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The Relationship between Self-Compassion and Disordered Eating Behaviors: Body Dissatisfaction, Perfectionism, and Contingent Self-Worth as Mediators

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The Relationship between Self-Compassion and Disordered Eating Behaviors: Body Dissatisfaction, Perfectionism, and Contingent Self-Worth as Mediators

by

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Dedication

This dissertation is dedicated to my loving grandfather David Santos Guardiola (b. 1926 - d.1991), who, despite being highly intelligence, deserving and possessing great potential, was not afforded the educational opportunities he so deserved due to the time and circumstances of his birth. Grandpa, thanks for always accepting me the way I am; I hope wherever you are, that you understand and believe this accomplishment is one I gratefully share with you.

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The Relationship between Self-Compassion and Disordered Eating Behaviors: Body dissatisfaction, Perfectionism, and Contingent Self-Worth as Mediators

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The concept of self-compassion has been gathering interest for researchers in recent years, as it appears to offer an array of benefits to wellbeing. This study investigated the potential role of self-compassion as a protective factor against disordered eating behaviors. It also examined the mediating roles of three potential variables: body dissatisfaction, perfectionism and contingent self-worth. Given modern representations of the female ideal, failure to achieve or adequately conform to such standards often poses psychological challenges for women and girls. Self-compassion encompasses kind, mindful self-treatment and may be an ideal protective factor against disordered eating. It has also been linked with lower body dissatisfaction, maladaptive perfectionism, and contingent self-worth. The present study found that dissatisfaction with one's body, as well as a tendency to judge one's personal worth based on appearance fully mediated the relationship between self-compassion and both restrained and emotional disordered eating respectively. Therefore, a self-compassionate attitude may serve as a protective

factor against engaging in disordered eating vis-à-vis strengthening young women's abilities to look at their bodies in a more compassionate and unconditionally accepting way.

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Chapter 1

Introduction

In recent decades, disordered eating has begun to receive a great deal of attention from researchers (Littleton & Ollendick, 2003), especially given the implications to public health. Examples of disordered eating include binge eating, restricting food intake, excessive dieting, and purging (Garner, Olmstead, & Polivy, 1983). As estimated prevalence rates of disordered eating and clinically diagnosable eating disorders continue to remain persistent or even to rise (Groesz, Levine, & Murnen, 2002; Mussell, Binford, & Fulkerson, 2000) it is imperative that we continue to focus on ways to prevent and reduce these behaviors. Disordered eating occurs most frequently during adolescence and emergent adulthood, a particularly vulnerable yet crucial period of development; and these behaviors are more often seen in females (Littleton & Ollendick, 2003; McVey, Pepler, Davis, & Flett, 2002). For young women, early intervention might be essential to prevent these behaviors.

For interventions to be effective however, underlying relationships with other factors linked with disordered eating must be uncovered and investigated. Attempts to determine related variables have led to several interesting discoveries. Two frequently occurring factors linked with disordered eating behaviors are perfectionism (McVey et. al, 2002) and body dissatisfaction (Brannan, & Petrie, 2004; Littleton & Ollendick, 2003; Tiggemann, 2001), as well as a more recent construct, contingent self-worth (Sanchez & Crocker, 2005). Greater body dissatisfaction has been considered a particularly strong risk factor in terms of predicting one's likelihood of engaging in disordered eating

behaviors (Brannan & Petrie, 2008). If one is unhappy with how he or she looks, attempts might be made to remedy the target of the dissatisfaction, or to cope with the dissatisfaction in an otherwise unhealthy way, such as poor eating habits.

Research has shown that disordered eating is also consistently related to higher levels of perfectionism (Hewitt & Flett, 1991; McVey, et al, 2002). Given that controlling food intake is something that may be perceived as manageable to some degree, perhaps setting unrealistic or overly idealistic goals could lead to engagement in the types of behaviors that would potentially make them more attainable. If a goal is related to a specific weight or body type, such behaviors might include disordered eating.

An additional factor linked more recently with disordered eating is contingent self-worth, which involves basing one's personal value on specific areas, such as weight for example (Sanchez & Crocker, 2005). When a person bases his or her self-worth on their appearance, he or she may be more likely to engage in behaviors believed to improve the way he or she looks.

