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The relationship between self-esteem, self-compassion, and intuitive eating**

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Constructing Body Image in University Women: The Relationship between Self-Esteem, Self-Compassion, and Intuitive Eating

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Abstract

Body image related concerns among women are well researched. However, this research has consistently focused on identifying pathological and maladaptive correlates of body image. Body image research has been based on the assumption that a positive body image is merely an absence of or is defined by low levels of a negative body image. Therefore, the aim of this study was to examine the relationship between self-esteem, self-compassion and intuitive eating in conceptualising body image related avoidance behaviours. Female university students (N = 137) completed four measures online: the Rosenberg Self-Esteem Scale, Self-Compassion Scale of Neff, Intuitive Eating Scale of Tylka, and Body Image Avoidance Questionnaire of Rosen, Srebnik, Satzberg and Wendt. Consistent with previous research, both self-compassion and intuitive eating were found to predict unique variance in avoidance behaviours, over and above the effect of self-esteem. However, contrary to expectations, intuitive eating was not found to be affected by body mass index (BMI). Findings of this study suggest that both self-compassion and intuitive eating are positive correlates of positive body image-related constructs. The findings of this study are discussed in light of clinical interventions, and directions for future research in the body image field that focuses on identifying adaptive self-relating attitudes and eating behaviours that can be modified to promote the development of a positive body image.

Keywords: self-esteem, self-compassion, intuitive eating, eating disorder, body image, body mass index, BMI,

Introduction

Body image concerns among women are well researched. However, this research has consistently focused on identifying pathological and maladaptive correlates of body image (Bjorck, Clinton, Sohlberg & Norring, 2007; Levine & Piran, 2004; McGee, Hewitt, Sherry, Parkin & Flett, 2005; Nicoli & Liberatore, 2011). Consequently, most current literature on body image has focused on aspects of a negative body image. It has been argued that body image literature is based on the assumption that a positive body image is merely an absence of or is defined by low levels of a negative body image and its correlates, such as eating disorder symptomatology and pressure for thinness (Avalos, Tylka, & Wood-Barcalow, 2005). In contrast, Tylka (2011) argues that the predictors of a positive body image are not the same as those of a negative body image.

Similarly, research on eating behaviour has focussed on identifying constructs related to disordered and maladaptive eating (Streigel-Moore, & Bulik, 2007; Tylka, 2006). Dockendorff, Petrie, Greenleaf and Martin (2012) argue that eating behavior research has focused specifically on the prevalence, causes and factors associated with the development of disordered eating. As with the issue of body image research, eating behavior research is based on the assumption that adaptive eating behaviour is merely the absence of eating disorder symptomatology (Eneli, Crum & Tylka, 2008).

One fundamental shortcoming of pathology-focused research and these assumptions is that very little research exists on the promotion of healthy self-relating attitudes and eating behaviours, which contribute to developing a positive body image. Therefore, with the recent movement to shift focus towards the positive (Grogan, 2010), several researchers have called for exploring adaptive factors that not only contribute to developing a positive body image, but also contribute to the overall psychological well-being of the individual (Seligman, & Csikszentmihalyi, 2000). Researchers such as Neff (2003a) and Tylka (2006) have been developing fundamentally new adaptive constructs: self-compassion (SC) and intuitive eating (IE) respectively. Both SC and IE have been found to be associated with a positive conceptualization of body image, adaptive eating behavior and psychological well-being (Avalos & Tylka, 2006; Neff, 2003; Neff, Kirkpatrick & Rude, 2007; Tylka, 2006; Tylka & Wilcox, 2006; Wasylikiw, Mackinnon & MacLellan, 2012).

IE and SC have not been analysed together in relation to body image. Based on this rationale, the aim of the current study was to explore the role of SC and IE in understanding body image.

Issues with Self-Esteem (SE)

Self-esteem is a global evaluation of one's self-worth (Rosenberg, 1965), and its association with body image is widely researched (Clay, Vignoles & Dittmar, 2005; Sears, Tracy & McBrier, 2011). Cash and Fleming (2002) reported that women who are dissatisfied with their appearance, body shape and size have a low SE. By contrast, women who have a high SE are more likely to have a positive evaluation their body (Connors, & Casey, 2006). Likewise, SE has also been traditionally linked to fostering many psychological benefits (Paradise & Kernis, 2002).

In a large meta-analysis, Kling, Hyde, Showers, and Buswell (1999) identified the importance of SE in various psychological domains. First, Kling et al. (1999) identified that SE and affect are closely associated. High SE was associated with high levels of positive affect and low levels of negative affect and depression. Second, SE was found to be associated with positive adjustment, and to be a protective factor in light of everyday challenges and failures. Third, high SE was found to allow for a self-serving bias, where one thinks of one's behavior positively. For example, one may take credit for successes and deny responsibility for failure. Fourth, Kling et al. found that those with high SE performed better on tasks after having received negative feedback.

The above research supports the psychological importance of having a high SE. SE therefore can be viewed as a crucial factor for mental health and positive psychological adaptation.

Although high SE is associated with many positive outcomes, it also has many negative corollaries (Crocker & Park, 2004; Zeigler-Hill, 2006; Zeiger-Hill, Chadha & Osterman, 2008). High SE is strongly associated with narcissism, self-absorption, self-centeredness and a lack of concern for others (Baumeister, Campbell, Krueger & Voha, 2003). Similarly, high SE can lead to distortions in self-knowledge, prejudice, violence and aggression towards others (Seligman, 1995).

A large body of evidence has consistently found that where narcissism works as a defense mechanism for SE, narcissism regulates SE (Raskin, Novacek & Hogan, 1991). These findings

suggest that although increasing SE fosters various benefits, it can also be detrimental to healthy psychological functioning.

Self-Compassion (SC)

SC is a relatively new concept within psychology and is a crossover between Eastern Buddhist ideology and Western psychology. SC has recently gained attention amongst researchers as a novel way of relating to the self in times of failure and inadequacies (Neff, 2003a).

Neff developed the SC Scale, defining SC as:

Being touched by and open to one's suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness. Self-compassion also involves offering nonjudgmental understanding to one's pain, inadequacies and failure, so that one's experience is seen as part of the larger human suffering (Neff, 2003b, p. 87).

