos are easy to consume, and therefore, it becomes of high importance that women observe what kinds of photos they are allowing onto their social media platforms. As Marwick (2015) suggests, photo sharing platforms have provided avenues for the average user to amass a wide range of followers. As individuals gain followers, they feel a sense of popularity amongst their audience, and this feedback serves as validation for their behavior (Marwick, 2015). The issue with this, is that it perpetuates a celebrity culture, one in which an individual is always striving to get more followers, create a better highlight reel, and gain validation and support for their endeavors. Thus, photo sharing can lead one down a dangerous path, especially when Insta-famous celebrities tend to be those that fit the societal standard of beauty. It can be damaging to constantly engage in upward social comparisons, and thus, photos must be

interpreted and consumed with caution (Festinger, 1954). While photo sharing may be the new, and preferred, means of communication, it does not come without hesitation based on the underlying mechanisms at play.

Photo sharing also has important implications when it comes to impression management behaviors. After testing the model to discover which constructs significantly predict impression motivation, it was discovered that contingent self-esteem was the most significant predictor of this behavior. This falls in line with the proposed literature, as Leary and Kowalski (1990) suggest that individuals are motivated to convey favorable impressions in order to enhance selfesteem. Contingent self-esteem, which is self-esteem that determines one's self-worth, makes sense as a predictor of impression motivation because individuals might feel motivated to convey impressions that will garner them positive feedback from others if they are successfully able to demonstrate that they achieved a certain standard or expectation. The need for contingent selfesteem was highly reflected in the interviews from this study. The first theme of this study, The Highlight Reel, explored women's experiences creating desirable impressions of themselves for their audience. This was particularly reflected in women discussing that they actively sought out activities to create post worthy content and then proceeded to document all their exerciser accomplishments on their social media platforms. Within this theme, it was also discussed how women interpreted "likes" and the high value women placed on receiving "likes." For women in this study, receiving a "like" fed their self-worth, which one can interpret to mean enhanced their contingent self-esteem. Women in this study voiced that they felt good when they received "likes" and the "likes" validated their behaviors. Thus, it makes sense that when posting content, women are motivated to convey impressions that will document self-worth. Typically, positive

feedback will reinforce self-worth and this can be achieved by presenting a highlight reel to the audience.

Although contingent self-esteem was a strong predictor of impression motivation, it is important to consider where narcissism might fit into this mix. Previous research has documented that the need to seek out reassurance on social media platforms does not only stem from one's desire to satisfy their ego—it also is derived from their narcissistic tendencies. Due to the constant need to appear a certain way to others, it has been demonstrated that individuals with narcissistic traits are more likely to: (1) post statuses that reflect their major accomplishments and their diet and exercise routines (Marshall, Lefringhausen, & Ferenczi, 2015), (2) frequently update their status to gain validation from others (Carpenter, 2012), (3) use social media as a way to attract favorable others to their social media profile (Davenport, Bergman, Bergman, & Fearrington, 2014), and (4) engage in posting more self-promoting content (Mehdizadeh, 2010). Specifically, in regards to exercise, Marshall and colleagues (2015) found that narcissists tend to display exercise and diet information on their social media platforms as a nod to the high value they place on physical appearance. Narcissism was not a construct explored in this study, but further research is warranted and necessary to explore the role of narcissism as an individual vulnerability trait. It was interesting how heavily the qualitative responses fit into the definitions of narcissism, although this trait was not a specific focus, or intended focus, of the study. Although it is unlikely that any of the 20 women interviewed would consider themselves narcissists, it was curious to observe how so many of their behaviors aligned with previous research in this area, particularly in regards to posting exercise and diet related accomplishments. It is plausible to conclude that whether it was intended or not, social media has exposed narcissistic traits in some women. This is particularly

salient in the discussion I had with the women in regards to the value of "likes" and how they used "likes" as a means to reinforce their posting behaviors. "Likes" feed quite tremendously into one's ego, so although posting photos and statuses might be disguised as a means to obtain social support, the true intention and ulterior motive may in fact be to cater to one's narcissism. This is definitely a topic worthy of further exploration, particularly by means of a qualitative discovery.

When exploring impression construction, the frequency of posting health and exerciserelated content on social media was the most significant predictor of this construct. As a reminder, impression construction refers to adopting certain traits and behaviors to reflect socially desirable identities (Leary & Kowalski, 1990). When constructing impressions, it is not uncommon to align oneself with these particular traits and behaviors in order to embody the identity fully. Impression construction was discussed in-depth during the interviews; women expressed the experiences they had trying to construct a persona on social media from a health and exercise standpoint. The most significant take-away was that women hoped their audience would perceive them as exercisers or successful athletes. Prior research suggests that athletic women tend to feel empowered and proud because of their strength and skill (Krane, Choi, Baird, Aimar, & Kauer, 2004). Maintaining an athletic-ideal enhances self-esteem, selfconfidence, and feelings of independence (Krane, Choi, Baird, Aimar, & Kauer, 2004). These traits were valued and embraced by the women in this study and thus, were further incorporated in their beliefs about exercise and the impressions they conveyed. Women validated these impressions by committing to an active and healthy lifestyle in "real" life so that they could "back-up" their social media persona with appropriate pictures and posts. Thus, it seems logical that the women in this study might post health and exercise-specific content on social media

frequently in order to keep up the appearance of being an exerciser or an athlete. Additionally, this type of content would be the most efficient way to convey said impression, therefore it makes sense that it would consume most of their social media profile.

The second largest predictor of impression construction was body and exercise comparisons. As Perloff (2014) suggests, comparative processes are prominent on social media because social media is a network of peers. Festinger (1954) proposes that individuals are more likely to engage in comparisons with like others to make their progress more relatable and attainable. Women in this study voiced that they often engaged in comparisons with their peers because they were real people doing real things. While it was also easy to compare one's body to "someone who get paid to exercise daily," many of these woman also realized that these images are heavily filtered and they tried to remove those types of images from their platforms. There was much talk about seeing the transformations of similar others and comparing one's own progress to theirs, which in turn was either motivating or disparaging. In terms of impression construction individuals in this study spoke about appearing relatable and consistent with who they were in "real" life. This is reflective of Leary and Kowalski's (1990) conceptualization of impression construction. It is possible that in an attempt to appear real and authentic, these women might have been prompted to convey a sense of self that might have been a bit embellished in order to save face with their peers. Participants discussed the importance of posting accomplishments as this appeared to be a way to "keep up with the Joneses" and stay relevant in the social media exercise world.

In consideration of the qualitative and quantitative pieces of this study, it is important to explore what constructs might need further examination and if the model should be adjusted for future use. Based on the overall results of this study, one avenue warranting further exploration

is linear and cyclical manner in which the model flows. Currently, the model progresses forward in a linear manner to the ultimate outcome: influencing exercise and impression management behaviors. Although the model as a whole demonstrated significance during each hierarchical multiple regression, considering the significant predictor variables, and the responses from the participants during the qualitative portion of this study, it is plausible that the cyclical manner of the model extends beyond the effects of social media circling back towards online reassurance seeking and contingent self-esteem. Instead, one might surmise that there should be additional arrows added to the backend of exercise and impression management that circle back towards the construct box containing online reassurance seeking and contingent self-esteem. It appears that it is possible that engagement in exercise and impression management may lead the cycle to start over, or continue, and thus, this new directionality is worthy of further exploration. Women in this study expressed that social media influenced them to exercise in the sense that not only did they gained inspiration from social media to exercise, but they also found motivation to exercise because they knew an exercise session may create "post worthy" content for their social media page. Thus, while the model may at time progress in a linear manner, it appears that it should also have the capability to operate in reverse or in a new direction altogether.

Another concept that should be re-considered when re-conceptualizationing the model is the placement of online reassurance seeking and the addition of narcissism. In this study, online reassurance seeking was not a significant predictor in any of the three regression equations, but is all twenty women discussed the need and desire for online reassurance seeking in some capacity during the qualitative interviews. The disconnect in existence between the significant model predictors and the women's online experiences was interesting to take note of, and it leads one to wonder how reassurance seeking fits into the social media use process. One of the trademarks for

narcissism is reassurance seeking, and based on the previous documented literature, it appears that narcissism is a worthy addition to the individual vulnerability factors, which serve as possible precursors for reassurance seeking. Although narcissism was not explicitly mentioned in the qualitative portion of the study, the characteristics of narcissism were apparent and it makes sense that narcissistic tendencies may influence the need to seek out reassurance online. Thus is worthy of exploration as the model continues to evolve and come to fruition.

Moving forward, it is also necessary to explore the model from both a user's and a consumer's perspective, and how different types of social media engagement when engaging in social media use, and how these behaviors might differ in influencing exercise engagement and impression management. It is possible that aspects such as online reassurance seeking might only play a role when an individual is using social media, whereas constructs such as social comparisons might play out when using and consuming this content. Likewise, it is possible that using and/or consuming social media content might influence exercise and impression management behaviors differently. Consuming content may have more of an impact on exercise engagement, whereas using might have more of an impact on creating and maintaining impressions. Based on the varying experiences the women shared when using social media, it is important to consider that mere exposure alone may not elicit exercise engagement or impression management, but instead one must consider the reciprocal relationship that exists between the social media user, the social media medium, and the context surrounding the social media exchange may have a large impact on one's resulting behaviors. These facets are worthy of further exploration and future research should aim to assess how I might need to re-define and re-organize the model constructs and outcomes to better fit the reciprocating and cyclical

relationship that exists between social media engagement, exercise engagement, and impression management.

Much of what was proposed in the model was reflected in the experiences shared by the women in this study. Women created narratives that encompassed all pieces of the model, discussing elements across the spectrum from internalization of the thin-ideal to social comparisons, to affect, to body (dis)satisfaction, to reasons for social media engagement. Based on both the quantitative and qualitative results, it appears that the transactional model of social media use, body image concerns, impression management, and exercise behaviors I proposed is a promising way to interpret how women use social media to conceptualize healthy bodies and healthy exercise practices and what underlying processes occur during social media engagement. Although not all variables were significant predictors of the model, the model as a whole was significant and the entirety of the model is reflected in the experiences shared by the women in this study. While it appears that social media is an encouraging place to connect for health and exercise-related purposes, much of the interaction on social media does prompt comparison and internalization of the thin-ideal. The messages social media outlets are sending do not quite align completely with the body positive movement and there is no clear indication that they ever will. Although many messages on social media still equate thin bodies as being healthy bodies and exercise as a tool to obtain a thin body, there is something to be said for the importance of using social media as a means to document exercise behaviors. The fact that so many women in this study found it important to display themselves as exercisers alludes to the importance of exercise and how they prioritize exercise in their lives. These women noted that others in their network post about exercise across the spectrum. Yes, there are extremes to this, as some women post work-out sessions where they are flipping tires or doing extremely complex yoga poses, and

some women post that they walked a mile around their neighborhood. Regardless, the fact of the matter is that these women are engaging in some sort of exercise and using social media as a tool not only to document this behavior, but also to hold themselves accountable. Considering the body of research related to exercise engagement and exercise adherence, it is known that women are less physically active than men, and approximately 60% of women do not engage in the recommended amount of physical activity (Centers for Disease Control and Prevention, 2016). Thus, it seems advantageous to find a way to harness social media as a tool to promote exercise engagement across the spectrum in an attempt to improve exercise engagement and adherence.

It is important that as society moves forward in the social media era, researchers take time to address the amount of dependence and obsessiveness associated with social media engagement. The ramifications of reassurance seeking have been documented and reflected in the present study. "Likes" serve to validate self-worth. In trying to validate self-worth, impressions are constructed to form favorable opinions and it becomes of utmost importance to have these impressions received positively by one's audience. The obsession over receiving feedback and seeking out reassurance through the continual documentation of post worthy content may have negative side effects, which I have previously mentioned. Women in this study conveyed the importance of attaining "likes," and while reassurance seeking was not a significant predictor of impression management, contingent self-esteem was. Enhancement of contingent self-esteem cannot occur without some sort of validation. It is important that researchers find ways to help women understand that their worth is not dependent on a "like" or a comment. This is a hard avenue to navigate as so much of social media revolves around creating a highlight reel and constructing the best version of oneself online. As social media

continues to provide more ways for individuals to interact with each other's posts, it will be important to explore how to separate contingent self-esteem from audience approval feedback.

Social media has cultivated an interesting dynamic for the health and exercise world. While the benefits of social media are fruitful, the costs are just as abundant. Unfortunately, society will never be able to improve health, be it physical, mental, or emotional, without celebrating a diversity of body shapes and sizes. Because messages of health are so pervasive on social media outlets, it is important that society strives to represent healthy bodies in terms that are more accepting of a health at every size approach. Women are willing and ready to document their exercise endeavors on their social media accounts; thus it is paramount to expose women of all shapes and sizes being active and promoting physical activity. If society continues to send a singular message about what a healthy body looks like, the cultural norm can never expand and change. The present dynamic that equates health to a thin and fit body has been countered in the research, and thus, society must move forward with the intention of expressing health in terms of a lifestyle—a lifestyle that is attainable by all. If women are able to reject thinness-ideals as the ultimate truth, it is likely that the female population as a whole may feel less pressure to conform to those societal standards of health. As researchers and advocates for size inclusiveness, it is important to strive to create interventions on social media that will decrease opportunities for social comparison and increase opportunities for body acceptance and appreciation. There is great potential to revolutionize the experience women have on social media from a health and exercise perspective, but it must start with the acknowledgement that there is a diversity of body shapes and sizes that exist, and these women are exercisers too. Thus, the definition of a healthy body should not be confined to a box; it should be exposed for its multiplicity. There is a body

positive movement that exists on social media, and it is on the rise. Now, all society needs to do, is press "like."