One promising buffer against disordered eating is self-compassion (Neff, 2003b), a concept which involves treating oneself with kindness and understanding, and accepting one's flaws, imperfections, and the general pitfalls life may bring. Self-compassionate people are able to treat themselves with compassion when things do not go as planned; they are careful to take their shortcomings and mistakes into consideration. The concept of self-compassion was derived from Buddhist psychology and encompasses mindfulness, common humanity, and self-kindness. It is not contingent upon positive or negative circumstances, but rather, remains constant despite the situation.

The concept of self-compassion has been linked negatively to the aforementioned factors that may lead to disordered eating; specifically, self-compassion has been linked to lower levels of perfectionism, contingent self-worth and body dissatisfaction (Brown, 2007; Neff, 2003a; Neff & Vonk, 2009), and may provide the emotional resilience necessary to prevent unhealthy eating behaviors. Given the challenging environmental and social factors surrounding an emerging-adult female, it is proposed that a self-compassionate attitude may be a healthy internal protective factor for lowering one's risk of exhibiting disordered eating behaviors, and that this protection may come partly through less body dissatisfaction, perfectionism, and contingent self-worth.

Chapter 2

Review of Relevant Literature

Disordered Eating

Disordered Eating can be broadly defined as unhealthy eating behaviors and attitudes that form the eating disorder continuum. Characteristic features of disordered eating include self-induced food deprivation, such as eating too little based on the body's nourishment needs, obsessively thinking about food and calories, binge eating, overeating to the point of feeling ill, and having unrealistic beliefs about weight and eating (Alvarenga, Scagluisi, & Philippi, 2010; Anderson, Simmons, Martens, Ferrier, & Sheehy, 2006).

Disordered eating may be categorized based on specific impacting factors leading to unhealthy behaviors. Restrained eating for example, involves intentionally restricting food intake, or even not eating when hungry, while emotional eating occurs when someone eats not out of hunger, but as a coping mechanism for a painful emotion (Strien, et. al, 1986). The type of disordered eating behavior displayed tends to vary from one individual to the next, but regardless of specific type is typically linked with a negative health outcome, of varying degrees. For example, restrained eating is often associated with anorexia (Strien, et. al, 1986), overeating and emotional eating are often co-morbid with obesity (McNamara, Hay, Katsikitis, & Chur-Hansen, 2008; Ricca, et al, 2009), and emotional eating is often linked with binge eating (Baranowski & Hetherington, 1999).

Disordered eating behaviors can lead to some very serious health risks, such as obesity. Body mass index (BMI), often used to determine obesity, is a calculation based

on height and weight, and is non-gender specific. The obesity rate continues to be of concern in the United States. Among the many health risks of obesity are: coronary heart disease, type 2 diabetes, cancer, stroke and sleep apnea. (Center for Disease Control & Prevention [CDC], 2008). On the other hand, restricted eating in the form of food deprivation may result in an individual becoming underweight, and failure to meet the body's nourishment needs may lead to a variety of other health concerns.

When disordered eating behaviors increase in severity, they may develop into clinically diagnosable eating disorders such as Binge Eating Disorder, Bulimia Nervosa and Anorexia Nervosa. Eating disorders are defined by the National Institute of Mental Health [NIMH] as: "severe disturbances in eating behavior such as extreme reduction of food intake, or extreme overeating, or feelings of extreme distress or concern about body weight or shape" (NIMH, 2007).

Anorexia Nervosa is a relentless pursuit of thinness along with unwillingness to maintain a normal or healthy weight; it is characterized by emaciation, drastic attempts to lose weight, an inaccurate self-perception of obesity, lack of menstruation, and extremely disturbed eating behavior (NIMH, 2007). Other possible symptoms include: brittle nails and hair, mild anemia, severe constipation, lethargy, and "lanugo", a growth of fine hair over the body. The growth of this hair is the body's attempt to retain heat lost as a result of reduced body fat.

Bulimia Nervosa is characterized by binge eating, followed by compensatory behavior such as fasting, purging, or excessive exercise. According to the NIMH (2007), bulimic behaviors are often accompanied by disgust or shame, and are therefore often

done secretly. Other possible symptoms are: swollen glands, worn tooth enamel, chronically inflamed and sore throat, and intestinal distress.