The recent interest in SC is largely because SC has been found to be associated with adaptive psychological functioning (Neff, 2003b; Neff, Kirkpatrick & Rude, 2007). In developing the SC scale, Neff (2003b) found that SC was negatively correlated with self-criticism, positively correlated with social connectedness, and positively correlated with all three subscales of the Trait-Meta Mood Scale (attention, clarity and repair), which measures emotional intelligence (Salovey, Mayer, Goldman, Turvey & Palfai, 1995). Neff's (2003b) findings therefore suggest that self-compassionate people regulate their negative emotions in an adaptive manner. Moreover, Neff (2003b) found that SC predicted mental health. SC was found to be negatively correlated with depression and anxiety, which are comorbid in several mental health conditions. SC is positively correlated with life satisfaction. These findings suggest that being compassionate towards oneself is an adaptive process, which increases psychological resiliency and well-being (Neff, 2003a; Neff, 2003b).

In an experimental analysis, Neff, Kirkpatrick, and Rude (2007) undertook a study to explore if increasing SC had long-term psychological benefits. Neff et al. (2007) conducted a "Gestalt two-chair" exercise to examine if changes in SC were linked to changes in psychological well-being. In the two-chair exercise, participants were asked about a time when they had been self-critical. Once the participant had described this event, the participant was then asked to respond to this criticism from a different perspective.

With guidance from the therapist, the participants then had to resolve the conflict caused between the two perspectives. By doing so, the therapist had created an intervention where participants' maladaptive and self-critical beliefs were challenged. Therefore, the two-chair exercise made them more empathetic towards themselves, and consequently increased self-compassionate attitudes.

Three-weeks after the intervention, participants who had experienced an increase in SC after the intervention also experienced increased social connectedness. By contrast, they reported lower levels of self-criticism, depression, rumination, thought suppression, and anxiety. This finding suggests that increasing SC helps individuals buffer against the negative consequences of self-judgment and criticism. It also suggests that increased SC fosters resilience by helping individuals to escape harsh consequences of self-judgment. Moreover, these findings support the observations that self-compassion is malleable and is not a static trait-like characteristic (Tanaka, Wekerle, Schmuck, & Paglia-Bank, 2011).

In the current literature SC has been studied in the context of body image concerns. For example, it has been found that having a compassionate view of oneself contributes to having a positive evaluation of one's body (Wasylikiw, MacKinnon & MacLellan, 2012). In a recent study, Wasylikiw et al., 2012 explored the relationship between SE, SC and body image in female university students. Their study found three noteworthy relationships:

1. Body image constructs were significantly correlated with SC, using the Body Shape Questionnaire (Cooper, Taylor, Cooper & Fairburn, 1987), Body Appreciation Scale (Avalos, Tylka & Wood-Barcalow, 2005) and Body Esteem Scale (Franzoi & Shields, 1984). Women who were self-compassionate had lower body preoccupation and weight concerns, and showed a higher level of body appreciation. Wasylikiw et al. (2012) therefore identified that SC is related to having a positive body image. Furthermore, their study found that all three facets of SC: self-kindness, common humanity and mindfulness, as defined by Neff (2003a) were correlated with body preoccupation, weight concerns and body appreciation. Therefore, body image can be defined within these three main domains of SC: a. To elaborate, to be self-compassionate towards oneself in regards to one's body, it is necessary to take a kind and understanding view of one's body and not be self-critical and harsh (self-kindness versus self-judgment). b. To be self-compassionate it is essential to treat one's body-related shortcomings as those experienced by part of the human experience rather than feeling isolated and separated by them (common humanity versus isolation) is essential. c. It is also essential to balance one's negative thoughts and feelings about one's body with mindful awareness rather than over-identifying with them (mindfulness versus over-identification) (Neff, 2003a).

2. Wasylikiw et al. (2012) undertook a hierarchical regression analyses and found that SC predicted unique variance in concerns related to body image, over and above the effect of SE. When holding SE constant, SC uniquely predicted 8%, 9% and 7% of the variance in body preoccupation, body appreciation and weight concerns, respectively. The addition of SC rendered SE a non-significant predictor of body-image related constructs. This finding suggests that SC plays a unique role in predicting body image related concerns, one that is not related to SE. It follows that irrespective of whether women had high or low SE, if they were compassionate they were less likely to report body image related concerns.

SC and SE also share a strong positive correlation (Neff, 2003b). Wasylikiw et al. (2012) suggest that SE and SC complement each other in explaining body image related concerns in women, as they both work via the process of comparison and evaluation. When women compare their bodies with others' bodies, they evaluate themselves as superior or inferior. However, compassionate women are accepting of themselves even when they evaluate their bodies as inferior than another's. Therefore, compassionate women show kindness and less judgment when their SE is low as a consequence of a negative body evaluation. Additionally, Wasylikiw et al. (2012) found that the self-judgment subscale of SC accounted for 7% of variance in body preoccupation, over and above the effect of SE. Therefore, as self-judgment increased, body preoccupation also increased. This finding reinforces the notion that the construct of SC better encapsulates body image related concerns than SE, and is not redundant with SE.

3. Wasylikiw et al. (2012) undertook another hierarchical analysis to assess if SC predicted eating behavior. It was found that SC predicted eating guilt but not restrictive eating. Self-compassionate women felt less guilt for eating foods that they perceived to be unhealthy (diet breaking), as compared with women with low SC.

SE and eating behaviours

The third finding of Wasylikiw et al (2012) indicates that self-compassionate women are less likely to

react with criticism and harshness in light of diet breaking. Additionally, this finding suggests that SC is associated with the affective component of eating behaviors (for example, lessening the emotional impact of eating guilt), rather than the eating behavior itself.

Wasylikiw et al.'s (2012) observed relationship between SC and emotional reactions to eating behavior is in line with previous findings. Adams and Leary (2007) used an experimental analysis to induce self-compassionate attitudes among restrictive and guilty eaters. Their study found that inducing SC in highly restrictive eaters prevented harsh self-criticism to diet breaking. As a consequence, rather than experiencing a binge episode to compensate for the negative emotional impact of diet breaking, highly restrictive eaters were able to regulate their food intake effectively, similar to non-dieters. This finding suggests that SC can be more effective than rigid dieting in regulating food intake, and that SC is an essential component in promoting adaptive, healthier eating attitudes.

SE also protects against negative self-thoughts after diet breaking (Polivy, Heatherton, & Herman, 1988). Therefore, it can be argued that both SE and SC are related to eating behavior, and that they can both buffer the negative emotional impact of diet breaking. A high SE works by allowing individuals to maintain a positive view of themselves, and not allowing for a negative self-evaluation, therefore causing individuals to avoid negative self-awareness (Adams & Leary, 2007). By contrast, compassionate individuals allow themselves to be evaluated, but they do so less harshly and with less criticism (Wasylikiw et al., 2012). Therefore, both SE and SC are related to eating behavior, but they differ in the ways they are related. The study of Polivy et al. (1988) provides additional support in establishing the differences between SC and SE, and establishes that SC is a distinct construct which measures psychological constructs relevant for body image concerns.