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## Appendix A

# **Demographics Questionnaire**

1. What is your gender?:FemaleMale						
2. What is your age (measure in years)?:						
3. What is your height (measured in inches)?: inches						
4. What is your weight (measured in pounds)? Please report a whole number: lbs.						
5. What is your ethnicity?:Not Hispanic/LatinoHispanicOther (please						
6. What is your race?:American Indian or Alaskan NativeAsianWhite						
Black or African AmericanNative Hawaiian or Pacific Islander						
Multiple RacesOther (please specify)						
7. Do you exercise at least 2 times per week for 30 minute segments?YesNo						
8. Do you have at least 1 social media platform that you access at least 5 times per day?						
YesNo						
9. Are you currently pregnant?:YesNo						
10. Are you currently being treated for an eating disorder?YesNo						
11. Are you currently being treat for exercise addiction?YesNo						

### Appendix B

### **Rosenberg Self-Esteem Scale**

Instructions: Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle SA. If you agree with the statement, circle A. If you disagree, circle D. If you strongly disagree, circle SD.

### STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE

1. On the whole, I am satisfied with myself.

SA A D SD

2. At times, I think I am no good at all.

SA A D SD

3. I feel that I have a number of good qualities.

SA A D SD

4. I am able to do things as well as most other people.

SA A D SD

5. I feel I do not have much to be proud of.

SA A D SD

6. I certainly feel useless at times.

SA A D SD

7. I feel that I'm a person of worth, at least on an equal plane with others.

SA A D SD

8. I wish I could have more respect for myself.

SA A D SD

9. All in all, I am inclined to feel that I am a failure.

SA A D SD

10. I take a positive attitude toward myself.

SA A D SD

## Appendix C

### Sociocultural Attitudes Towards Appearance Questionnaire-4

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

				Neith	efinitely Disagree = 1 Mostly Disagree = 2 er Agree Nor Disagree = 3 Mostly Agree = 4 Definitely Agree = 5				
1.	1. It is important for me to look athletic.								
	1	2	3	4	5				
2.	2. I think a lot about looking muscular.								
	1	2	3	4	5				
3.	3. I want my body to look very thin.								
	1	2	3	4	5				
4.	4. I want my body to look like it has little fat.								
	1	2	3	4	5				
5.	5. I think a lot about looking thin.								
	1	2	3	4	5				
6. I spend a lot of time doing things to look more athletic.									
	1	2	3	4	5				
7	I think a lo	t about ]	looking	athletic					
/.	1 unit u 10	2	3	4	5				
0	8. I want my body to look very lean.								
0.	1 want my	2	3	4	5				
0									
9. I think a lot about having very little body fat. 1 2 3 4 5									
	1	-	5	т	5				
10. I spend a lot of time doing things to look more muscular.									

1 2 3 4 5

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

11. I feel pressure from family members to look thinner.								
	1	2	3	4	5			
12. I feel pressure from family members to improve my appearance.								
	1	2	3	4	5			
13. Family members encourage me to decrease my level of body								
fat.	1	2	3	4	5			
1 <i>1</i> E	amily ma	mbars ar	courage	me to ge	t in better shape.			
14.1	1	2	3	4	5			
					evance to your PEERS (include close friends,			
<u>class</u>	mates, and	d other so	ocial con	tacts):				
15. N	Ay peers e	encourage	e me to g	et thinne	r.			
	1	2	3	4				
1 - 1	<b>C</b> 1	G						
16.1	teel press	sure from 2	my peer 3	_	ove my appearance. 5			
	1	Z	3	4	5			
17. I	feel press	ure from	my peer	s to look	in better shape.			
	1	2	3	4	5			
1Q T	act proces	iro from	mu noore	to dooro	as a my lavel of body fat			
10.1	1	2	3	4	ase my level of body fat.			
	1	2	5	·				
Ansv	ver the fol	llowing <u>c</u>	uestions	with rele	evance to the MEDIA (include television, magazines, the			
inter	net, movie	es, billbo	ards, and	advertis	ements):			
19 I	feel press	ure from	the med	ia to look	c in better shape.			
17.1	1	2	3	4	5			
20. I	feel press							
	1	2	3	4	5			
21. I feel pressure from the media to improve my appearance.								
	1	2	3	4	5			

- 22. I feel pressure from the media to decrease my level of body fat. 1 2 3 4 5

### Appendix D

#### **Reasons for Exercise Inventory**

People exercise for a variety of reasons. When people are asked why they exercise, their answers are sometimes based on the reasons they believe they should have for exercising. What we want to know are the reasons people actually have for exercising. Please respond to the items below as honestly as possible. To what extent is each of the following an important reason that you have for exercising? Use the scale below, ranging from 1 to 7, in giving your answers.

1 = not at all important	2 3 4 = moderately important	5 6 7 = extremely
important		

- 1. To be slim
- 2. To lose weight
- 3. To maintain my current weight
- 4. To improve my muscle tone
- 5. To improve my strength
- 6. To improve my endurance, stamina
- 7. To improve my flexibility, coordination
- 8. To cope with sadness, depression
- 9. To cope with stress, anxiety
- 10. To increase my energy level
- 11. To improve my mood
- 12. To improve my cardiovascular fitness
- 13. To improve my overall health
- 14. To increase my resistance to illness and disease
- 15. To maintain my physical well-being
- 16. To improve my appearance
- 17. To be attractive to members of the opposite sex
- 18. To be sexually desirable
- 19. To meet new people
- 20. To socialize with friends
- 21. To have fun
- 22. To redistribute my weight
- 23. To improve my overall body shape
- 24. To alter a specific area of my body

### Appendix E

### **Contingent Self-Esteem Scale**

Listed below are a number of statements containing concerning personal attitudes and characteristics. Please read each statement carefully and consider the extent to which you think it is like you. Circle one number on the scale below each statement that best reflects your answer. There are no right or wrong answers so please answer as honestly as you can.

1-not at all like me 2 3-Neutral 4 5-very much like me

1. An important measure of my worth is how competently I perform.

2. Even in the face of failure, my feelings of self-worth remain unaffected.

3. A big determinant of how much I like myself is how well I perform up to the standards that I have set for myself.

4. My overall feelings about myself are heavily influenced by how much other people like and accept me.

5. If I get along well with somebody, I feel better about myself overall

6. An important measure of my worth is how physically attractive I am.

7. My overall feelings about myself are heavily influenced by what I believe other people are saying or thinking about me.

8. If I am told that I look good, I feel better about myself in general.

9. My feelings of self-worth are basically unaffected when other people treat me badly.

10. An important measure of my worth is how well I perform up to the standards that other people have set for me.

11. If I know that someone likes me, I do not let it affect how I feel about myself.

12. When my actions do not live up to my expectations, it makes me feel dissatisfied with myself.

13. Even on a day when I don't look my best, my feelings of self-worth remain unaffected.

14. My overall feelings about myself are heavily influenced by how good I look.

15. Even in the face of rejection, my feelings of self-worth remain unaffected.

# Appendix F

## Social Media Reassurance Seeking Scale (Modified version of the Facebook Reassurance Seeking Scale)

Choose the number that best reflects the degree to which you agree with the following statements:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Disagree Somewhat
- 4 = Neither Agree nor Disagree
- 5 =Agree Somewhat
- 6 = Agree
- 7 = Strongly Agree

1) When I post something new on social media, I expect others to comment on it.

2) When I update or add something on social media and no one comments on it, I tend to be disappointed.

3) When I update or add something on social media, it does not affect me if no one comments on it.

4) I update my social media accounts multiple times per day.

5) I sometimes write negative things about myself on my social media accounts to see if others will respond with negative comments about me.

# Appendix G

## **10-item Social Media Behavior Scale** (Modified version of the 10-item Facebook Behavior Scale)

1 =Never 2 3 4 5 6 =All the time

Frequency of use

- 1. How often do you use social media?
- 2. How often do you update your status?
- 3. How often do you update your profile information?
- 4. How often do you post pictures of yourself?
- 5. How often do you change your profile picture?
- 6. How often do you tag pictures of yourself?
- 7. How often do you browse through profiles of others?

Frequency of use (health and fitness-related)

- 1. How often do you use social media to post information related to health or fitness?
- 2. How often do you update your status on social media with content related to health or fitness?

3. How often do you update your profile information to disclose information related to your health or fitness habits?

4. How often do you post pictures of yourself participating in activities related to health or fitness?

5. How often have you changed your profile picture to you doing something health or fitness related?

6. How often do you tag pictures of yourself participating in activities related to health or fitness?

7. How often do you browse through profiles of others to view the health and fitness related content they post?

Facebook monitoring

- 1. I use social media to see what people are saying about me.
- 2. I like to read through my social media sites to see if my friends have mentioned me.
- 3. It is important to me to know if anyone is saying anything bad about me on social media.
- 4. I usually know what people are saying about me on social media.

Social support seeking

- 1. Whenever I am upset I usually create a post about what is bothering me.
- 2. If something made me sad, I usually post a comment about it on social media.
- 3. Posting something on social media is a good way to vent when something is bugging me.

4. If I post something on social media about something that is bothering me, it makes me feel better.

5. I use my social media platforms to let people know that I am upset about something.

Social support provision

1. I use social media to offer emotional support to people I know when they are feeling upset about something.

2. If I see someone post something on social media that indicates they are upset, I try to post a comforting comment.

3. It is important to me to try to cheer up my friends by commenting on their posts when it appears that they feel distressed.

4. I try to make people feel better by commenting on their posts when I can tell they are having a bad day.

Attitude towards having many friends

- 1. Having many friends on my social media accounts is important to me.
- 2. Having many friends on my social media accounts is fun.
- 3. Having many friends on my social media accounts is desirable.
- 4. Having many friends on my social media accounts is useful.

#### Self-promotion

- 1. Social media allows me to present myself in a favorable way.
- 2. I see social media as a tool to present myself in a positive way.
- 3. I think it's good that people can find information about me on social media.
- 4. Everyone finds it interesting what I post on social media accounts.
- 5. Others want to know what I am doing.
- 6. I find it important that my friends know what I am doing.
- 7. I like social media because more people can notice me.
- 8. I use social media to influence my image.

## Self-promotion with pictures

- 1. Having an attractive profile picture is important to me.
- 2. I think it's important that I look professional in my social media pictures
- 3. I think it's important that I look happy in my social media pictures
- 4. I think it's important that I look sexy in social media pictures
- 5. I think it's important that I look tough in social media pictures.
- 6. I think it's important that my social media pictures look fun.

# Appendix H

### **Physical Appearance Comparison Scale-Revised**

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	Ofter	n	Always		
	0	1	2	3		4		
				Never			1	Always
1.	When I'm out physical appea others.	-		0	1	2	3	4
2.	When I meet a compare my b size.	-		0	1	2	3	4
3.	When I'm at w my body shape others.		· •	0	1	2	3	4
4.	When I'm out body fat to the	-		0	1	2	3	4
5.	When I'm sho compare my w others.			0	1	2	3	4
6.	When I'm at a shape to the bo	1 .		0	1	2	3	4
7.	When I'm with compare my w others.			0	1	2	3	4
8.		· ·		0	1	2	3	4
9.	When I'm with compare my b others.	• •	friends, I he body size of	0	1	2	3	4
10.	When I'm eati compare my b others.	-		0	1	2	3	4

11. When I'm at the gym, I compare my 0 1 2 3 4 physical appearance to the appearance of others.

# Appendix I

### Body, Eating, and Exercise Comparison Orientation Measure

Please rate each of the following items regarding how often you compare yourself to your samesex peers in terms of appearance, exercise, and eating. Remember, there are no right or wrong answers, so please be as honest as possible.

Regarding the items that refer to comparisons you might make when you are exercising (e.g., running outside, playing an organized sport, using a cardio machine at a gym): If you are not currently exercising, think back to times when you have exercised (e.g., participated in gym class, played an organized sport, walked or ran outside) and answer accordingly.

1- Never	2-Almost Never	3-Seldom	<b>4-Sometimes</b>	5-Often
6-Almost Alw	vays 7-A	lways		

1. I pay attention to whether or not I am as thin as, or thinner than, my peers.

2. In social situations, I think about how my figure "matches up" to the figures of those around me.

3. When I am exercising (e.g., at the gym, running outdoors), I pay attention to the length of time that those around me work out.

4. I pay close attention when I hear peers talking about exercise (in order to determine if I am exercising as much as they are).