Binge Eating Disorder is characterized by a general loss of control of one's eating habits, as well as frequent binge eating; this disorder differs from Bulimia in that binges are not followed by purging or other excessive attempts to reverse binge effects. Additionally, according to the NIMH (2007), individuals suffering from Binge eating disorder are frequently overweight or obese. Emotional eating has been linked to bingeing behavior (Baranowski & Hetherington, 1999).

While the U.S. government does not track prevalence and mortality rates for eating disorders in the population, there have been studies conducted by other researchers which allow for estimates (Renfrew Center Foundation, [RCF], 2003). Sullivan (1995), suggested that eating disorders have the highest mortality rate of any mental illness and that for females 15-24 years of age, the mortality rate associated with Anorexia Nervosa is particularly daunting. According to Mintz and Betz (1988), roughly 1 to 3% of the population suffers from a diagnosable eating disorder. However, a much larger percentage of females are likely to suffer from eating disorder symptoms at the sub-clinical level. Sub-clinical symptoms are considered to be frequent engagement in disordered eating behaviors resulting in some symptoms, but not to the extent of the clinical diagnostic definition based on the Diagnostic and Statistical Manual of Mental Disorders fourth edition text revision (DSM-IV-TR) (American Psychiatric Association, 2000).

Clearly, the primary characteristic of all eating disorders is the presence of some form of unhealthy eating behavior. In fact, engaging in these behaviors is frequently a precursor in the development of full-blown eating disorders (NIMH, 2007). However, it is important to note that simply engaging in disordered eating does not necessarily qualify as an eating disorder. For example, it is common for people to eat beyond fullness during holidays or celebrations, and in general, frequency of disordered eating varies from one individual to the next. While these behaviors do not necessarily constitute eating disorder pathology, they are among the main criteria in terms of symptomology for those suffering from eating disorders. Further, experiences with eating disorder symptomology, even when at the sub-clinical level, can cause a great deal of distress (Cohen & Petrie, 2005). Once someone is suffering from an eating disorder, these behaviors are much more extreme in nature, further increasing physical and mental health risks for that individual. For the purposes of the proposed research, the focus will be on risks of increased engagement in disordered eating behaviors in general, but not necessarily at the clinical level.

Group Differences in Disordered Eating

According to the DSM –IV-TR (2000), 90% of Anorexia Nervosa cases occur in females. One reason may be that current societal standards for the female body tend to be related to thinness, as opposed to muscularity for men. Portrayals of successful and/or famous women are often thin and attractive, and many women may feel pressure to engage in problematic behaviors such as overly-restricted eating or purging in order to

achieve thinness. Furthermore, women and girls often consider their physical appearance to be directly linked to their personal-worth (Kilbourne, 2000), a concept that will be discussed further in the section on body dissatisfaction. The thin ideal does not seem to affect men in the same way or as frequently. For example, a male wanting to become muscular or gain weight would not necessarily be inclined to deprive himself of food. Basic advertising further supports this. For instance, women receive more external information about the importance of their bodies conforming to certain standards related to their weight. This is easily observable in the amount of advertising for weight loss and dieting products, which most frequently targets women (Kilbourne, 2000). Given these factors, females may be more vulnerable to developing eating disorders, and this is supported by prevalence rates.

Although disordered eating was once considered to be a problem solely experienced by European-American middle-class females, more recent research has indicated that women and girls from ethnic minority groups are experiencing eating problems as well. For example, some research suggests that Binge-Eating Disorder occurs equally between both European American and African American women (Mussell, Binford, & Fulkerson, 2000). Societal portrayals of the thin physical body ideal and the behaviors resulting from attempts to conform to these standards appear to affect women and girls regardless of ethnicity. Socioeconomic status (SES) has been found to have a relationship with dieting behaviors. Research investigating the potential influence of SES on dieting behaviors and diagnostically significant behaviors (i.e.: vomiting at least twice per week) in conjunction with eating disorders, found SES to be a significant

factor in the engagement in unhealthy dieting behaviors, but was not significant when the behaviors met clinical criteria. Rogers, Resnick, Mitchell, and Blum (1997) found that participants of lower SES were more likely to have engaged in self-induced vomiting once per week or less, based on self-report.