Intuitive Eating (IE)

Mindless eating (or disassociated eating), where an individual eats while distracted, has been shown to result in faster consumption rates, eating 'amnesia,' consumption of more snack foods and a lack of satiety (Oldham-Cooper, Hardman, Nicoll, Rogers & Brunstrom, 2011). Because of the negative effects of such styles of eating, and in line with the growing interest in focusing on adaptive rather than maladaptive variables in conceptualizing body-image related constructs, a new eating style, Intuitive Eating (IE) has gained popularity among researchers. Tylka (2006) developed the IE measure and defined IE as "eating based on physiological hunger and satiety cues rather than situational and emotional cues and...associated with psychological well-being" (p. 226). IE has been found to consist of three main components (Tylka, 2006):

1. Unconditional permission to eat (when hungry and what food is desired), is defined as allowing oneself to eat in response to physiological cues of hunger and satiety and allowing oneself to eat whatever food is desired. Those who give themselves unconditional permission to eat do not differentiate between food that is acceptable and non-acceptable. Additionally, these individuals are less likely to engage in maladaptive eating behaviors such as binge eating, as they are less likely to experience any negative emotional reactions to eating food that is perceived to be unhealthy (Polivy & Herman, 1998).

2. Eating for physical rather than emotional reasons, refers to consuming food only for physiological reasons of hunger and satiety and not to cope with emotional distress. Those who do not diet have two boundaries of hunger and satiety: they will eat until their hunger is satiated and they have escaped the hunger zone, and once their hunger is satiated they will stop eating (Herman and Polivy, 1983). In contrast, restrained eaters and dieters who chronically restrict their food intake to control their weight have a third, unnatural boundary, which when breached leads to anxiety and unrestrained eating. In addition to this uninhibited eating, restrained eaters also experience a negative affect, which

leads to increased food intake to regulate their emotions (Costanzo, Reichmann, Friedman & Mustane, 2001).

3. Reliance on internal hunger and satiety cues to determine when and how much to eat, refers to relying on physiological cues of hunger and satiety, and trusting these cues to monitor eating behavior. Individuals who exhibit this component have an increased awareness of the inner experiences of their body, and this inner physiological awareness is the core of psychological well-being (Rogers, 1964). Those who rely on inner cues are aware of when they are slightly full or hungry, and trust their body to tell them when, what and how much to eat (Tylka, 2006). *By contrast, those who do not rely on this internal mechanism internalise societal messages of dieting and eating behaviors to guide their eating habits. This reliance on external messages causes a disconnection between the innate need of the body and the internal awareness of inner experiences, therefore this may cause poor awareness of bodily functions.

Intuitive Eating (IE), body mass and body image

Individuals who engage in IE have been found to have better physical health and are less likely to practice maladaptive eating behaviors. Hawks, Madanat, Hawks, and Harris (2005) explored the relationship between IE and health status of college women. They found that IE was negatively correlated with Body Mass Index (BMI) and accounted for a significant proportion of variance in BMI. Therefore, women who engaged in IE had a lower BMI as compared with women who did not engage in IE. Additionally, those who engaged in IE had higher levels of high-density lipoproteins and lower levels of triglycerides than those who did not engage in IE, suggesting that women who engaged in IE may have a significantly lower risk of cardiovascular diseases.

Similarly, in a recent study of overweight/obese first-year college women, as IE scores decreased, problematic binge eating and night time eating behaviors increased (Webb and Hardin, 2012). As a consequence, women with low IE scores experienced a significant increase in their BMI levels over the course of their first-year at university. This finding also suggests that IE is related to BMI status, such that women with a healthy BMI are likely to practice IE, and women who do not engage in IE are likely to have an unhealthy BMI level and to practice maladaptive eating behaviors. Moreover, these findings suggest that IE is a healthy alternative eating style to dieting, and can be a useful tool in maintaining healthy weight at an individual level (Tylka, 2006; Webb, & Hardin, 2012).

IE has also been found to be related to various facets of having a positive body image. In developing the IE measure, Tylka (2006) found that IE scores were negatively correlated with scores on body dissatisfaction, poor introspective awareness, pressure for thinness, and internalization of the thin-ideal stereotype. This finding suggests that those who practiced IE felt less pressure to be thin based on societal standards, and were more satisfied with their bodies.

Consistent with previous findings, IE scores were also found to be negatively correlated with BMI (Hawks et al., 2005; Webb & Hardin, 2012). However, it can be argued that a low BMI reflects societal standards of the thin-body ideal. Nevertheless, these women (high IE, low BMI) rejected the societal standards of being thin, and did not base their self-worth on being thin (Tylka, 2006).

Similarly, in a recent study, body appreciation in college women was predicted by IE (Iannantuono, and Tylka, 2012). Specifically, this study found that body appreciation mediated the relationship between maladaptive perfectionism and IE, such that maladaptive perfectionism was negatively related to IE only to the extent that women appreciated their bodies. This finding suggests that if women appreciated their body (that is, if women had favorable views about their body despite their perceived weight, size or imperfections), they engaged in IE. Additionally, for women who appreciated

their bodies, as maladaptive perfectionism decreased, IE increased. This suggests that women who appreciate and evaluate their bodies, independent of societal ideals, have a healthy BMI and also engage in adaptive eating behaviors (Iannantuono & Tylka, 2012).

The relationship between body image and IE is in support of previous research by Avalos and Tylka (2006). These researchers found that IE was predicted by an emphasis on body functionality and appreciation rather than appearance. This finding supports the theory that when women emphasize the functionality of their body rather than their appearance, they hold positive views about their body, and are therefore more attuned to rely on physiological signals of hunger and satiety. Additionally, this finding emphasizes that holding positive views about one's body allows for increased awareness of bodily signals, which is the core component of IE (Tylka, 2006). Therefore, this finding supports the observations that appreciating one's body is associated with IE (Avalos, & Tylka, 2006; Tylka, 2006).