5. I notice how I compare with my peers in terms of specific parts of the body (e.g., stomach, hips, breasts, etc.).

6. When working out around other people, I think about how many calories I am burning in comparison to my peers.

7. I compare my body shape to that of my peers.

8. When I see a peer who is wearing revealing clothing, I have thoughts of how my own body compares.

9. I like to know how often my friends are working out so I can figure out if the number of times I work out "matches up."

10. When I exercise (e.g., at the gym, running outdoors), I pay attention to the intensity level of the workouts of those around me.

11. I pay attention to whether or not I am as toned as my peers.

12. When I work out, I evaluate how hard my workout was compared to how hard my friends say they worked out.

# Appendix J

### **Social Physique Anxiety Scale**

Please rate the degree to which the following statements are characteristic of you.

1 = not at all characteristic of me

2 = slightly characteristic of me

3 = moderately characteristic of me

4 = very characteristic of me

5 = extremely characteristic of me

- 1. I wish I wasn't so uptight about my physique/figure.
- 2. There are times when I am bothered by thoughts that other people are evaluating my weight or muscular development negatively.
- 3. When I look in the mirror I feel good about my physique/figure.
- 4. Unattractive features of my physique/figure make me nervous in certain social settings.
- \_\_\_\_\_ 5. I am comfortable with how fit my body appears to others.
- 6. It would make me uncomfortable to know others were evaluating my physique/figure.
- \_\_\_\_\_ 7. When it comes to displaying my physique/figure to others, I am a shy person.
  - 8. I usually feel relaxed when it is obvious that others are looking at my physique/figure.
    - 9. When in a bathing suit, I often feel nervous about the shape of my body.

# Appendix K

## **Body Parts Satisfaction Scale-Revised**

Below are listed different parts or aspects of your body. For each one, using the scale provided, honestly rate your current level of satisfaction. There are no right or wrong answers, so please respond to each item as it applies to you.

	Extremel Dissatisfie				Extre Sati	emely sfied
1. Weight	1	2	3	4	5	6
2. Hair	1	2	3	4	5	6
3. Complexion	1	2	3	4	5	6
4. Overall face	1	2	3	4	5	6
5. Arms	1	2	3	4	5	6
6. Stomach	1	2	3	4	5	6
7. Breasts	1	2	3	4	5	6
8. Buttocks	1	2	3	4	5	6
9. Hips	1	2	3	4	5	6
10. Upper thighs	1	2	3	4	5	6
11. General muscle tone	1	2	3	4	5	6

Extremely			Extremely			
Dissatisfied			Satisfied			
1	2	3	4	5	6	

Overall satisfaction with the size and shape of your body

# Appendix L

## **Positive Affect Negative Affect Scale**

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt this way during the past <u>week</u>.

Use the following scale to record your answers.

1 very slightly or not at all 2 a little 3 moderately 4 quite a bit 5 extremely

\_\_\_\_ interested

\_\_\_\_ distressed

\_\_\_\_ excited

\_\_\_upset

\_\_\_\_strong

\_\_\_\_guilty

\_\_\_scared

- \_\_\_\_ hostile
- \_\_\_\_ enthusiastic
- \_\_\_\_ proud
- \_\_\_\_ irritable
- \_\_\_\_ alert
- \_\_\_\_ ashamed
- \_\_\_\_ inspired
- \_\_\_\_ nervous
- \_\_\_\_ determined
- \_\_\_\_ attentive
- \_\_\_\_ jittery \_\_\_\_ active

\_\_\_\_ afraid

## Appendix M

#### Self-Presentation in Exercise Questionnaire

Choose the number that best reflects the degree (1-Strongly disagree 6-Strongly agree) to which you agree with the following statements:

1 =Strongly Disagree 2 3 4 5 6 =Strongly Agree

1. I value the attention and praise of others when they regard me as being in good shape

2. I enjoy the praise I often receive for exercising

3. I try to appear toned and fit to others

4. I want to be thought of as a person who exercises

5. I wear exercise/athletic clothing so that other people will see me as an exerciser

6. I emphasize my athletic ability around those who do not yet know that I am an "exercise nut"

7. I value the attention and praise offered by others in regard to appearing physically fit

8. I wear exercise clothes that are flattering or revealing so others can tell that I am fit and/or attractive

#### Appendix N

#### **Godin Leisure Time Exercise Questionnaire**

#### **INSTRUCTIONS**

In this excerpt from the Godin Leisure-Time Exercise Questionnaire, the individual is asked to complete a self-explanatory, brief four-item query of usual leisure-time exercise habits.

#### CALCULATIONS

For the first question, weekly frequencies of strenuous, moderate, and light activities are multiplied by nine, five, and three, respectively. Total weekly leisure activity is calculated in arbitrary units by summing the products of the separate components, as shown in the following formula:

Weekly leisure activity score =  $(9 \times \text{Strenuous}) + (5 \times \text{Moderate}) + (3 \times \text{Light})$ 

The second question is used to calculate the frequency of weekly leisure-time activities pursued "long enough to work up a sweat" (see questionnaire).

#### EXAMPLE

Strenuous = 3 times/wk Moderate = 6 times/wk Light = 14 times/wk

Total leisure activity score =  $(9 \times 3) + (5 \times 6) + (3 \times 14) = 27 + 30 + 42 = 99$ 

1. During a typical **7-Day period** (a week), how many times on the average do you do the following kinds of exercise for **more than 15 minutes** during your free time (write on each line the appropriate number).

Times Per Week

# a) STRENUOUS EXERCISE (HEART BEATS RAPIDLY)

(e.g., running, jogging, hockey, football, soccer, squash, basketball, cross country skiing, judo, roller skating, vigorous swimming, vigorous long distance bicycling)

#### MODERATE EXERCISE (NOT EXHAUSTING)

(e.g., fast walking, baseball, tennis, easy bicycling, volleyball, badminton, easy swimming, alpine skiing, popular and folk dancing)

## b) MILD EXERCISE (MINIMAL EFFORT)

(e.g., yoga, archery, fishing from river bank, bowling, horseshoes, golf, snow-mobiling, easy walking)

2. During a typical **7-Day period** (a week), in your leisure time, how often do you engage in any regular activity **long enough to work up a sweat** (heart beats rapidly)?

OFTEN	SOMETIMES	NEVER/RARELY
1.  _	2.  _	3.  _

#### Appendix O

#### **Exercise Behavior Survey**

- 1. On average, I typically exercise \_\_\_\_\_ days per week:
- 2. Each session, I typically exercise for \_\_\_\_\_ minutes (please use a whole number)
- 3. I prefer to exercise:

\_\_\_\_\_Alone \_\_\_\_\_With friends \_\_\_\_\_In a group setting but not necessarily with friends

- 4. My favorite place to exercise is:
- \_\_\_\_\_At home \_\_\_\_\_Outdoors \_\_\_\_\_At the gym/public facility
- \_\_\_\_Other: \_\_\_\_\_
- 5. When I exercise, the type of clothing I like to wear is:
  - \_\_\_\_\_Very Concealing \_\_\_\_\_Moderately Concealing
    - \_\_\_\_\_Wear Concealing or Revealing clothing equally \_\_\_\_\_Moderately Revealing
  - \_\_\_\_\_Very Revealing
- 6. I typically participate in the following types of exercises (check all that apply):

Weight Training	Yoga/Pilates
Running/Walking	Swimming
Cardio Machines	Aerobic Classes
Ball Sports	Karate/Martial Arts
CrossFit	Other:

7. Based on the items you chose above, which type of exercise do you participate in most often:

Most Often:	
Second Most Often:	
Third Most Often:	

8. Describe what a typical exercise segment looks like for you. Include the apparel that you wear, if you exercise alone or with a group, the atmosphere/setting, and the type/duration of exercises you choose to do:\_\_\_\_\_\_

## **Appendix P**

University of Wisconsin-Milwaukee Consent to Participate in Online Survey Research

Study Title: Hashtagging Your Health: Using Psychosocial Variables and Social Media Use to Understand Impression Management and Exercise Behaviors in Women

Person Responsible for Research: Caitlyn Hauff, M.S., ABD

Study Description: The purpose of this study is to explore how psychological behaviors, social behaviors, and social media use influence exercise behaviors in women and how women choose to manage their impressions. Approximately 500 women will complete this survey for this study. If you agree to participate, you will be asked to complete a survey that will take approximately 15-25 minutes to complete. The questions will ask you to think about different personal characteristics and behaviors you possess, as well as how you use social media. You will be asked to answer the questions based on your beliefs about yourself and your own personal experiences. The Board has approved this study under the tracking number H: 16.366 and has concluded that the rights and safety of the research subjects are protected.

Risks / Benefits: Risks to participants are considered minimal. There will be no costs for participating. The core benefit of participation in this study is to further research on this topic. Some instructors who are helping in the recruitment process may offer students extra credit points for participation and completion of this survey. Extra credits points will be given at the discretion of the instructor and will not be guaranteed to all students who partake in this study. At the end of the survey, you will also have the chance to enter a random drawing to win one of five \$10.00 Amazon gift cards. Due to UWM policy and IRS regulations, we may be required to obtain your name, address, social security number (or tax ID number), and signature in order to issue the payment to you. At the end of the survey, you will also be asked for your contact information if you wish to participate in Part 2 of this study. Please note that if you do not wish to participate in this study, you can still be eligible for the prize drawing by providing your name and contact information to Mrs. Hauff.

Collection of data and survey responses using the internet involves the same risks that a person would encounter in everyday use of the internet, such as breach of confidentiality. While the researcher has taken every reasonable step to protect your confidentiality, there is always the possibility of interception or hacking of the data by third parties that is not under the control of the research team.

Limits to Confidentiality: Identifying information such as your name, email address, and the Internet Protocol (IP) address of this computer will not be asked or available to the researchers. Data will be retained on the Qualtrics website server for 5 years and will be deleted by the researcher after this time. However, data may exist on backups or server logs beyond the timeframe of this research project. Data transferred from the survey site will be saved on a password protected computer for 5 years. Only Caitlyn Hauff will have access to the data collected by this study. However the Institutional Review Board at UW-Milwaukee or

appropriate federal agencies like the Office for Human Research Protections may review this study's records.

Voluntary Participation: Your participation in this study is voluntary. You may choose to not answer any of the questions or withdraw from this study at any time without penalty. Your decision will not change any present or future relationship with the University of Wisconsin Milwaukee.

Who do I contact for questions about the study: For more information about the study or study procedures, contact Caitlyn Hauff at pecinov2@uwm.edu.

Who do I contact for questions about my rights or complaints towards my treatment as a research subject? Contact the UWM IRB at 414-229-3173 or irbinfo@uwm.edu

Research Subject's Consent to Participate in Research:

By entering this survey, you are indicating that you have read the consent form, you are age 18 or older and that you voluntarily agree to participate in this research study.

Thank you!

## Appendix Q

#### Exercise and Social Media Use Log

Thank you for volunteering your time to participate in this study.

In the following pages, you will find a social media use and exercise log. This log is meant to capture a typical day of exercise and social media use for each participant. Please fill this log out <u>no more than two days</u> prior to your interview with the researcher so that the information remains fresh in your head. In the days leading up to your interview, take a few moments to reflect on your typical social media use during the day. Pay attention to what kind of content you are liking, sharing, or commenting on, as well as what type of content you are posting. These notions will be beneficial during the interview segment. Please make sure to email this log to Caitlyn Hauff prior to the interview, or print out a hard copy to bring with you to the interview.

In addition to completing this social media use and exercise log, please remember to review your social media accounts and find **THREE** posts/photos that you have posted/shared that encompass an exercise, body image, or health-related message. You will need to screen shot these photos and bring hard copies with you to the interview, OR email them to Caitlyn Hauff before your interview. These posts/photos will be vital to the interview process.

If you have questions as you fill out the log or as you are choosing your posts/photos, please do not hesitate to contact the lead researcher, Caitlyn Hauff (<u>pecinov2@uwm.edu</u>). Thank you so much for your time and your invaluable contribution to this research study.