Experiences with trauma or neglect may also be risk factors for developing disordered eating, especially considering links have been established between adverse childhood experiences and these behaviors (Mussell et al., 2000). Thompson, Wonderlich, Crosby, and Mitchell (2001) investigated potential links between sexual violence and weight control techniques; they found that for adolescents, sexual violence may be a risk factor for practicing weight control techniques. This may be related to a desire to regain command over the body, as a result of having had this control taken away by someone else.

Several physical and environmental familial factors have also been linked with increased risk of developing disordered eating behaviors including, father's preferences for thinner female body types, maternal over-protectiveness, and paternal emphasis on the importance of thinness. Disordered eating also has shown some comorbidity with maladaptive drinking behaviors in college students (Anderson, Simmons, Martens, Ferrier, & Sheehy, 2006). Finally, the possibilities of biological contributors to disordered eating behaviors, such as serotonin abnormalities or additional catecholamines for example, have been considered (Mussell et al., 2000).

Body Dissatisfaction

Body dissatisfaction, an individual's negative conceptualization of his or her physical bodily appearance is another important risk factor for disordered eating. The concept has been named body image, body perception, body esteem, perceived bodily appearance, and appearance orientation, among others. A 1994 analysis of common scales used to measure bodily perception found that despite the variety of terminology used, all were measuring a similar construct (Thompson, Altabe, Johnson, & Stormer, 1994).

While body dissatisfaction was not a prevalent research topic until recent decades, evidence suggests that the seeds of this issue were planted around the early 1920s. Before the 20th century, the desirable physique for women was full-figured (Grogan, 1999 as cited in Goodman, 2000). Author and researcher Joan Brumberg compared the diaries of 19th century girls with those of girls from modern times. What she discovered were interesting trends having to do with perceptions of the body. She noted that societal factors arose, such as the flapper era, in which the ideal female form was exceptionally slender, and not very curvy. Attempts to conform to this visual standard resulted in a great deal of dieting among young women. Additionally, the 1920s brought forth a new household item - the scale. Prior to this, people weighed themselves in drug stores or at county fairs (Brumberg, 1997). The scale provided another means by which to focus one's attention on weight. Around that time, there were young women exhibiting disordered eating symptoms, such as skipping meals, with an attempt to lose weight. However, according to Brumberg (1997), it was not until the 1960's that strong concerns

regarding one's body began to show up in the diaries of American girls. The preoccupation girls began to feel around this time is seen in frequent statements about feeling fat or unattractive, as well as writings about attempted dieting behaviors for the sake of altering one's bodily appearance. Furthermore, Brumberg (1997) noticed that often, the overall sense of wellbeing and esteem of many of these girls was almost entirely tied to weight and bodily appearance.

Higher levels of body dissatisfaction have been linked with a multitude of variables. One study investigating the socioeconomic and health features of relationships, found that in a sample of 16-21 year old women, smoking, body-mass index, and income (annual household >$20,000) were positively correlated ($p < .02$ or less) with what the study termed "body esteem" (Kornblau, Pearson, & Breitkopt, 2007). A study in Australia, involving a non-clinical adolescent population, found low self-esteem, depression, anxiety, and body-mass index positively correlated with their measure of body dissatisfaction "perceived body-image dissatisfaction" (Kostanski & Gullone, 1998).

Feminist author Naomi Wolf (2002), in her bestseller "The Beauty Myth," critiques popular images of beauty, cautioning that women are made to feel inferior to viewed images , thus becoming more likely to purchase products to help themselves achieve an unrealistic ideal. Award-winning author and researcher Jean Kilbourne uncovers and derides sexist messages in advertising. In her book "Can't Buy My Love" (1999) she provides countless examples of advertisements directed at potential female customers, in which the importance of physical beauty is emphasized in terms of how

women and girls should conceptualize themselves. One such example was an advertisement for a women's clothing product that stated: "the more you subtract, the more you add" (Kilbourne, 2000), further emphasizing the importance of physical image in terms of size and weight.