It could be argued that the relationship between positive body image and IE is due to the lack of eating disordered (ED) symptomatology amongst individuals who engage in IE. This argument would suggest that IE is merely on the opposite continuum of ED symptomatology; that is, individuals who do not exhibit ED symptomatology (where ED is related to a negative body image) are found to be high on IE. When Measures of IE and well-being were analyzed to see whether IE accounted for unique variance in well-being measures, which have been previously found to be negatively associated with ED symptomatology. Tylka & Wilcox (2006) found that IE accounted for unique variance in positive affect, proactive coping, optimism, unconditional self-regard, psychological hardiness, and social problem solving over and above the effect of ED symptomatology. This finding suggests that IE is a distinct construct that uniquely contributes to our conceptualization of having a positive body image, adaptive eating and psychological well-being and is not merely an indication of the absence of ED symptomatology (Tylka & Wilcox, 2006).

Assessing body image

Several measures exist that assess body image. One way of measuring how individuals evaluate and perceive their body image is by measuring body-image related disturbances. Rosen, Srebnik, Satzberg, and Wendt (1991) developed the Body Image Avoidance Questionnaire that focuses on behavioral tendencies which accommodate the negative appraisal of one's body. These behaviors usually involve avoidance of social situations that may trigger anxiety about appearance, physical intimacy, and wearing tight-fitting clothing. Factor analysis has shown these behaviors are linked to the anxiety. By measuring the frequency of the behavior we can obtain a measure of the levels of anxiety that are present.

Similarly, those who engage in body-image avoidance behaviors also engage in frequent weight-checking or consistently checking themselves in the mirror (Rosen et al., 1991). Assessing body avoidance behaviors has been found to be particularly essential to the core psychopathology of eating disorders. Body checking and avoidance behaviors are manifestations of over-evaluation of weight and shape and disordered eating (Rosen et al., 1991).

Body image avoidance behaviors have been found to be associated with several correlates of body-image disturbances. Avoidance behaviors of weight-loss program patients were uniquely associated with overestimation of shape ($r_s = .28$) and weight ($r_s = .22$) after partializing out the contribution of weight checking behavior. Additionally, an increased frequency of avoidance behaviors was associated with lower levels of self-efficacy (Latner, 2008). Furthermore, women with a history of eating disorders engaged in more avoidance behaviors than women without any prior history of eating disorders. The severity of the prior eating disorder was associated with the frequency of avoidance behaviors (Shafran, Fairburn, Robinsons, and Lask, 2003). The above findings suggest that body

image avoidance behaviors are related to weight and shape concerns, low self-efficacy, and ED symptomatology.

The present study

The aim of the present study was to explore the relationship between self-compassion (SC) and intuitive eating (IE) in understanding body image, while holding the effect of Self-esteem (SE) constant. It is evident from previous literature that SC and IE are related to both positive body image and psychological well-being. However, while SC and IE have been found to be related to the same constructs, the two variables have not been explored together. Therefore, it was hypothesized that:

H1: Individuals who indicated higher SC, as measured by the Self-Compassion Scale (SCS) of Neff (2003b) would report lower levels of body image avoidance behaviors, as measured by the Body Image Avoidance Questionnaire (BIAQ) of Rosen et al. (1991), over and above the effect of SE (Rosenberg, 1965).

H2: Similarly, individuals who engaged in IE, as measured by higher scores on Intuitive Eating Scale (IES) of Tylka (2006) would show lower levels of body image avoidance behaviors, as measured by the BIAQ, over and above the effect of SE as measured on the Rosenberg Self-Esteem Scale (Rosenberg, 1965).

H3: Individuals who indicated higher SC, as measured by the Self-Compassion Scale (SCS) of Neff (2003), would report engaging in IE, as measured by higher scores on IES (Tylka, 2006).

H4: Individuals who engaged in IE, as measured by higher scores on IES (Tylka, 2006), would have a healthy BMI, than those who did not engage in IE, as measured by lower scores on IES (Tylka, 2006).

Method

Participants

A total of 216 students voluntarily participated in the study after a call for participation was made through various social media websites and local notice boards. The sample consisted of university students, and included both domestic (N = 160), and international (N = 56) students with an age range of 18 - 52. Of the 216 participants, 149 were female with a mean age of 21.06 years (SD = 3.60). Of the 149 females and according to BMI categories, 11.5% were underweight, 65.5% were healthy weight, 18.2% were overweight, and 4.7% were obese. There were 67 males in the sample with a mean age of 21.97 (SD = 3.03). Of these 67 males, 6.8% were underweight, 64.4% were healthy weight, 23.7% were overweight, and 5.1% were obese.

Demographics

Participants were asked to enter basic demographic information before starting the survey. Participants recorded their age, sex, whether they were a domestic or international student, their height, and their weight. Self-reported height and weight were used to calculate BMI (kilograms/m²).

The Body Image Avoidance Questionnaire (BIAQ) is a 19-item scale that measures self-reported behavioral tendencies that are related to perceptual-cognitive body-image disturbances such as avoidance of tight-fitting clothes, social outings, and physical intimacy (Rosen et al., 1991). The BIAQ is different to other measures of body-image disturbances as it focuses on behavioral tendencies that are consistent with cognitive and perceptual distortions of body shape and size (Rosen et al., 1991).

The BIAQ includes items related to avoidance of tight-fitting clothes (for example, “I wear baggy clothes”); social outings (for example, “I do not go out socially if people I am with are thinner than me);” and physical intimacy (for example, “I avoid physical intimacy”).

All items are scored on a five-point scale from zero (never) to five (always). Total scores are calculated by taking a sum of all item scores, where higher scores indicate a more negative body image. A negative body image entails a high body dissatisfaction, fear of fatness, low self-worth due to appearance and high body shape and weight concerns. The BIAQ has been found to have sound psychometric properties. Rosen et al. (1991) found a high internal consistency of $\alpha = .89$ and good test-retest reliability of $\alpha = .87$ over a two-week interval.

The BIAQ is positively correlated ($r = .78$) with the Body Shape Questionnaire (Cooper, Taylor, Cooper, & Fairburn, 1987). The subscales of Shape Concern ($r = .68$), and Weight Concern ($r = .63$) indicate that self-reported behavioral avoidance is strongly correlated with increased negative attitudes towards body weight and shape, increased negative body image attitudes, and greater emphasis on appearance for self-evaluation, respectively. Therefore, the BIAQ shows sound convergent validity. Also, when controlling for the variance accounted for by the Body Shape Questionnaire, the BIAQ contributed uniquely to discriminating between Bulimia Nervosa patients and a non-clinical sample. The sample of bulimia nervosa patients ($M = 40.17$, $SD = 10.9$) scored significantly higher than the non-clinical sample ($M = 30.67$, $SD = 12.7$), $t = 6.69$. Therefore, the BIAQ has been found to have good divergent validity (Rosen et al.).