TYPE OF	DURATION	<b>REASON FOR</b>	RATE YOUR	DID YOU USE	REASON
EXERCISE	<b>OF EACH</b>	PERFORMING	EXERCISE	SOCIAL MEDIA	FOR SOCIAL
	TYPE OF	EACH EXERCISE	INTENSITY	<b>DURING THIS</b>	MEDIA USE
	EXERCISE			<b>SESSION?</b>	
			LIGHT (minimal		
			effort)	YES	
			MODERATE	NO	
			(not exhausting)		
			VIGOROUS		
			(heart beats rapidly)		
			LIGHT		
				YES	
			MODERATE		
				NO	
			VIGOROUS		
			LIGHT		
				YES	
			MODERATE		
				NO	
			VIGOROUS		
			LIGHT		
				YES	
			MODERATE		
				NO	
			VIGOROUS		

Total Exercise Time (in minutes):

Start Time of Exercise – Stop Time of Exercise (eg: 6:00pm-8:00pm): \_\_\_\_\_

Location of Exercise Session:

Consider your <u>exercise session</u> for this day:

- Did you create a post on social media about this exercise session? \_\_\_\_\_\_
   If you answer <u>NO</u> to this question, think of a time when you previously created a post on social media about an exercise session and respond accordingly. If this does not apply to you, you may skip this session.
- 2. Did you post to social media before, during, or after this session? Before During After

	SITE(S) CONTENT WAS POSTED TO	TYPE(S) OF CONTENT POSTED (eg: status, photo, tweet, etc.)	REASON FOR POSTING CONTENT	HOW MANY TIMES DID YOU CHECK FOR LIKES, COMMENTS, RETWEETS, ETC.?	HOW MANY COMMENTS, LIKES, RETWEETS, ETC. DID YOU RECEIVE?
-					
-					

260

How many times did you consume health, body image, or exercise-related social media content today?:

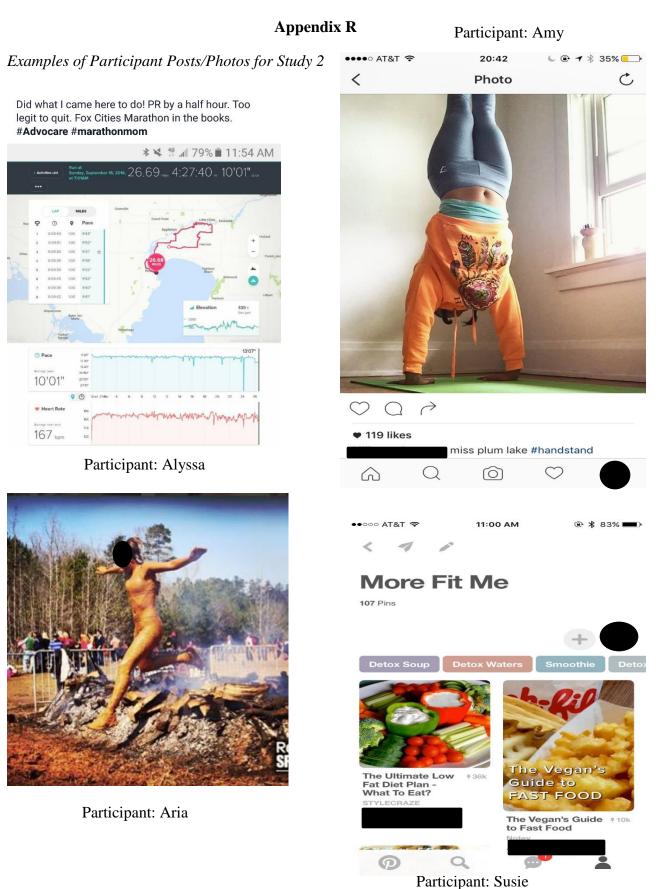
TYPE OF HEALTH OR EXERCISE- RELATED CONTENT CONSUMED	SOCIAL MEDIA SITE USED	TYPE OF INTERACTION (read an article, commented/liked photos, shared, etc.)

Directions: Track your social media use for ONE HOUR, then answer the following:

(Please circle the most accurate response)					
How many times did you open a social media site:	1 2	3 4	5 6	7 8	9 10+
Which site(s) was(were) accessed? Instagram Other	Facebook	Snapchat	Twitter	Pinterest	Blog
Did you post health or exercise related content? (content should be UNRELATED to your exercise ses	YES sion)	NO			
Which sites did you use to post this content? Blog Other	Instagram N/A	Facebook	Snapchat	Twitter	Pinterest
How many times did you check for likes/comments/re	tweets/etc on y	our posted co	ntent?		
0 1 2 3 4 5 6 7	89	10+ N/A			
Did you consume health or exercise related content?	YES	NO			
Which sites did you use to consume this content? Blog Other	Instagram	Facebook	Snapchat	Twitter	Pinterest
Did you comment on/retweet/share/like this content?	YES	NO			

Approximately how much TIME did you spend on social media today (in minutes):

SOCIAL MEDIA SITE(S) ACCESSED	TIME SPENT ON SOCIAL MEDIA SITE	DID YOU <u>POST</u> HEALTH OR EXERCISE-RELATED CONTENT? DESCRIBE. (content should be UNRELATED to your exercise session)	HOW MANY TIMES DID YOU CHECK FOR LIKES, COMMENTS, RETWEETS, ETC.?



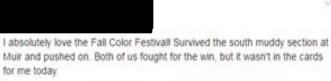
Sorry for my brief absence... you might be asking why? Well, simply because I'm human and my own biggest critic.

I only just realized this today at the color run this morning. I was mentally beating myself up for weeks about my progress or should I say lack of progress. You could even say ashamed so, in hiding I went.. However, I also realized today that progress isn't always physical. That girl on the right is so much stronger mentally then the girl on the left and that itself is something to be proud of!

No matter where you are on your journey remember that there are multiple ways to look at progress, multiple ways to measure your progress, and multiple ways to be proud of yourselves!



Participant: Emma





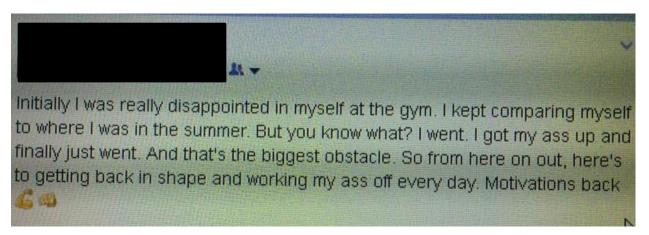
Participant: Hannah



#### Participant: Mary

How do you know you've hit rock bottom with your life long weight loss struggle? When a coworker (who might be considered an acquaintance) tells you you need to lose weight. FML

## Participant: Kari



# Appendix S

## The Interview Guide

# **Opening:**

First of all, thank you for your willingness to participate today. During the course of this interview I am going to ask you a series of questions. You may feel free to respond to the questions in any way that you wish. I just ask that you respond as openly and honestly as possible, and if there is a question you do not want to talk about, you can tell me. As you can see, there is a tape recorder present. I am going to use this tape recorder to create an accurate account of what you tell me today (explain that it is like a movie script). Is it okay if I record your answers? (If "no", ask if we can still continue with the interview without recording answers). Thank you—please know that your answers will be kept confidential. The purpose of this interview is to help me examine how women use social media to talk about health or exercise-related content and gain a better understanding of how social media relates to health and exercise behaviors. I am interested in exploring your current exercise behaviors and how you use social media.

To begin, I would like to discuss the exercise and social media use log I had you fill out:

• Describe the experience you had when filling out these logs during the day.

Walk through log with the participant by going through the pages.

- Potential questions:
  - Why did you choose to post about your exercise session on this particular day?
  - Why did you post a photo instead of a status? Why did you post a motivational quote instead of a photo?
  - How often do you post and expect someone to interact with your post?
    - Do you ever post with the intention of wanting to have an interaction?
    - How do you feel when no interaction/some interaction happens?
  - Where did you learn this type of exercise regimen? Who/what influences your exercise choices?
- How would you describe your social media use on a day to day basis?
   O How reliant are you on social media?
- Are you more likely to consume health/exercise information from particular platforms? Why?
- What determines if you like/share/comment on a health/exercise post?
- If/how/to what extent did the type of exercise you performed influence your post?
- If you posted before your exercise segment, did your post influence your exercise participation that day?

Next, I would like to discuss the 3 posts/photos your brought with you today.

- Describe #1 to me
- Describe #2 to me
- Describe #3 to me

Questions for each post:

- Describe how this post defines how you conceptualize your health/exercise behaviors or beliefs.
- What kinds of thoughts did you have when posting this to social media?
  - How often did you find yourself checking for comments, or likes, or retweets?
    - Describe that experience.
  - What kinds of feelings did you have when a) no one commented or b) lots of people commented?
- Who is/was your intended audience?
- What were your intentions when posting?
- Why did you choose this platform?
- Does this post/image capture, or fall in line with, your social media persona?
- Does this post/image convey a particular message to your audience?
  - What message do you want it to convey...
    - About you?
    - About health/exercise?

For the last part of this interview, we are going to discuss some general insights you have about social media use:

- Describe your experience with trying to create an online persona from a health/exercise perspective.
- How do you think women conceptualize healthy bodies and exercise behaviors through social media?
  - How do YOU do this?
- Describe ways in which you think social media defines healthy bodies and exercise behaviors for women?
- How is your definition of a healthy body shaped by your social media use?
- How is your definition of healthy exercise practices shaped by your social media use?
- Think of a time when you might have used social media as a way to reassure yourself about your appearance. Describe that experience.
- Describe a time when you might have used social media to appear a certain way to others. What prompted the need to do this?

- What do you do on social media to control the impression others have of you from a health/exercise standpoint? Do you ever feel that there a discrepancy?
  - How do you know when you have successfully made this impression?
- Based on the type of social media you consume, how do you think women portray themselves on social media in regards to health and exercise?
- Think of a time when you might have posted something on social media that got a lot of "likes/comments" and a time when the post seemingly was ignored. Talk about those experiences.
  - How does positive or negative feedback on social media influence you decisions about health and your exercise behaviors?
  - How do you react to positive or negative feedback on social media regarding your health and exercise behaviors?
- What kind of feelings do you have towards individuals who document all health and exercise endeavors?
- What kind of reaction do you typically have when viewing posts of other women from a health/exercise standpoint?
- How often do you add a filter to your photos or edit your photos?
  - Why?
  - Tell me about a time that you added a filter to photo.
    - How did you feel afterwards?
    - Do you feel as if the photo was better received (i.e. got more comments/likes)?

**Exercise Influences** 

- Describe a time when someone else's social media post influenced your exercise routine

   Was it positive or negative?
- When you see posts regarding other's exercise experiences (lifting results, body transformations, etc.) what comes to mind?
- Do you find that you compare your exercise routines to social media posts?
- Does posting about your own exercise successes/failures influence how much/the intensity of your exercise?
- How does exercise shape your view of a healthy body? Does this view differ from society's general perception? Does it differ from what you see on social media?

Impression Motivation

- What would you consider your reasons for exercise?
  - How do you portray these reasons on social media? Is there a discrepancy?
- Describe a time when your self-esteem was impacted by a post on social media.
  - Positive aspects and negative aspects

• Do you find that you are motivated to create particular impressions to enhance selfesteem?

Impression Construction

- Is posting health/exercise related content on social media part of your persona?
- Do you find yourself posting and then comparing yourself to other's posts?
- Do you find yourself posting in light of society's views on attractive bodies?
- How do you construct an image of yourself on social media through your posts?
  - What do you hope your audience perceives?
  - How does this impact your self-esteem?

Based on how you use social media now, what do you like about it? What would you like to see changed moving forward/in the future?

# **Closing:**

I would like to thank you again for taking the time to complete this interview today. Your responses are extremely valuable to my study and I appreciate your willingness to participate.

## Appendix T

University of Wisconsin – Milwaukee Consent to Participate in Qualitative Research Study

**Study Title:** Hashtagging Your Health: Using Psychosocial Variables and Social Media Use to Understand Impression Management and Exercise Behaviors in Women

## Person Responsible for Research: Caitlyn Hauff, M.S., ABD

**Study Description:** The purpose of this research study is to gain a better understanding of the relationship between social media use, exercise behavior, and impression management in women. The purposes of this study are to explore social media use and exercise behaviors, and gain a deeper understanding of how women conceptualize health, healthy bodies, and healthy exercise behaviors through social media use. Participation in this research study will require you to (1) log your exercise behaviors and social media use for 1 day; (2) select three posts/images you have posted to social media that best define how you conceptualize your health/exercise behaviors or beliefs; and (3) complete a 45-60 minute face-to-face interview. This research project has been approved by the Institutional Review Board under the tracking number H: 16.366 and the board has concluded that the rights and safety of the research subjects are protected.

**Risks / Benefits:** Risks to participants are considered minimal. There will be no costs for participating. After you participate in this study, you will receive a \$15.00 Amazon gift card to compensate you for your time and efforts. This research project will serve to fill a gap in the literature regarding how women use social media to conceptualize healthy bodies and healthy exercise behaviors. Social media is an ever-growing past time, and it is important to further explore how women are using social media in this context to help research progress in this field.

**Confidentiality:** Your responses are completely confidential and your identity will be coded with an alias. No participant will be identified by her answers to anyone other than the primary researcher. Data from the study will be saved on a password protected computer for 5 years and any printed documents containing data will be kept in a locked file cabinet. Only Caitlyn Hauff and members of Mrs. Hauff's research team will have access to the information for the purposes of data analysis.

**Voluntary Participation:** Your participation in this study is voluntary. You may choose to discontinue your participation in this study at any point in time without penalty. You may also choose not answer any of the questions during the interview process if you feel uncomfortable. In addition, you may choose to skip any questions you find objectionable. You should know that the topic we are asking you to explore is very personal and sensitive, as we are asking about your experiences with social media use in regards to health and exercise. You have the right to refuse to answer any questions without penalty and may skip any of these questions in their entirety if you feel that the questions are too personal or too sensitive. Example questions may include:

"Describe a time when you posted something health or exercise-related to social media," or "How do you think women conceptualize a healthy body and healthy exercise behaviors through social media?