Additional research has demonstrated that the nature of an image may also be a factor affecting body dissatisfaction. For example, a study investigating sexist depictions of women on television, determined that for women a relationship existed between being exposed to sexist ads and perceiving one's body as larger (Lavine, Sweeney, & Wagner, 1999). So much emphasis is placed on thinness for women, that often, other desirable traits are associated with attaining this physical look. The media frequently represents thin women as capable, benevolent, popular, successful, and attractive (Goodman, 2000). Internalization of the thin ideal is so powerful that it is not uncommon for normal weighted American women to consider themselves to be overweight (Kilbourne, 2000). According to Kilbourne (1994), survey data indicate roughly three quarters of normal weight United States adult women feel fat, and more than half are on a diet (Wolszon, 1998). This may be due, in part, to the fact that the body type of models represents a very small minority and is impossible for the vast majority of women to attain (Kilbourne, 2000). Fallon and Rozin (1985) found discrepancy between women's perceived body appearance and what they considered to be ideal, with the ideal and more attractive appearance being smaller. Disordered eating behaviors may occur as an attempt to reduce this discrepancy. Research has consistently shown relationships between thin media images and negative body perception or disordered eating (Goodman, 2000).

As with eating disorders, original research in this area focused primarily on the subject of body dissatisfaction as a European-American issue. However, there are now indications that a negative perception of one's bodily appearance is not solely connected with one particular ethnic group, but instead, transcends these boundaries and can affect women of any ethnicity. In fact, women of color may experience an additional burden from societal standards of beauty, which under-represent or even misrepresent minority groups. Author Lola Young, in the chapter "Racializing Femininity" from her book Women's Bodies (1999) addressed the White beauty standard, stating that adjectives historically associated with White were seen as symbolizing grace, purity and innocence. These associations, according to Young, by default put women of color in a negative light, as the "embodiment of the antithesis of those qualities" (Young, p.79).

Because many ideals are developed not just across but also within cultures, other standards of beauty also exist, which may have a more positive effect on female body image. A recent longitudinal study of Latina adolescent females investigated the relationship between body image and television viewing. Deborah Schooler (2008) found that when comparing mainstream, Spanish-oriented, and Black-oriented television viewing, frequent viewing of the latter was associated with greater body satisfaction, while frequent viewing of mainstream television was associated with decreased satisfaction with body image during adolescence. In another study, Striegel-Moore et al. (2003) indicated that eating disorders might be more common among White women, in comparison with Black women. However, conceptualizing both historical and cultural context is crucial to the understanding of body image ideals within society. Maria Root

(1990) cautioned that individuals within a specific racial or ethnic group "are subject to the standards of the dominant culture" (p.525). Root went on to advocate for additional research on the subject of body image for women of color.

Body dissatisfaction has been specifically linked with disordered eating in numerous studies (Brannan, & Petrie, 2004; Littleton & Ollendick, 2003; Tiggemann, 2001), and is considered to be a strong predictor of disordered eating behaviors. The thin ideal has been seen as a common factor contributing to this relationship. As woman and girls view images of bodies that do not match their own, and continue to internalize these images as standards of beauty, body image may be negatively affected.

In an attempt to alter the body to meet the unrealistic standards of the thin ideal portrayed in society, one may engage in disordered eating as an unhealthy means of coping with the discomfort of the discrepancy found in her own body. Groesz, Levine, and Murnen (2002) investigated effects of viewing thin media images versus average or plus-sized images; they found a significantly lowered body image for participants after viewing the thin images. This was especially true for young women under 19 years of age. These images of women are sometimes portrayed in a sexist light, which also has a negative impact on women. Lavine, Sweeney, and Wagner (1999), in their investigation of the effects of sexist television advertising on female body dissatisfaction, found that "although feminists were more rejecting of the sexist ads, when explicitly asked to evaluate them, they were no more impervious to their influence than were non-feminists" (p.1056). In other words, there was no significant difference between feminists and non-feminists in lowered body satisfaction after exposure to such mediated images.

When one does not feel satisfied with his or her bodily appearance, disordered eating behaviors may be initiated as a means of trying to cope with this dissatisfaction and alter its source, the body. Disordered eating may be a means of attempting to exert control over the aspect of life a person is displeased with, her physical appearance. If she is not as thin as the images she sees on television when she comes home from work or school, or can't wear the same clothing size as her thinner friends, or doesn't feel as attractive as the girls in her favorite magazines, she might consider alternate options as a means of achieving a thinner appearance.