The Rosenberg Self-Esteem Scale (RSES) is a widely used self-report questionnaire that measures global SE (Rosenberg, 1965). The RSES includes 10 items, with an equal number of positively worded items (for example, “On the whole I am satisfied with myself”), and negatively worded items (for example, “At times, I think I am no good at all”).

All items are reverse scored on a four-point Likert scale from one (strongly disagree) to five (strongly agree). The sum of each item score provides a total score. Higher total scores indicate high SE. Sinclair, et al. (2010) found sound psychometric properties for the RSES for a general American sample ($N = 1,018$). The overall measure of the RSES has a high internal consistency, $\alpha = 0.91$. Additionally, Sinclair et al. (2012) found good convergent and divergent validity for the RSES.

The RSES is negatively correlated with subscales of depression ($r = -.62$), anxiety ($r = .47$) and stress ($r = -.52$) on the Depression Anxiety Stress Scales. Fleming and Courtney (1984) found a high test-retest reliability for a sample of 259 University students for a 1-week interval, $\alpha = .82$.

The Self-Compassion Scale (SCS) is a 26-item self-report questionnaire that measures the three main features of SC (Neff, 2003b). These include self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification. Thus the SCS has six subscales measuring each of these components of SC. For example, self-kindness items include, “I try to be loving towards myself when I feel emotional pain.” By contrast, self-judgment items include, “I can be a bit cold-hearted towards myself when I’m experiencing emotional pain.” Similarly, common humanity items include, “I try to see my failings as part of the human condition.” By contrast, isolation items include, “When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.” Finally, mindfulness items include, “When something upsets me I try to keep my emotions in balance.” By contrast, items focused on over-identification include, “When I’m feeling down I tend to obsess and fixate on everything that’s wrong.”

All items are measured on a five-point Likert scale from one (almost never) to five (almost always). Subscale scores are calculated by taking the mean of each subscale item score. Total scores are calculated by reverse scoring the negative subscale items (self-judgment, isolation and over-

identification) and calculating a total mean. High scores on the SCS indicate high SC.

The SCS has sound psychometric properties, with a high internal consistency, $\alpha = .92$. Similarly, each of the subscales have a moderate to high reliability. Cronbach's alpha was found to be .78, .77, .80, .79, .75, and .81 for self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification respectively. The SCS also has test-retest reliability, $\alpha = .93$, over a three-week period. Additionally, the SCS is moderately correlated ($r = .62$) with Berger's Self-Acceptance Scale (Berger, 1952); Self-Determination Scale ($r = .43$) of Sheldon & Deci (1993); and all three subscales of the Basic Psychological Needs Scale, Gagné (2003), namely, Autonomy ($r = .42$), Competence ($r = .52$), and Relatedness ($r = .25$). Therefore, the SCS has good convergent validity. The SCS has a low correlation with the RSES ($r = .59$) and is not correlated with the Narcissistic Personality Inventory (Raskin & Terry, 1988), therefore indicating that the SCS has sound divergent validity.

The Intuitive Eating Scale (IES) is a 21-item scale that measures an adaptive style of eating that involves eating based on physiological cues rather than emotional cues (Tylka, 2006). The IES measures three main facets of IE in three subscales. The first facet is unconditional permission to eat (for example, "I try to avoid certain foods high in fat, carbohydrates, or calories"). The second is eating for physical rather than emotional reasons (for example, "I find myself eating when I am bored, even when I'm not physically hungry"). The third is reliance on internal hunger/satiety cues (for example, "I can tell when I'm slightly full").

Each item is scored on a five-point Likert scale from one (strongly disagree) to five (strongly agree). Total scores are calculated by reverse scoring the negative worded items and adding to the positive worded items and taking an average of the total score, where higher scores indicate more IE, and low scores indicate low IE.

The IES has been found to have sound psychometric properties. Cronbach's alpha for the overall IES is .85. Additionally, internal consistency of .87, .85 and .78 was found for unconditional permission to eat, eating for physical rather than emotional reasons and reliance on internal/satiety cues subscales respectively. The IES also has high test-retest reliability over a three-week period, $\alpha = .90$. The IES has good divergent validity. The IES is negatively correlated ($r = -.49$) with Poor Introspective awareness (Tylka, 2006); Body Dissatisfaction of the Eating Disorder Inventory-2 ($r = -.56$) of Garner, Olmstead, & Polivy (1993); Perceived Sociocultural Pressure for Thinness Scale ($r = -.55$) of Stice & Agras, (1998); and the Internalization subscale of Sociocultural Attitudes Toward Appearance Questionnaire ($r = -.50$) of Thompson, van den Berg, Roehrig, Guarda, & Heinberg (2004). Similarly, the IES has good convergent validity. The IES is positively correlated with the RSES ($r = .44$), and Satisfaction with Life Scale ($r = .41$).

Ethics committee approval

After the ethics application for this study was approved by the Bond University Human Research and Ethics Committee, the questionnaires for the survey were created in an online survey program which included informed consent for anonymous and voluntary participation.

Results

Data diagnostics

1. The original sample for this study consisted of 216 participants. This data set was cleaned to see if it met all the assumptions of multiple hierarchical regression. All six assumptions of multiple hierarchical regression were met: sample size, univariate and multivariate normality, linearity, homoscedascity, and multicollinearity and singularity. Outliers were detected by examining boxplots of all variable scores. Twenty-two outliers were detected and deleted, bringing the sample size to 194.

2. The skew of every variable was calculated, and all scores were found to be normally distributed. Therefore, this met the assumptions of univariate and multivariate normality. Secondly, an examination of a residuals scatterplot found that the residuals were normally distributed about the predicted DV score. Therefore, the assumptions of normality, linearity, and homoscedascity of residuals were met.

3. Correlations were calculated between all variable scores and no effects of multicollinearity or singularity were found. Fourthly, the probability of Mahalanobis distances were calculated and no multivariate outliers were detected. Finally, the sample size was found to be adequate, where $N = 194 \geq 50 + 8(3)$, therefore the ratio of cases to IVs was not violated. The sample of $N = 194$ had an unequal distribution of males ($N = 57$) and females ($N = 137$). Additionally a χ^2 analysis found a significant group difference between the male and female sample sizes. Therefore, the sample of 57 males was deleted from the data set, bringing the sample to 137 female participants.

Regression analysis

Descriptive statistics and correlations among all the variables of the study are reported in Table 1. The body image avoidance construct (BIAQ) was significantly negatively correlated to all the independent variable measures of SE, SC and IE. This suggests that women who show fewer avoidance behaviors are also likely to have a high SE, be self-compassionate and engage in IE. BMI was not found to be significantly correlated to any total scores or subscale scores.