Due to the qualitative nature of this study, the research will ask you (the participant) for your consent to be audio-recorded during the interview and will ask for your approval to use your posts/photos as part of future publications and presentations. Please note that you can still continue your participation in this study if you do not consent to the audio-recordings and/or do not wish to have your posts/photos shared in the future. If you do not consent to being audio-recorded, the researcher will ask for your consent to take handwritten or typed notes during the interview to ensure accuracy of your statements. If you do consent, your alias will be used on all transcriptions of your verbal recording and any identifying information from your posts/photos will be removed prior to disseminating the research. De-identification will include removing user names, real names or nick names, and blurring the faces of anyone present in the photo who cannot give proper consent.

Who do I contact for questions about the study: For more information about the study or study procedures, contact Caitlyn Hauff at <u>pecinov2@uwm.edu</u>.

Who do I contact for questions about my rights or complaints towards my treatment as a research subject? Contact the UWM IRB at 414-229-3173 or <u>irbinfo@uwm.edu</u>

# **Research Subject's Consent to Participate in Research:**

To voluntarily agree to take part in this study, you must sign on the line below. If you choose to take part in this study, you may withdraw at any time. You are not giving up any of your legal rights by signing this form. Your signature below indicates that you have read or had read to you this entire consent form, including the risks and benefits, and have had all of your questions answered, and that you are 18 years of age or older.

I, the undersigned, verify that the above informed consent procedure has been followed.

## Printed Name of Subject/ Legally Authorized Representative

Signature of Subject/Legally Authorized Representative

Date

#### **Research Subject's Consent to Audio/Video/Photo Recording:**

By initialing below I agree that the researcher my use the photos I take for data analysis and publication purposes.

Please initial: \_\_\_\_Yes \_\_\_\_No

By initialing below I agree that the researcher may tape-record me while I am participating in this study and use my recorded data in the research.

Please initial: \_\_\_\_Yes \_\_\_\_No

#### **Principal Investigator (or Designee)**

I have given this research subject information on the study that is accurate and sufficient for the subject to fully understand the nature, risks and benefits of the study.

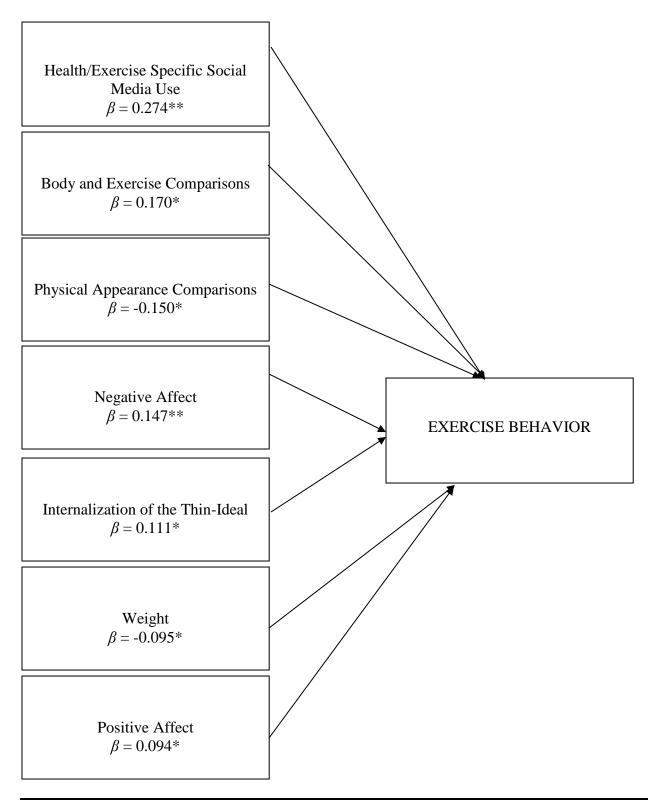
Printed Name of Person Obtaining Consent

**Signature of Person Obtaining Consent** 

Date

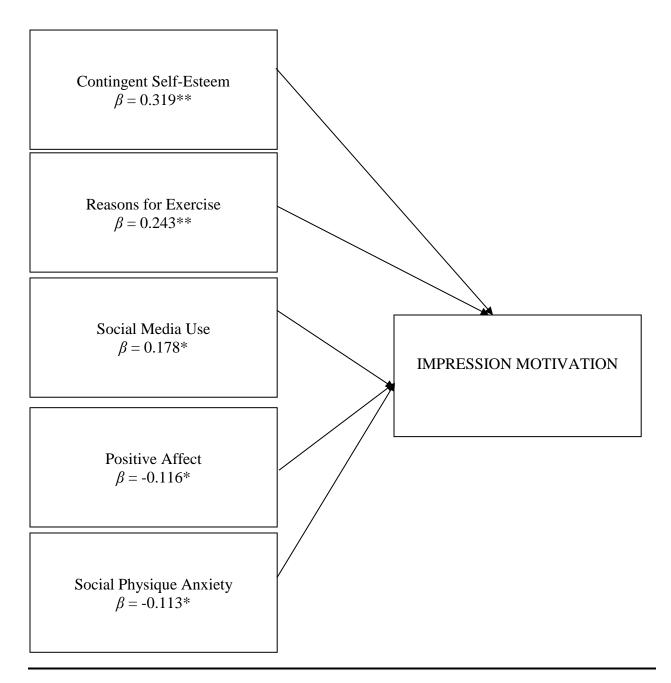
Study Role

Figure 3. Significant predictors of exercise.



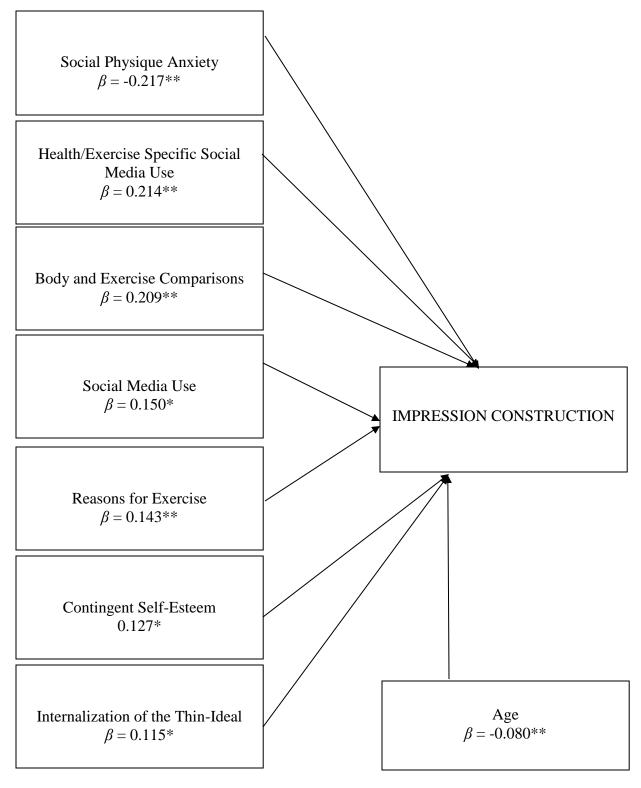
*Note.*  $R^2 = .0259, *p < .05; **p \le .001$ 

Figure 4. Significant predictors of impression motivation



*Note.*  $R^2 = .0259, *p < .05; **p \le .001$ 

Figure 5. Significant predictors of impression construction.



*Note.*  $\mathbb{R}^2 = .0259, *p < .05; **p \le .001$ 

Figure 6. Study 2 Overarching themes, lower order themes, and subthemes

# The Highlight Reel

- Reassurance Seeking
  - "Likes" as Reinforcement
  - Feedback from Audience
- Post Worthy
- Celebrating Accomplishments

## "Digital" Exercise

- Social Media Influences the Exercise Experience
- Exercise Comparisons
- Bad Exercise Advice

## Building a Brand: Your Self vs. Your Selfie-Self

- Maintaining an Impression
  - Commit to the Lifestyle
  - Authenticity and Relatability
  - Live Up to Expectations
- Exerciser Identity
- My Two Personas

## The Filtered Body vs. The Real Body

- The Societal Norm Box
- Body Appraisals
- Healthy Body Portrayals

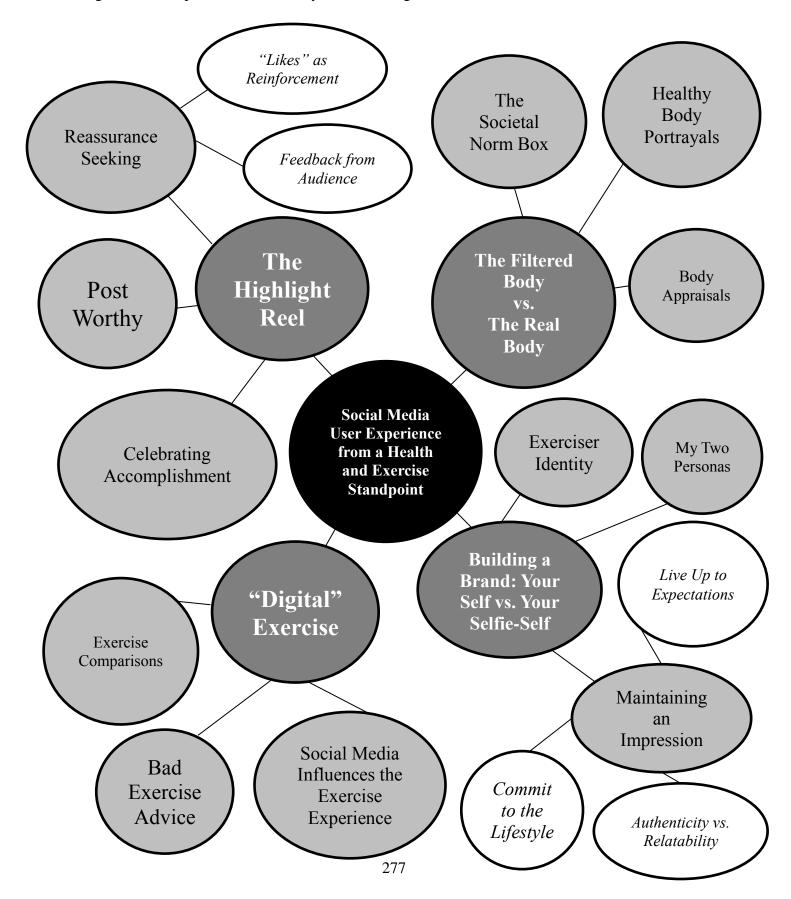


Figure 7. Conceptual model of Study 2 overarching themes, lower order themes, and subthemes

## Study 1 Participant Characteristics

Characteristic		n	%
Age	18-22	91	15.0
-	23-27	230	38.0
	28-32	186	30.7
	33-35	98	16.2
Ethnicity	Not Hispanic/Latino	524	86.6
•	Hispanic/Latino	59	9.8
	Did not respond	22	3.6
Race	White	481	79.5
	African American/Black	60	9.9
	Asian	28	4.6
	Multiple Races	17	2.8
	American Indian/Alaskan Native	8	1.3
	Hispanic	3	0.5
	Middle Eastern	2	0.4
	Native Hawaiian/Pacific Islander	2	0.5
	Aborigine	1	0.2
	Spanish	1	0.2
	Did not respond	1	0.2
BMI	< 18.5	26	4.5
(Body Mass Index)	18.5-24.99	320	55.1
	25-29.99	113	19.4
	$\geq$ 30.00	121	20.8
Height	52-59 inches	29	5.0
	60-69 inches	516	89.4
	70-80 inches	32	5.5
Weight	<100 lbs.	7	1.2
	100-125 lbs.	141	23.6
	126-150 lbs.	218	36.5
	151-175 lbs.	115	19.2
	176-200 lbs.	53	8.9
	>200 lbs.	65	10.9
Exercise	2-3	154	25.6
Days/Week	4-5	300	49.6
	6-7	143	23.6
	Did not respond	8	1.3

Means, Standard Deviation, and Bivariate Correlations for Self-esteem, Thin-ideal internalization, Reasons for exercise, Contingent self-esteem, Reassurance seeking, Social media use (general and health/exercise specific), Physical comparisons, Exercise/Body comparisons, Social physique anxiety, Body (dis)satisfaction, Affect, Impression motivation, Impression construction, and Exercise behaviors