Certain personality characteristics may also make an individual more likely to adopt these attitudes; for example, disordered eating behaviors have been linked with higher levels of social comparison (Tylka & Sabik, 2010), state and trait anxiety (Vardar, Vardar, & Kurt, 2007), locus of control (Scoffier, Paquet, & d'Arripe-Longueville, 2010), escape avoidance coping, perceived family support, low self-esteem (Ghaderi, 2003), and perfectionism. Perfectionism in particular, has been linked with bulimic symptoms (Bardone-Cone, Weishuhn, & Boyd, 2009; McKee, 2006; Tissot & Crowther, 2008; Young, Clopton, & Bleckley, 2004;), including a maladaptive form of the trait (Stuart, 2010).

Perfectionism

Personal goals for weight often require an incorporation of changes in eating behavior, and some weight goals are more attainable than others. Perfectionism incorporates exceptionally high personal standards for oneself, and may involve overly

self-critical personal behavior evaluations (Frost, Marten, Lahart, & Rosenblate, 1990).This is often seen in attempts to live up to perfectionist personal achievement. In addition to only accepting the highest standards in terms of personal performance, perfectionism can be thought of as the "belief that outstanding achievement is expected by others" (Garner, p.6, 1991). Individuals struggling with these unrealistic standards, whether from internal or seemingly external sources, may find themselves in a position requiring a continuous strive for a level of success that is unattainable. In the case of disordered eating behaviors associated with anorexia nervosa or bulimia, the weight that is lost might provide false hope of achieving the goal of perfection.

Individuals exhibiting higher levels of perfectionism in general may be more likely to engage in disordered eating behaviors as an attempt to perfect his or her image of the "perfect" idealized physical body. A study by McVey, et al, (2002) investigating risk and protective factors associated with disordered eating, found perfectionism to be associated with an increased risk of engaging in disordered eating behaviors. Recent research regarding the relationship between perfectionism and disordered eating further supports this hypothesis. A comparison of underweight anorexics, with weight restored anorexics and a control group indicated that underweight anorexics exhibited higher perfectionism than the other two groups (Bastiani et al, 1995, as cited in Peck & Lightsey, 2008, p.185). Another study found a relationship between perfectionism and binge eating disorder symptoms (Pratt, Telch, Labouvie, Wilson, & Agras, 2001). Welch, Miller, Ghaderi, and Vaillancourt (2009) found a correlation between disordered eating attitudes and behaviors associated with perfectionism.

Multiple researchers have begun to consider perfectionism as a multi-faceted construct. Hewitt and Flett (1991) for example, established three qualifying dimensions of perfectionism: self-oriented, other-oriented and socially prescribed perfectionism. Hewitt and Flett (1991) postulated that socially prescribed perfectionism might lead to negative emotions like depression and anxiety, as a result of feeling incapable of meeting perceived expectations of others that are unrealistic and unattainable. Self-oriented perfectionism has been associated with similar negative emotions, including anorexia nervosa specifically. Notably, perfectionism may influence bulimic behaviors, but in different ways (Silgado, Timpano, Bucker, & Schmidt 2010). Up until recently, while perfectionism was considered to have multiple forms, these were generally all considered to be negative.

Current research has led to further consideration of the construct embodying both positive and negative features (Slaney, et. al, 2001). Researchers refer to these features as adaptive and maladaptive perfectionism, respectively (Longbottom, Grove, & Dimmock, 2010), with the former being associated with healthier psychological traits such as self-efficacy, and the latter with fears of failure, for example (Longbottom, et. al, 2010). Thus, perfectionism may not be in and of itself a negative construct, as it can be utilized in terms of goal setting and high standards of achievement. In such instances, it may be thought of as adaptive. When there is a discrepancy between these standards and how much an individual feels distanced from them however, perfectionism may become maladaptive, in that there is distress experienced by the lack of mastery regarding such standards.