A regression analysis was undertaken to assess whether BMI, SE, SC, and IE significantly predicted avoidance behaviors. Moreover, since no previous studies had assessed this set of predictors together, the regression analysis was used to inform the order for the consequent hierarchical regression analyses. The four predictors were collectively found to be significant predictors of avoidance behaviors, $F(4, 132) = 24.97, p < .001$, and predicted a 41.3% variance in avoidance behaviors. BMI had a positive relationship with avoidance behaviors, but was found to be a non-significant predictor, contributing 1.37% of the variance. Similarly, SE and avoidance behaviors were inversely related, where SE was found to be a non-significant predictor and contributed 1.28% variance. By contrast, SC and avoidance behaviors were inversely related and SC contributed a significant 1.70% variance. Similarly, IE was inversely related to avoidance behaviors and significantly contributed a large 23.04% variance in avoidance behaviors (see Table 2).

Table 1. Bivariate Correlations

	M	SD	BMI	SE	SC	SK	SJ	CH	IS	MS	OI	BIAQ	IE	UPE	EPE	RIH
BMI	23.04	5.84	-													
SE	28.08	3.97	.07	-												
SC	2.71	0.54	.13	.47**	-											
SK	2.70	0.71	.12	.42**	.42**	-										
SJ	3.42	0.70	-.13	-.36**	-.36**	-.61**	-									
CH	2.90	0.80	.12	.25**	.25**	.40**	-.26**	-								
IS	3.46	0.71	-.12	-.43**	-.43**	-.34**	.50**	-.38**	-							
MS	3.06	0.73	.07	.29**	.28**	.59**	-.36**	.63**	-.35**	-						
OI	3.48	0.74	-.02	-.35**	-.35**	-.42**	.49**	-.39**	.57**	-.51**	-					
BIAQ	49.96	9.52	.15	-.34**	-.35**	-.26**	.38**	-.18*	.28**	-.19*	.23**	-				
IE	3.02	0.53	-.11	.29**	.30**	.26**	-.30**	-.08	-.28**	.11	-.26**	-.61**	-			
UPE	2.95	0.85	-.04	.32**	.31**	.32**	-.34**	.05	-.25**	.10	-.28**	-.56**	.80**	-		
EPE	2.71	0.80	-.14	.02	.09	-.00	-.11	-.00	-.17*	.03	-.11	-.34**	.62**	.11	-	
RIH	3.42	0.57	-.09	.20*	.15	.15	-.08	.15	-.12	.08	-.08	-.28**	.63**	.25**	.37**	-

Notes: SE = Self-Esteem Scale, SC = Self-Compassion Scale, SK = Self-Kindness Subscale, SJ = Self-Judgment Scale, CH = Common Humility Scale, IS = Isolation Subscale, MS = Mindfulness Subscale, OI = Over-Identified Subscale, BIAQ = Body Image Avoidance Questionnaire, IE = Intuitive Eating Scale, UPE = Unconditional Permission to Eat Subscale, EPE = Eating for Physical Rather than Emotional Reasons Subscale, RIH = Reliance on Internal Hunger/Satiety Cues Subscale. Correlations are significant, * $p < .05$, ** $p < .001$

Table 2. Regression Analysis Predicting Body Image Avoidance Behaviors from Body Mass Index (BMI), Self-Esteem (SE), Self-Compassion (SC) and Intuitive Eating (IE)

Predictor	B	β	R ²	Adjusted R ²
BMI	.19	.12	.43	.41
SE	-.31	-.13		
SC	-2.68*	-.15		
IE	-9.23**	-.52		

Notes: * $p < .05$, ** $p < .001$

A hierarchical multiple regression was undertaken to assess whether SC and IE predict body image avoidance behaviors over and above the effect of SE. In step 1, BMI accounted for a small 1.5% variance in avoidance behaviors. However, it was found to be a non-significant predictor. In step 2, SE accounted for 13.3% variance, $\Delta F(1, 134) = 19.47$, $p < .001$. SE was found to be a significant negative predictor of avoidance behavior. Therefore, when SE increased, avoidance behaviors decreased. In step 3, SC was added to the regression. Collectively the two predictors (SE and SC) accounted for a statistically significant proportion of variance, $F(2, 134) = 11.45$, $p < .001$. However, the addition of SC made SE a non-significant predictor, and SC uniquely predicted 5.4% of the variance, $\Delta F(1, 133) = 9.09$, $p < .001$ and was a significant negative predictor of avoidance behavior. Therefore, when controlling for SE, as SC increased, avoidance behaviors decreased. In step 4, IE was added to the regression. Collectively the three predictors (SE, SC and IE) accounted for a statistically significant proportion of variance, $F(4, 132) = 24.97$, $p < .001$. IE was a significant negative predictor of avoidance behavior and uniquely predicted a large 23.04% of the variance. Therefore, when controlling for SE and SC, those who engaged in IE showed fewer avoidance behaviors (see Table 3).

Table 3. Hierarchical Multiple Regression Analyses Predicting Body Image Avoidance Behaviors from Body Mass Index (BMI), Self-Esteem (SE), Self-Compassion (SC) and Intuitive Eating (IE)

Predictor	B	β	R ²	Adjusted R ²	ΔR^2
Step 1					
BMI	.24	.15	.02	.02	.02
Step 2					
BMI	.28	.17	.15	.13	.12**
SE	-.85**	-.35			
Step 3					
BMI	.33	.20	.20	.18	.06*
SE	-.55	-.23			
SC	-4.72*	-.27			
Step 4					
BMI	.19	.12	.43	.41	.23**
SE	-.31	-.13			
SC	-2.68	-.15			
IE	-9.23**	-.52			

Notes: * $p < .05$, ** $p < .001$

Because such a large variance was accounted for by IE, a second hierarchical regression was undertaken to determine how much variance was accounted for by each subscale of IE in predicting avoidance behaviors. Similar to the first hierarchical regression, BMI, SE and SC were added in step 1, 2 and 3 respectively. In step 4, the three subscales of IE were added. The addition of the three subscales accounted for an additional 42.5% variance. Unconditional permission to eat, and eating for physical rather than emotional reasons were found to be significant negative predictors and uniquely predicted 15.92% and 5.43% variance respectively. Reliance on internal hunger/satiety cues was not a significant predictor of avoidance behaviors (see Table 4).