Variable	Mean	SD	1	2	3	4	5	б	7	8	9	10	11	12	13	14	15
1. SE	13.17	3.1		.060	.161*	017	.107*	.262*	.049	.126*	024	.301*	.238*	.088*	.151*	.184*	.196*
2. Intern. Thin-ideal	66.76	16.76			.413*	.442*	.382*	.364*	.628*	.645*	.536*	232*	037*	.358*	.391*	.402*	.205*
3. Reasons for Exercise	5.21	0.89				.255*	.199*	.412*	.387*	.426*	.271*	.077	.316*	.136*	.492*	.432*	.254*
23 4. Contingent SE	50.54	8.91					.296*	.145*	.531*	.507*	.531*	289*	149*	.252*	.441*	.247*	.025
5. Reassuran. Seeking	17.11	5.54						.577*	.355*	.422*	.237*	055	053	.301	.312*	.363*	.189*
6. Social Media Use	147.7	44.09							.283*	.421*	.182*	.196*	.199*	.224*	.409*	.535*	.360*
7. Physical Comp.	24.62	11.9								.797*	.589*	303*	027	.322*	.425*	.362*	.103*
8. Ex/Body Comparison	48.39	16.08									.529*	205*	.004	.316*	.469*	.473*	.230*
9. SPA	28.33	7.39										521*	227*	.324*	.239*	.101*	.006

10. Body Satisfaction	3.81	1.00	.492*	226*	.038	.149*	.220*
11. Positive Affect	34.06	8.00		170*	.202*	.227*	.270*
12. Negative Affect	20.82	8.6			1.36*	.161*	.122*
<ol> <li>13. Impress.</li> <li>Motivation</li> </ol>	17.41	4.65				.642*	.228*
14. Impress. Construction	13.97	4.99					.326*
15. Exercise Behavior	62.46	23.92					-

Step	Variable	В	SE	β	
1	BMI	.002	.002	.053	
	Age	228	.222	042	
	Weight	047	.018	110*	
	Ethnicity	2.254	2.831	.018	
	Race	-1.43	.755	078	
2	BMI	.001	.002	.026	
	Age	134	.214	025	
	Weight	056	.017	132**	
	Ethnicity	1.176	2.694	.017	
	Race	674	.728	037	
	Self-esteem	1.112	.306	.144**	
	Internalization thin	.201	.063	.141**	
	Reasons for exercise	4.579	1.166	.171**	
3	BMI	.001	.002	.022	
	Age	176	.213	033	
	Weight	060	.017	140**	

Hierarchical Multiple Regression Analysis Predicting Exercise Behavior

Ethnicity	1.659	2.671	.024
Race	266	.729	014
Self-esteem	.997	.305	.129**
Internalization thin	.200	.070	.140*
Reasons for exercise	4.829	1.160	.181**
Contingent SE	306	.119	114*
Reassurance seeking	.559	.184	.129*
BMI	.000	.002	.005
Age	364	.205	067
Weight	049	.016	116*
Ethnicity	1.504	2.546	.022
Race	.001	.700	.000
Self-esteem	.711	.296	.092*
Internalization thin	.158	.067	.111*
Reasons for exercise	2.62	1.162	.098*
Contingent SE	143	.115	053
Reassurance seeking	.071	.206	.016
Social media use	.016	.037	.025
Social media use health	.830	.126	.320**
BMI	.000	.002	.008

306	.205	057
047	.016	110*
1.614	2.538	.023
.126	.699	.007
.671	.296	.087*
.155	.075	.109*
2.645	1.174	.099*
141	.122	053
.064	.207	.015
.007	.037	.011
.797	.126	.307**
295	.131	147*
.235	.101	.158*
.001	.001	.012
287	.205	053
041	.016	095*
.800	2.524	.012
.027	.698	.001
.329	.305	.043
.158	.076	.111*
1.228	1.220	.046
	047 1.614 .126 .671 .155 2.645 141 .064 .007 .797 295 .235 .001 287 041 .800 .027 .329 .158	047.0161.6142.538.126.699.671.296.155.0752.6451.174141.122.064.207.007.037.797.126295.131.235.101.001.001.287.205.041.016.8002.524.027.698.329.305.158.076

Contingent SE	079	.126	029
Reassurance seeking	.099	.208	.023
Social media use	006	.037	010
Social media use health	.711	.128	.274**
Physical comparison	302	.132	150*
Body/Exercise comp.	.252	.100	.170*
Social physique anxiety	.024	.179	.007
Body parts satisfaction	1.576	1.244	.066
Negative affect	.262	.115	.094*
Positive affect	.441	.137	.147**

*Note.*  $R^2 = .025$  for step 1;  $R^2 = .122$  for step 2;  $R^2 = .143$  for step 3;  $R^2 = .224$  for step 4;  $R^2 = .233$  for step 5;  $R^2 = .259$  for step 6 \*p < .05; \*\* $p \le .001$ 

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Step	Variable	В	SE	β	
1	BMI	.001	.000	.068	
	Age	004	.043	004	
	Weight	004	.003	045	
	Ethnicity	061	.552	005	
	Race	182	.147	051	
2	BMI	.000	.000	.032	
	Age	.016	.037	.015	
	Weight	008	.003	094*	
	Ethnicity	107	.466	008	
	Race	.035	.126	.010	
	Self-esteem	.102	.053	.068	
	Internalization thin	.068	.011	.244**	
	Reasons for exercise	1.989	.202	.382**	
3	BMI	.000	.000	.054	
	Age	.001	.035	.001	
	Weight	007	.003	083*	
	Ethnicity	231	.437	017	

Hierarchical Multiple Regression Analysis Predicting Impression Motivation

Race	303	.119	008
Self-esteem	.106	.050	.071*
Internalization thin	.021	.011	.076
Reasons for exercise	1.821	.190	.350**
Contingent SE	.151	.019	.289**
Reassurance seeking	.105	.030	.124**
BMI	.000	.000	.042
Age	007	.035	007
Weight	007	.003	084*
Ethnicity	240	.431	018
Race	0.27	.119	.008
Self-esteem	.064	.050	.043
Internalization thin	.016	.011	.056
Reasons for exercise	1.558	.197	.300**
Contingent SE	.161	.019	.308**
Reassurance seeking	.026	.035	.031
Social media use	.020	.006	.163**
Social media use health	.021	.021	.042
BMI	.000	.000	.044
Age	004	.035	004

Weight	007	.003	084**
Ethnicity	282	.429	021
Race	.030	.118	.008
Self-esteem	.058	.050	.039
Internalization thin	.000	.013	.001
Reasons for exercise	1.47	.199	.283**
Contingent SE	.142	.021	.271**
Reassurance seeking	.015	.035	.018
Social media use	.019	.006	.156*
Social media use health	.019	.021	.038
Physical comparison	.021	.022	.054
Body/Exercise comp.	.024	.017	.083
BMI	.000	.000	.043
Age	020	.035	019
Weight	005	.003	064
Ethnicity	198	.426	015
Race	020	.118	005
Self-esteem	.028	.051	.019
Internalization thin	.012	.013	.042
Reasons for exercise	1.265	.206	.243**
Contingent SE	.167	.021	.319**

Reassurance seeking	.026	.035	.031
Social media use	.022	.006	.178**
Social media use health	005	.022	010
Physical comparison	.034	.022	.086
Body/Exercise comp.	.027	.017	.093
Social physique anxiety	071	.030	113*
Body parts satisfaction	041	.210	009
Negative affect	026	.019	048
Positive affect	.067	.023	.116*

*Note.*  $R^2 = .010$  for step 1;  $R^2 = .300$  for step 2;  $R^2 = .387$  for step 3;  $R^2 = .406$  for step 4;  $R^2 = .414$  for step 5;  $R^2 = .436$  for step 6 \*p < .05; \*\* $p \le .001$ 

Step	Variable	В	SE	β	
1	BMI	.001	.000	.108*	
	Age	070	.46	062	
	Weight	.001	.004	.009	
	Ethnicity	225	.586	016	
	Race	393	.156	103*	
2	BMI	.001	.000	.069	
<i>L</i>	Age	040	.040	035	
	Weight	004	.003	041	
	Ethnicity	282	.509	020	
	Race	182	.138	048	
	Self-esteem	.167	.058	.104*	
	Internalization thin	.080	.012	.268**	
	Reasons for exercise	1.664	.220	.299**	
3	BMI	.001	.000	.077*	
-	Age	059	.039	053	
	Weight	004	.003	043	
	Ethnicity	247	.495	017	

Hierarchical Multiple Regression Analysis Predicting Impression Construction

Race	127	.135	033
Self-esteem	.143	.057	.089*
Internalization thin	.050	.013	.168**
Reasons for exercise	1.617	.215	.290**
Contingent SE	.023	.022	.042
Reassurance seeking	.197	.034	.219**
BMI	.000	.000	.055
Age	096	.037	085*
Weight	002	.003	025
Ethnicity	279	.461	019
Race	038	.127	010
Self-esteem	.062	.054	.039
Internalization thin	.039	.012	.131**
Reasons for exercise	1.046	.210	.188**
Contingent SE	.058	.021	.103**
Reassurance seeking	.055	.037	.061
Social media use	.019	.007	.141*
Social media use health	.152	.023	.281**
BMI	.001	.000	.059
Age	085	.037	076*

Weight	002	.003	021
Ethnicity	322	.456	022
Race	020	.126	005
Self-esteem	.050	.053	.031
Internalization thin	.018	.013	.061
Reasons for exercise	.934	.211	.168**
Contingent SE	.033	.022	.059
Reassurance seeking	.039	.037	.043
Social media use	.017	.007	.126*
Social media use health	.146	.023	.270**
Physical comparison	006	.024	015
Body/Exercise comp.	.059	.018	.189**
BMI	.000	.000	.054
Age	091	.036	080*
Weight	.001	.003	.015
Ethnicity	254	.447	018
Race	049	.124	013
Self-esteem	.007	.054	.005
Internalization thin	.034	.013	.115*
Reasons for exercise	.796	.216	.143**
Contingent SE	.071	.022	.127**

Reassurance seeking	.035	.037	.039
Social media use	.020	.007	.150*
Social media use health	.116	.023	.214**
Physical comparison	.019	.023	.046
Body/Exercise comp.	.065	.018	.209**
Social physique anxiety	146	.032	217**
Body parts satisfaction	.142	.220	.029
Negative affect	.001	.020	.002
Positive affect	.042	.024	.067

*Note.*  $R^2 = .028$  for step 1;  $R^2 = .272$  for step 2;  $R^2 = .315$  for step 3;  $R^2 = .409$  for step 4;  $R^2 = .424$  for step 5;  $R^2 = .460$  for step 6 \*p < .05; \*\* $p \le .001$ 

## Study 2 Participant Characteristics

Aria	23			(inches)	Race	Ethnicity	Exercise
		21.5	150	70	Caucasian	Not Hispanic/Latino	6-7
Ashley	33	25.1	160	67	Caucasian	Not Hispanic/Latino	4-5
Lydia	27	23.3	140	65	Caucasian	Not Hispanic/Latino	6
Alyssa	30	25.1	133	61	Caucasian	Not Hispanic/Latino	5
Kelly	22	19.1	98	60	Caucasian	Not Hispanic/Latino	3
Amy	21	21.6	122	63	Caucasian	Not Hispanic/Latino	5-6
Julia	31	25.6	140	62	Caucasian	Not Hispanic/Latino	6
Colleen	23	23.9	148	66	Caucasian	Not Hispanic/Latino	4-5
Sheena	28	20.5	135	68	Caucasian	Not Hispanic/Latino	4
Mary	32	31.0	175	63	Caucasian	Not Hispanic/Latino	3
Dana	27	21.8	127	64	Caucasian	Not Hispanic/Latino	5-6
Erin	22	24.4	170	70	Multiple Races	Not Hispanic/Latino	4
Emily	30	24.6	162	68	Caucasian	Not Hispanic/Latino	6
Claire	24	25.6	140	62	Caucasian	Not Hispanic/Latino	3-4
Erica	21	23.5	150	67	Caucasian	Not Hispanic/Latino	3
Hannah	34	18.6	112	65	Caucasian	Not Hispanic/Latino	7
Emma	22	35.9	250	70	Caucasian	Not Hispanic/Latino	3
Kari	22	21.8	135	66	Caucasian	Not Hispanic/Latino	3-5
Rachel	22	20.0	120	65	Multiple Races	Hispanic	7
Susie	19	23.9	148	66	Caucasian	Not Hispanic/Latino	3
Mean	25.6	23.8	145.75	65.4	-	-	4.70
SD	4.65	3.99	31.04	2.98	-		1.41