Table 4. Hierarchical Multiple Regression Analysis Predicting Body Image Avoidance Behaviors from Body Mass Index (BMI), Self-Esteem(SE), Self-Compassion(SC) and Intuitive Eating Subscale-Unconditional Permission to Eat and Reliance on Internal/Satiety Cues (UPE), Eating for Physical rather than Emotional Reasons (EPR), and Reliance on Internal Hunger/Satiety Cues (RIH)

Predictor	B	β	R2	Adjusted R2	$\Delta R2$
Step 1					
BMI	.24	.15	.02	.02	.02
Step 2					
BMI	.28	.17	.15	.13	.12**
SE	-.85**	-.35			
Step 2					
BMI	.33	.20	.20	.18	.06*
SE	-.55	-.23			
SC	-4.72*	-.27			
Step 3					
BMI	.20	.12	.45	.43	.25**
SE	-.32	-.13			
SC	-2.51	-.14			
UPE	-4.92**	-.44			
EPR	-3.03**	-.25			
RIH	-.27	-.02			

Notes: * $p < .05$, ** $p < .001$

Analysis of Variance (ANOVA)

An ANOVA was used to investigate whether BMI level affected IE. Participants were divided into four groups, underweight, healthy weight, overweight and obese, based on their self-reported height and weight. A BMI below 18.5 is classified as underweight, BMI from 18.5 to 24.99 is considered within the normal range, a BMI from 25 to 29.99 is classified as overweight range and a BMI over 30 is considered obese (World Health Organisation, 2012). The ANOVA was not found to be significant, indicating that IE scores for the four BMI groups were not significantly different, $F(3, 133) = 1.84$, $p = .14$.

Discussion

The aim of this study was to explore the relationship between self-compassion (SC) and intuitive eating (IE) in conceptualizing body image, over and above the effect of self-esteem (SE) and BMI. Current literature supports the role of both SC and IE as positive correlates of body image and consequently psychological wellbeing. However, previous research has not explored both SC and IE concurrently in relation to body image. The findings of this study suggest that both SC and IE are positive correlates of body image, and explain variance in body image avoidance behaviors over and

above the effect of SE. The results of this study not only support previous literature that has found SC to explain unique variance in body image related constructs (Wasylikiw et al., 2012), but the addition of IE in this study has extended previous literature that has found IE to be predicted by body appreciation (Iannantuono, & Tylka, 2012). The findings of Wasylikiw et al. and Iannantuono and Tylka (2012), combined with the findings of this study, suggest that both SC and IE are important constructs in conceptualizing body-image related constructs.

The first hypothesis that self-compassionate women would show lower levels of body image avoidance behaviors, and that SC would explain unique variance in body image avoidance behaviors, over and above the effect of SE was supported in this study. This result supports the findings of Wasylikiw et al., 2012 that found compassionate women have lower levels of body preoccupation, weight concerns and higher levels of body appreciation as compared to less self-compassionate women, when holding SE constant. Additionally, SC was significantly negatively correlated with body image avoidance behaviors. This suggested that self-compassionate women were less likely to engage in avoidance behaviors (Wasylikiw et al.).

The positive subscales of SC, self-kindness, common humanity and mindfulness were also negatively correlated with avoidance behaviors. By contrast, the negative subscales of SC, self-judgment, isolation and over-identification were positively related to avoidance behaviors. These findings are in line with those proposed by Neff (2003b), where she explained that compassionate women are kind and understanding rather than harsh and judgmental towards themselves. Similarly, compassionate women do not feel isolated and separated by their failures and shortcomings; rather they view it as part of the larger human experience. Finally, compassionate women do not over-identify with their negative feelings and thoughts, rather they balance it out with mindful awareness (Neff, 2003).

Therefore it can be assumed that compassionate women are less likely to engage in day-to-day avoidance behaviors, such as those related to social situations, physical intimacy or tight-fitting clothes (Rosen et al., 1991) due to their compassionate attitudes. Moreover, Neff (2003) found that SC was negatively correlated with anxiety, which suggests, being self-compassionate decreases the likelihood of experiencing appearance-related anxiety. Then, irrespective of whether women have a high or low SE, if they are self-compassionate they are less likely to experience appearance-related anxiety, and consequently less likely to engage in avoidance behaviors. Therefore, these findings suggest that SC plays a unique role in predicting body image avoidance behaviors (Wasylikiw et al., 2012). Additionally, the present study supports that SC is not a redundant construct to SE in explaining body image related constructs.

The second hypothesis, that women who engage in IE would show lower levels of body image avoidance behaviors, and that IE would explain unique variance in avoidance behaviors over and above the effect of SE, was also supported. This result is in line with the findings of Iannantuono and Tylka (2012) who found that women who appreciated their bodies, were more likely to engage in IE. This study found that intuitive eating predicted avoidance behaviors, such that women who were intuitive eaters were less likely to engage in avoidance behaviors. Furthermore, it also supports Tylka's (2006) findings that intuitive eaters were less dissatisfied with their bodies, and intuitive eaters focused on the functionality of their bodies rather than their appearance and therefore held a positive view of their body. Combined with the findings of this study and previous research (Tylka, 2006; Iannantuono & Tylka, 2012) it can be assumed that intuitive eaters appreciated their body more, were less dissatisfied with their appearance and therefore were less likely to engage in avoidance behaviors. Moreover, it can also be inferred that intuitive eaters engage in less avoidance behaviors because they focus on the functionality of their bodies rather than their appearance (Tylka, 2006), especially more so because avoidance behaviors are appearance-related (Rosen et al., 1991). Additionally, this finding also suggests that intuitive eaters hold a positive appraisal of their body as they do not engage in a lifestyle that is consistent with cognitive and perceptual distortions of body

image disturbances (Rosen et al.). Therefore, as expected, IE may be related to having a positive evaluation of one's body because individuals focus on the functionality of their body and experience less appearance-related anxiety (Tylka, 2006; Iannatuono & Tylka, 2006).

Another finding of this study was that IE accounted for unique variance in avoidance behaviors such that SC was rendered a non-significant predictor. Tylka (2006) suggested that one of the core components of IE involves being aware and attuned to one's physiological cues, being self-aware is also a core facet of self-compassion (Neff, 2003). Based on previous findings it can be extended that IE in this study captured the overall psychological self-awareness that was being measured by the SCS. For example, it can also be argued that IE is based on allowing one-self to eat whatever the body desires, therefore IE in a sense captures self-kindness towards one's body, similarly, eating for physical reasons rather than using food to cope with emotional distress reflects being mindful of one's negative thoughts and feelings and not over-identifying with them.