## Study 2 Participant Characteristics (Continued)

Name	Type of Social Media User	<b>Descriptive Information</b>	
Aria	Heavy	Crossfit, Student, Instagram, Facebook, Pinterest	
Ashley	Moderate	Runner, General Exerciser, Engineering Manager, Facebook	
Lydia	Light	Weightlifter, Physique Competition Competitor, Student, Facebook, Instagram, Snapchat	
Alyssa	Heavy	Long Distance Runner, Office Desk Worker, Facebook	
Kelly	Light	General Exerciser, Student, Facebook, Snapchat	
Amy	Heavy	Weightlifter, Student, Facebook, Instagram, Pinterest, Youtube	
Julia	Light	General Exerciser, Tennis, Client Specialist, Facebook, Instagram, Snapchat, Twitter	
Colleen	Moderate	Runner, Yoga, General Exerciser, Student, Fitness Instructor, Promotions Worker, Pinterest, Facebook, Instagram	
Sheena	Heavy	General Exerciser, Student, Instagram, Facebook, Snapchat	
Mary	Light	Runner, Research Technologist, Facebook, Snapchat	
Dana	Heavy	Yoga, Cycling, Pilates, Student, Instagram, Facebook	
Erin	Light	Runner, General Exerciser, Student, Facebook, Instagram, Pinterest	
Emily	Heavy	Long Distance Runner, Museum Aid, Facebook, Instagram, Blog	
Claire	Heavy	General Exerciser, Cycling, Facebook, Instagram, Pinterest	
Erica	Light	General Exerciser, Kickboxing, Student, Facebook, Twitter, Pinterest, Snapchat, Instagram	
Hannah	Heavy	Mountain Biking, Runner, Benefit Analyst, Facebook, Twitter, Blog	
Emma	Heavy	General Exerciser, Student, Facebook, Instagram, Pinterest	
Kari	Moderate	General Exerciser, Student, Facebook, Instagram, Snapchat, Pinterest	
Rachel	Heavy	Yoga, Student, Yoga Instructor, Instagram, Facebook, Twitter	
Susie	Heavy	Soccer, Running, Student, Beauty Pageants, Instagram, Facebook, Twitter, Pinterest, Blog	

## Frequencies of Participant-chosen Posts/Photos: Type and Platform

Frequency of Typ	e			
Photo	Video	Pin	Status	Status + Photo
38	2	11	6	8

<b>Frequency of Platform</b>		
Facebook	Instagram	Pinterest
28	27	11

#### **CURRICULUM VITAE**

#### **CAITLYN HAUFF**

#### **Education**

University of Wisconsin-Milwaukee, Milwaukee, WI Anticipated Date of Graduation: December 2016 <b>Doctor of Philosophy in Kinesiology</b>	August 2013-Present
Focus: Weight Studies and Health Behavior Change	G.P.A.: 3.979
• Focus on psychosocial aspects of physical activity a	nd weight and the relationship
between social media use, exercise, and impression	0 1
Georgia Southern University, Statesboro, GA Date of Graduation- May 10, 2013	August 2011-May 2013
Master of Science in Health and Kinesiology	
Focus: Sport Psychology	G.P.A.: 4.0
• Focus in athletic performance enhancement, health l qualitative and quantitative research	behavior modification, and
• Thesis: "NCAA Division I Head Coaches' Experien	ces with Eating Disorders and
Disordered Eating in Female Athletes: A Qualitative	0
Deniel D. Ceast. DL D. Chain	-

o Daniel R. Czech, Ph.D., Chair

Baldwin-Wallace College, Berea, Ohio Bachelor of Science Major: Psychology Minor: Political Science August 2007-May 2011 G.P.A.: 3.64

#### Scholarly Activities

#### Scholarship

- Forseth, B., **Hauff, C.,** Swartz, A. (in progress). Development of a method to quantify physical activity performed during yoga.
- Greenleaf, C. & **Hauff, C.** (August 2016). Using elite athletes to create a healthy body image in youth. Tips for parents and coaches [Web log post]. Retrieved from <u>http://www.acsm.org/public-information/acsm-blog/2016/08/10/using-elite-athletes</u> to-create-a-healthy-body-image-in-youth...-tips-for-parents-and-coaches.
- Greenleaf, C., **Hauff, C.**, Hennum, A., & Pozolinski, B. (preparing for manuscript submission). "Unless you puke, faint, or die, keep going!" Exploring weight stigma communicated during exercise on *The Biggest Loser*.

- Greenleaf, C., Martin, S., Petrie, T., & **Pecinovsky, C.** (2014). Media use and body dissatisfaction, social comparisons, physical activity, and dietary restraint in adolescent females (Report). *Medicine and Science in Sports and Exercise*, *46*(5), 220-221.
- Hauff, C. (in press, 2016). Dress to impress or dress to sweat? Examining the perceptions of exercise apparel through the eyes of active women. *Women in Sport and Physical Activity Journal*.
- **Hauff, C.** (preparing for manuscript submission). Six-pack abs, yoga poses, and shameless gym selfies: An exploration into how social media users define #fitspiration on Instagram.
- Parker, K., Czech, D., Burdette, T., Stewart, J., Biber, D., Easton, L., Pecinovsky, C., Carson, S., McDaniel, T. (2012). The preferred coaching styles of generation z athletes: A qualitative study. *Journal of Coaching Education*, 5(2), 5-23.
- **Pecinovsky, C.,** Czech, D., Harris, B., Burdette, T., & Biber, D. (2015). NCAA division I head coaches' experiences with eating disorders and disordered eating in female athletes: A qualitative analysis. *Georgia Association for Health, Physical Education, Recreation and Dance Journal*, 47(1), 21-32.

## Georgia Southern University, Statesboro, GA

## **Research Assistant/Author**

• Assisted with revisions on a qualitative thesis entitled: *The Prevalence of Eating Disorders in Four Sport Teams at a Southeastern University* 

## Baldwin-Wallace College, Berea, OH

**Undergraduate Thesis in Psychology** 

- Completed a quantitative research project focusing on the attitudes and personalities of athletes on and off the field of competition
- Research title: *Athletes' Personas On and Off the Field of Competition: An Assessment of Personality*
- Dale Grubb, Ph.D., Chair
- Presented to Baldwin-Wallace College Spring 2010

## Presentation of Scholarly Work

- **Pecinovsky, C.** (2012). *Examining the role of self-talk in contact, non-contact, and individual sports*. Presented research at the Southeast Regional Conference for the Association of Applied Sport Psychology, Miami, FL.
- **Pecinovsky, C.,** Czech, D., Harris, B., Burdette, T., & Biber, D. (2012). *Preliminary findings* for NCAA division I head coaches' experiences with eating disorders and disordered eating in female athletes: A qualitative analysis. Research presented at Phi Kappa Phi Research Symposium, Statesboro, GA.
- **Pecinovsky, C.,** Czech, D., Harris, B., Burdette, T., & Biber, D. (2012). *Preliminary findings* for NCAA division I head coaches' experiences with eating disorders and disordered

September 2009- April 2010

April 2012

*eating in female athletes: A qualitative analysis.* Research presented at Graduate Research Symposium, Statesboro, GA.

- Pecinovsky, C., Czech, D., Harris, B., Burdette, T., & Biber, D. (2013). NCAA division I head coaches' experiences with eating disorders and disordered eating in female athletes: A qualitative analysis. Presented paper at the Southeast Regional Conference for the Association of Applied Sport Psychology, Statesboro, GA.
- **Pecinovsky, C.,** Czech, D., Harris, B., Burdette, T., & Biber, D. (2013). *NCAA division I head coaches' experiences with eating disorders and disordered eating in female athletes: A qualitative analysis.* Paper presented at Phi Kappa Phi Research Symposium, Statesboro, GA.
- **Pecinovsky, C.,** Czech, D., Harris, B., Burdette, T., & Biber, D. (2013). *NCAA division I head coaches' experiences with eating disorders and disordered eating in female athletes: A qualitative analysis.* Paper presented at Graduate Research Symposium, Statesboro, GA.
- **Pecinovsky, C.** & Greenleaf, C. (2014). *Exercise apparel and the exercise experiences of women*. Paper presented at College of Health Science Graduate Research Symposium, Milwaukee, WI. First place prize.
- **Pecinovsky, C.** & Greenleaf, C., Petrie, T., & Martin, S. (2014). *The role of media on body satisfaction, social comparisons, physical activity, and dietary restraint in adolescent females.* Research presented at American College of Sports Medicine National Conference, Orlando, FL.
- **Pecinovsky, C.** & Greenleaf, C. (2015). *Assessing exercise experiences through flow, anxiety, comfort, and motivation.* Research presented at SHAPE America National Conference, Seattle, Washington.
- **Pecinovsky, C.** (2015). Dress to impress or dress to sweat? Examining the perceptions of exercise apparel through the eyes of active women. Paper presented at College of Health Science Graduate Research Symposium, Milwaukee, WI.
- **Pecinovsky, C.** (2015). Dress to impress or dress to sweat? Examining the perceptions of exercise apparel through the eyes of active women. Paper presented at the Association for Applied Sport Psychology National Conference, Indianapolis, IN.
- **Pecinovsky, C.**, Hennum, A. & Greenleaf, C. (2015). Healthy Attitudes, Healthy Bodies. Keynote presentation at University of Wisconsin-Milwaukee's Nutrition Symposium.
- Hauff, C. (2016). Six-pack abs, yoga poses, and shameless gym selfies: An exploration into how social media users define #fitspiration on Instagram. Research presented at the Association for Applied Sport Psychology National Conference in Phoenix, Arizona.
- Greenleaf, C., **Hauff, C.,** Hennum, A., Pozolinski, B., & Serafin, G. (2016). "Unless you puke, faint, or die, keep going!" Exploring the prevalence of weight bias commentary on The Biggest Loser. Research presented at Midwest American College of Sports Medicine Conference in Fort Wayne, Indiana.

#### **Research Experience**

University of Wisconsin-Milwaukee

Research Assistant, Body Shape and Weight Research Lab

Assist with multiple research projects assessing body satisfaction issues, weight issues, self-objectification, and weight bias

August 2013-Present

- Promote healthy body image, self-esteem, and healthy eating habits to the general public
- Proficient in SPSS, Word, Powerpoint, Excel and manual methods of coding qualitative data
- Dr. Lori Klos and Dr. Christy Greenleaf, Lab Directors

University of Wisconsin-Milwaukee

## **Principal Investigator**

- Conducting original, quantitative and qualitative research on impression • management, social media use, and exercise behaviors in women
- Dissertation title: Hashtagging Your Health: Using Psychosocial Variables and Social Media Use to Understand Impression Management and Exercise Behaviors in Women
- Dr. Christy Greenleaf, Advisor

## University of Wisconsin-Milwaukee

## **Principal Investigator**

- Conducting original, quantitative research assessing exercise apparel and the • exercise experiences of women
- Conducting original, qualitative research assessing exercise apparel and the exercise experiences of women
- Manuscript in progress
- Project: Exercise Apparel and the Exercise Experiences of women won a first place award at the 2014 Spring Health Sciences Graduate Research Symposium
- Dr. Christy Greenleaf, Advisor

## University of Wisconsin-Milwaukee

## **Research Assistant/Primary Author**

- Collecting data on verbal transcriptions during various exercise sessions of multiple seasons of The Biggest Loser television series
- Coding data based on collected verbal transcriptions during multiple seasons of The Biggest Loser television series
- Manuscript in progress
- Dr. Christy Greenleaf, Advisor

## University of Wisconsin-Milwaukee **Secondary Author**

- Collaborating on a project with researchers from Georgia Southern University and Georgia Regents University
- Assessing the relationship between women who CrossFit and body image
- Assisting with the manuscript writing, data collection, and data analysis processes

#### University of Wisconsin-Milwaukee **Secondary Author**

August 2013-Present

December 2013-Present

November 2015-Present

August 2013-Present

## May 2016-Present

- Expanding on previous research from previously collected data, this project will evaluate the relationship between overweight and non-overweight female girls and media consumption, social comparison, body satisfaction, and dietary intake
- Dr. Christy Greenleaf, Advisor

Baldwin-Wallace College, Berea, OH

Psychology Research Team, Dr. Dale Grubb, Supervisor

- Compiled research and helped develop a study to measure the satisfaction of individuals in romantic relationships
- Research title: A Study in the Satisfaction of Romantic Relationships

## **Awards and Grants**

University of Wisconsin-Milwaukee

## **College of Health Sciences Graduate Student Research Grant**

- Awarded to graduate students to promote the growth of College of Health Sciences mentored student research efforts.
- Awarded in recognition of student research efforts and the importance of student research in the College of Health Sciences

## University of Wisconsin-Milwaukee

## **Chancellor's Graduate Student Award**

• Awarded to graduate students on a year to year basis based on exceptional academic performance and high promise for future success

University of Wisconsin-Milwaukee

## **College of Health Sciences Spring Research Symposium First Place Award for Research**

• Received a first place award for a research presentation entitled: *Exercise* apparel and the exercise experiences of women

## Georgia Southern University

## **2013 AASP Regional Conference Grant**

- Submitted and received an AASP (Association for Applied Sport Psychology) regional conference grant to host the 2013 regional AASP conference at Georgia Southern University
- Hosted by the Georgia Southern University Sport and Exercise Psychology Club

## Academic Teaching Experience

## September 2008- May 2009

August 2013-Present

July 2016-Present

May 2014

April 2013

#### University of Wisconsin-Milwaukee

#### August 2015-May 2016

Lecturer, KIN 351 Sociological Aspects of Health and Human Movement

- Implemented course lesson plan, created exams to evaluate the knowledge of undergraduate students, provided students with interactive learning opportunities to enhance problem solving and learning of sociological aspects of physical activity and health
- The course explores sociological topic areas including socioeconomic status, race and ethnicity, gender, age, disability, obesity, and behavior in relation to physical activity and health behaviors

#### **Enrollment Summary**

		KIN 351
Fall	2015	63
Spring	2016	54

University of Wisconsin-Milwaukee

Lecturer, KIN 200 ONLINE Introduction to Kinesiology

- Developed the course lesson plan, created quizzes and exams to evaluate the knowledge of undergraduate students, provided students with interactive learning opportunities to enhance problem solving and learning of the fundamentals of kinesiology, and developed individual and group projects to assess how well students grasped the core concepts of the kinesiology major
- The course explores experiences in physical activity, the scholarly study of physical activity, and professional practice centered in physical activity.
- Class taught entirely online

#### **Enrollment Summary**

		KIN 200 ONLINE
Fall	2014	85
Spring	2015	50
Fall	2015	69
Spring	2016	37

#### University of Wisconsin-Milwaukee

Lecturer, KIN 200 Introduction to Kinesiology

August 2013-May 2014

August 2014-May 2015

- Developed the course lesson plan, created quizzes and exams to evaluate the knowledge of undergraduate students, provided students with interactive learning opportunities to enhance problem solving and learning of the fundamentals of kinesiology, and developed individual and group projects to assess how well students grasped the core concepts of the kinesiology major
- The course explores experiences in physical activity, the scholarly study of physical activity, and professional practice centered in physical activity.

## **Enrollment Summary**

		KIN 200
Fall	2013	98
Spring	2014	88

University of Wisconsin-Milwaukee

## Graduate Teaching Assistant

- Assisted with teaching and grading for KIN 368: Study of Intervention Strategies in Complementary and Alternative Medicine
- Enrollment Summary: 25 students

University of Wisconsin-Oskosh

#### **Guest Lecturer**

Topic: Every BODY is Welcome: Size inclusiveness for health promotion

University of Wisconsin-Milwaukee March 2016 **Guest Lecturer,** Exercise Testing and Prescription **Topic:** Size Discrimination: Exploring the Realities of Weight Bias

University of Wisconsin-Milwaukee October 2014, March 2015, October 2015 **Guest Lecturer,** Introduction to Kinesiology **Topic:** Sport and Exercise Psychology—Introduction and Interventions

Georgia Southern University, Statesboro, GA

Graduate Teaching Assistant, Physical Activity Instructor

• Developed lesson plans, created exams, and taught undergraduates the fundamentals of tennis, volleyball, and fitness walking in conjunction with promoting a healthy lifestyle

• Enrollment Summary: 25-60 students per class; 5 classes taught per semester

## Georgia Southern University, Statesboro, GA

November 2011

August 2011-May 2013

**Guest Lecturer,** Foundations of Exercise and Sport Psychology **Topic:** Concentration

302

August 2016-December 2016

October 2016

#### **Applied Experience**

Georgia Southern University, Statesboro, GA

#### Sport Psychology Consultant

- Consulted with Division I varsity and club teams and athletes in the following areas:
  - Overcoming and controlling performance anxiety
  - Enhancing confidence
  - Improving concentration and focus
  - Developing stronger communication skills and team cohesion
  - Overcoming adversity and conquering the unknown
  - Heightening motivation
  - o Improving life skills for both social and school aspects of life
  - Coping with injury
  - o Identifying roles on a team
  - Altering self-perceptions and conquering body image issues
- Supervised by an AASP certified consultant

#### **Professional Development**

#### **Professional Organization Membership**

Association for Applied Sports Psychology	February 2012-Present
American College of Sports Medicine	March 2014-Present
Midwest Chapter of American College of Sports Medicine	October 2016-Present
Society of Health and Physical Educators	January 2014-March 2016

#### **Student Organization Leadership**

Body Shape and Weight Research Lab University of Wisconsin-Milwaukee

## Lab Research Assistant

- Collect data and provide research findings for multiple research projects
- Promote positive self-image and healthy eating habits to the general public and university
- Participate in monthly meetings and journal clubs
- Served as a volunteer to speak to a group of walkers training for a 5K run about having a positive body image and high self-esteem
- Organized and participated in events to promote positive body image (e.g. Love Your Body Day)
- Worked in collaboration with The Hub (University of Wisconsin Milwaukee's health and wellness center) to promote positive body image and body positive talk

January 2012-May 2013

August 2013-Present

• Organized lab participation for University of Wisconsin-Milwaukee's Glow Zumba event

Kinesiology Graduate Student Association University of Wisconsin-Milwaukee

Treasurer

- Active treasurer and member of this association
- Participated in planning events for the club including volunteer activities, social events, and research round table events

## Vice President

- Served as vice president and member of this association
- Participated in planning events for the club
- Attended Black and Gold committee meetings for the Health Sciences program

## Sport and Exercise Psychology Club Georgia Southern University

## Treasurer

- Collected dues and managed the budget
- Coordinator of the fundraising events
- Participated in professional development, community service, and fundraising activities
- Attended financial workshops to improve the efficiency and spending of our club's funds

## **Vice President**

- Assisted the President in decision making and planning for fundraisers and club events
- Contributed to the organization and implementation of the Southeastern Regional Association for Applied Sport Psychology to be held at Georgia Southern University in April 2013
- Involved in the creation and execution of the "Ready, Set, Glow!" 5K race to support a local Alzheimer's organization

Licensed Professional Counselors Student Affiliate Organization Georgia Southern University

## **Student Member**

- Active member of this organization
- Participates in organization meetings

PPUMP Association for Applied Sport Psychology Student Mentor February 2012-March 2015

September 2012-May 2013

August 2011-May 2012

May 2012-May 2013

August 2014-May 2016

May 2016-Present

- Act as a mentor for undergraduate students who are desiring to be more involved in the field of sport psychology
- Answer questions for undergraduate students regarding AASP, Special Interest Groups in AASP, the graduate school application process, and the general field of sport psychology

Adaptive Sports and Recreation Expo Milwaukee, WI	July 2014
<ul><li>Volunteer</li><li>Helped participants learn to play wheelchair tennis</li></ul>	
Collaborative Institutional Training Initiative (CITI) Certified	August 2011-Present
<b>IRB-Social and Behavioral Researcher</b>	
American Red Cross CPR and First Aid Certified	August 2012-Present
Review Experience	
Choice	March 2015-Present
Choice Reviewer	
<ul> <li>Review scholarly books and electronic products in the psychology/sociology discipline to assess readability</li> </ul>	1

buyers in academic settings

## **Courses Taught**

- University of Wisconsin-Milwaukee, Milwaukee, WI August 2015-May 2016 Instructor: **KIN 351 Sociological Aspects of Health and Human Movement** Implemented course lesson plans, provided students with an interactive learning experience that facilitated discussion and provided opportunities for problem solving and practical application, and assessed student via exams, presentations, and reflection papers. The course explores different sociological aspects related to health and fitness including socioeconomic status, race and ethnicity, gender, age, disability, obesity, and health behavior change models.
- University of Wisconsin-Milwaukee, Milwaukee, WI August 2014-Present Instructor: **KIN 200 ONLINE, Introduction to Kinesiology** Developed the course lesson plan, created quizzes, discussion board topics, and projects to evaluate the knowledge of undergraduate students, provided students with interactive learning opportunities to enhance problem solving and learning of the fundamentals of kinesiology, and developed individual projects to assess how well students grasped the core concepts of the kinesiology major. The course explores experiences in physical

activity, the scholarly study of physical activity, and professional practice centered in physical activity.

- University of Wisconsin-Milwaukee, Milwaukee, WI August 2013-May 2014 Instructor: **KIN 200, Introduction to Kinesiology** Developed the course lesson plan, created quizzes and exams to evaluate the knowledge of undergraduate students, provided students with interactive learning opportunities to enhance problem solving and learning of the fundamentals of kinesiology, and developed individual and group projects to assess how well students grasped the core concepts of the kinesiology major. The course explores experiences in physical activity, the scholarly study of physical activity, and professional practice centered in physical activity.
- University of Wisconsin-Milwaukee, Milwaukee, WI October 2014, March/October 2015 Guest Lecturer: **KIN 200, Introduction to Kinesiology** Introduced undergraduate students to the topic of sport and exercise psychology and interventions used by sport psychology consultants
- Georgia Southern University, Statesboro, GA August 2011-May 2013 Instructor: **KINS 1415, Beginning Tennis** Developed and instructed beginning tennis courses for undergraduate and graduate students as a component of the Physical Activity and Healthful Living Program

Instructor: **KINS 1417, Volleyball** Developed and instructed volleyball courses for undergraduate and graduate students as a component of the Physical Activity and Healthful Living Program

Instructor: **KINS 1218, Fitness Walking** Developed and instructed fitness walking courses for undergraduate and graduate students as a component of the Physical Activity and Healthful Living Program

Instructor: **KINS 2415, Intermediate Tennis** Developed and instructed intermediate tennis courses for undergraduate and graduate students as a component of the Physical Activity and Healthful Living Program

Guest Instructor: **KINS 3132, Foundations of Exercise and Sport Psychology** Instructed undergraduate students in a lesson about the different types of concentration and attentional focus as it pertains to athletes

#### **Relevant Coursework Completed**

University of Wisconsin-Milwaukee, Milwaukee, WI KIN 550: Psychological Aspects of Human Movement NUTR 550: Sports Nutrition NUTR 555: Public Health Nutrition and Food Politics KIN 556: Multilevel Approaches to Changing Physical Activity and Eating KIN 574: Obesity and Weight Management COMMUN 702: Qualitative Research Analysis KIN 702: Statistical Analysis in Health Sciences PH 706: Perspectives on Community and Behavioral Health ED PSY 724: Educational Statistical Methods II KIN 732: Physical Activity and Health Across the Lifespan PH 752: Public Health and Mental Health PH 825: Theories and Models of Health Behavior OCCTHPY 900: Teaching, Learning, and Educational Leadership KIN 910: Advanced Seminar in Health Sciences BMS 910: Advanced Seminar in Health Sciences SOC WRK 991: Grant Writing

Fall 2011- Spring 2013

Georgia Southern University, Statesboro, GA KINS 6130: Research Design in Kinesiology KINS 6131: Data Analysis in Kinesiology KINS 7099 A: Qualitative Analysis KINS 7099 C: Health and Exercise Psychology KINS 7530: Psychology of Peak Performance KINS 7531: Team Dynamics KINS 7533: Sport Psychology Interventions KINA 7534: Current Issues in Sport Psychology KINS 7733: Practicum in Sport Psychology KINS 7999: Thesis COUN 7231: Clinical Mental Health Counseling COUN 7234: Counseling: Assessment, Diagnosis, and Intervention COUN 7333: Models and Techniques of Counseling COUN 7337: Cross-Cultural Counseling

Baldwin-Wallace College, Berea, OH

PSY 110: Principles of Psychology PSY 205: Developmental Psychology

- PSY 210: Professions in Psychology
- PSY 279: Statistics
- PSY 280: Research Methods
- PSY 281: Thesis in Psychology
- PSY 302: Abnormal Psychology
- PSY 304: Personality Psychology
- PSY 325: Adolescent Development
- PSY 327: Psychology of Learning
- PSY 328: Cognitive Processes
- PSY 412: History and Systems of Psychology
- SOC 281: SPSS: Data Analysis
- HPE 227: Principles of Coaching

HPE 327: Coaching of Basketball

HPE 340: Program Organization and Administration

Fall 2007-Spring 2011

#### **Non-Academic Teaching Experience**

River Tennis Club, River Hills, WI

#### **Assistant Tennis Pro**

- Conduct group tennis lessons for youth members between the ages of 4-18
- Facilitate and coach junior and high school tennis matches in collaboration with • area recreation departments, clubs, and school programs

Homestead High School Tennis Program, Mequon, WI	March 2014-October

#### **Co-Junior Varsity Head Coach**

2014 August 2016-October 2016

June 2015-Present

- Organize and lead practice sessions for the boys' and girls' junior varsity high school tennis teams
- Attend and coach at high school tennis matches and tournament
- Assess skill level of players and develop appropriate teaching strategies to help players learn and progress their skills

Shorewood Recreation and Community Services, Shorewood, WI May 2014-August 2014 **Youth Tennis Program Coordinator** 

- Engineered and conducted the Youth Tennis Program for the Shorewood **Recreation Department**
- Facilitated and coached junior and high school matches in collaboration with area recreation departments and school programs
- Assessed skill level and developed appropriate teaching programs to facilitate the learning of fundamentals for youth members ages 4-18
- Taught both private and group lessons to youth participants

# Columbus Country Club, Columbus, Ohio

May 2006-August 2013/Seasonal

## **Assistant Head Tennis Pro**

- Engineered and conducted the Junior Program for Columbus Country Club
- Facilitated and coached junior matches in collaboration with area clubs
- Assessed skill level and developed appropriate teaching programs to facilitate the learning of fundamentals for club members from ages 3 to 65
- Coordinated and supervised the tennis portion of the Columbus Country Club Summer Camp for children ages 5-12
- Coached four women's GCTA tennis teams of various skill levels
- Assisted with the planning, promotion, and implementation of the Susan G. Komen Rally for the Cure
- Coached and managed the Columbus Country Club 12-U USTA Junior Team **Tennis** Team