Similarly, the third hypothesis that individuals who reported high levels of SC, would also report high levels of IE was also supported. This study found that SC and IE were significantly positively correlated. Therefore, increases in self-compassionate attitudes were related to increases in intuitive eating, and vice versa. As Neff (2003a) suggested that because SC is associated with less anxiety, less neurotic perfectionism, and greater life satisfaction, self-compassionate individuals were also more likely to engage in proactive behaviors. Additionally, based on previous research (Adams & Leary, 2007; Wasylikiw et al., 2012) SC has been found to be related to the affective component of eating behavior, where compassionate people are less harsh and judgmental regarding their eating behavior. Therefore, it can be inferred, based on the findings of this study, that being self-compassionate allows individuals to engage in adaptive eating behaviors. It can also be argued that IE is in a sense a food-related behavioral tendency or eating behavior of self-compassionate people, suggesting that IE may be one of the adaptive consequences of being self-compassionate.

This study also found that individuals who gave themselves unconditional permission to eat as measured by the IE scale engaged in fewer avoidance behaviors. Based on previous findings (Polivy & Herman, 1998), the findings of this study suggest that those who allow themselves to eat based on their physiological satiety cues and do not differentiate between food that is acceptable and non-acceptable are less likely to engage in avoidance behaviors. Avoidance behaviors may include avoiding social situations that involve eating (Rosen et al., 1991), however these food-related social situations do not provoke anxiety for those who give themselves unconditional permission to eat, as they are comfortable eating any food that their body desires.

It was similarly found that individuals who reported eating for physical rather than emotional reasons as measured by the IE scale engaged in fewer avoidance behaviors. Previous research has found that those who eat for physical rather than emotional reasons experience less distress and more proactive coping, and therefore do not use food to cope with negative affect (Tylka, 2006). Research has previously established that avoidance behaviors serve the purpose of reducing appearance-related negative affect, where avoidance-related behaviors are a lifestyle choice the individuals make to accommodate the negative appraisal of their body (Rosen et al.). Therefore, based on previous findings (Tylka, 2006; Rosen et al.), the results of this study suggest that those who did not use food to cope with emotional distress chose proactive coping strategies that did not involve food or other body image related avoidance behaviors to cope, and consequently engaged in fewer avoidance behaviors. The above findings support that IE is an adaptive eating behavior, and may be associated with a positive evaluation of one's body.

The fourth hypothesis that individuals who engaged in more IE would have been in a healthy BMI category was not supported in this study. Based on previous literature (Hawks et al., 2005; Webb & Hardin, 2012), it was expected that those who reported more IE would also have a healthy weight

status, because they would eat based on physiological hunger and satiety cues and would be more aware of their internal bodily needs. However, no significant differences were found between IE scores for each of the four BMI groups. Therefore, the findings of this study support Tylka (2006) to an extent that those who practiced IE felt less pressure to be thin. Based on this finding and previous literature it can be inferred that women who did not internalize societal-ideals of being thin, were satisfied with their bodies, despite their perceived and actual shape and size.

One limitation of the current study is that a non-experimental design was used for data collection. Due to the use of a non-experimental design, causal relationships cannot be established. Both SC and IE were found to explain unique variance in body image avoidance behaviors in the current study. However, it cannot be established whether SC and IE cause avoidance behaviors.

A second limitation of the study is the measurement issue of using the Body Image Avoidance Questionnaire, which measures negative body image (Rosen et al., 1991). Tylka (2011) suggests the use of Body Appreciation Scale (Avalos et al., 2005) as a measure of positive body image. The use of a scale that measures positive body image is important for future research, as it has been argued by Avalos, Tylka, Wood-Barcalow (2005) that a positive body image is not necessarily the absence of a negative body image, and that predictors of a positive body image are not the same as predictors of a negative body image. Tylka (2011) also suggests that the multifaceted and multidimensional aspects of positive body image are best measured by employing several different measures, rather than using a single measure that only focuses on one aspect of body image related construct.

The findings of this study that are consistent with previous findings have significance for clinical interventions. For example, the effect of SC in explaining avoidance behaviors is evident even when controlling for SE. This finding is consistent with previous findings that show that SC is associated with developing a positive body image (Wasylikiw et al., 2012), and similarly, increases in SC are associated with increases in positive psychological functioning and well-being (Neff et al., 2007). Moreover, SC is associated with the psychological benefits of having a high SE (Kling et al., 1999; Neff & Vonk, 2009), but SC is not associated with negative psychological constructs such as narcissism, and self-centeredness, which are also associated with having a high SE (Baumeister et al., 2003; Raskin et al., 1991).

An implication of this finding is that SC training could be given to young girls for the promotion of a positive body image. In light of findings of this study and previous findings it is suggested that low SC is implicated in times of failures and inadequacies, whereas high SE is implicated when self-evaluation and self-worth are high (Neff, & Vonk, 2009). This suggests that when young girls experience appearance-related anxiety, SC is more beneficial in buffering the negative consequences of self-judgment and harsh criticism as compared to working to enhance SE. This implication also invites research regarding the effectiveness of intervention programs based on SC. Such training might contribute towards reducing appearance-related anxiety, and towards prevention and treatment of body image related concerns in women.

Findings of this study that were found to be inconsistent with previous findings require further investigation. For example, BMI was not found to be correlated to the BIAQ, SCS, and IES measures. Furthermore, IE was not found to impact BMI levels, which was not expected. Previous research has consistently supported the expectation that those who engage in IE have a healthy BMI (Hawks et al., 2005; Webb & Hardin, 2012). The issue here may be a self-report bias in reporting height and weight, which may be inconsistent with the participant's actual height and weight. Furthermore, BMI is not a holistic health indicator. That is, a healthy BMI may not correlate with other positive health factors. Therefore, future research could improve upon the research design in this study by using a comprehensive health assessment (Hawks et al.), objective measurements of height and weight and whether these show a correlation to IE and SC.

Despite its limitations, the current research contributes to the understanding of conceptualization of body image related behaviors for university women. It is the first research to look at both SC and IE concurrently. Moreover, it has found support for SC and IE in explaining body image related behaviors. Future research needs to take into consideration the methodological and conceptual issues posed by this study, and direct research towards identifying correlates of positive body image. By moving the focus from the present pathology-driven research on body image, future research could help identify adaptive self-relating attitudes and eating behaviors that can be modified to promote the development of a positive body image. Conversely, promotion of positive body image may demonstrate benefits for improving adaptive self-relating attitudes and healthier eating behaviors.

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