Research comparing individuals being treated for eating disorders with those who weren't, revealed the maladaptive form of perfectionism was more prevalent in eating disordered populations. (Ashby, Kottman, & Schoen, 1998).The same study also noted a relationship between body dissatisfaction and maladaptive perfectionism as well. While maladaptive perfectionism was statistically more prevalent in the population being treated for eating disorders, there was no difference in adaptive perfectionism between the two groups. Maladaptive perfectionism has also been linked with unhealthy weight control behaviors (Lacour, 1997), as well as bulimic symptomology specifically (Pearson & Gleeves, 2006). Wilson (2009) found emotional and restrained eating both to be significantly related to maladaptive perfectionism in a sample of graduate students.

The relationship of perfectionism with disordered eating may in part be due to an individual's belief that achieving one's perceived ideal body is synonymous with realizing personal or societal standards of perfection. Thus, if someone has decided her body is the means by which perfection can be attained, she may engage in behaviors associated with body-related goals such as disordered eating, as a means of attaining her personal idea of a perfect body. For some, attaining a desirable personal appearance may be so important, that it impacts how an individual feels about him or herself.

Contingent Self-Worth

People tend to be very discriminating about the areas in which they invest their sense of self-worth. When one's self-worth is based on a specific area or areas, setbacks and/or failures threaten self-image. This may result in defensiveness regarding negative

outcomes or self-serving biases (Crocker, et al., 2003). When someone makes an effort to improve various aspects of his or herself, resulting successes and failures are likely to impact mood and potentially, self-esteem. By nature, self-esteem lies within specific domains in which people invest their validation. In other words, self-esteem is not only global, it is dependent on evaluations of self-worth in valued domains such as academics, appearance, popularity, and so on (Crocker, et al. 2003). This phenomenon of investing self-esteem only within specific domains is described as contingencies of self-worth. Having one's self-worth invested in success within specific domains can make people vulnerable to disappointment and lead to fragility of self-worth when such standards are not met. Placing self-worth mainly on appearance therefore, could lead to an unstable self-image whenever there are changes in appearance, such as when one gains or losses weight.

Contingent self-worth is connected with self-regulatory behaviors and goal-setting related to the particular domain(s) in which an individual invests his or her personal value or self-esteem. Thus, goal outcomes in these contingent areas may result in large fluctuations in self-esteem, with self-esteem rising and falling according to goal progress or hindrance. For women in U.S. society, appearance standards are often based on having a slim body. A young woman whose self-worth is dependent upon her appearance will be inclined toward behaviors related to physical appearance. Weight is a variable that can be manipulated and controlled to some degree, thus making it an easy to target aspect of goal setting. For this reason, women who have a sense of self-worth contingent on appearance ought to be more motivated to do things that maintain their self-worth such as

dieting and exercising, for example. Such dramatic and unstable shifts in self-perception are likely to lead to intense affective experiences such as depression or anxiety. The strong desire to improve one's self-image therefore could feasibly result in unhealthy eating, or dieting behaviors.

Crocker et al. (2003), investigated relationships between contingencies of worth and behavior outcomes among male and female college freshmen. Results indicated that individuals basing their self-worth on appearance were more likely to engage in increased exercise activities from the first to second semesters of college. Women tended to score significantly higher than men for appearance contingencies of worth, and for college freshmen, basing self-worth on appearance is a significant predictor of whether or not a freshman will join a fraternity or sorority (Crocker, et al, 2003).

External contingencies of worth have been linked to disordered eating behaviors directly, with external contingencies of worth referring to externally validating sources, including appearance (Sanchez, & Crocker, 2005), size, or weight, for example. Further, self worth contingent upon weight has been linked with a drive for thinness in women (Sabik, Cole, & Ward, 2010). Thus, when one places her personal value on her weight alone, she is more likely to engage in behaviors she believes will help her stay or become thin. On the other hand, if she sees she has value beyond her appearance, and can accept herself the way she is, perhaps she will instead eat for health and nourishment.

Self-Compassion

Self-compassion is a concept first researched by psychologist Kristin Neff (2003b), and incorporates essential aspects of Buddhist philosophy. Put simply, self-compassion is defined as a healthy way of relating to oneself during times of trial and emotional pain that entails three main components: Self-Kindness versus Self-Judgment; Common Humanity versus Isolation; and Mindfulness versus Over-identification with painful thoughts and feelings. Self-compassion involves an openness and acceptance of one's personal suffering, as opposed to disconnection or avoidance. This generates a desire to heal oneself in a kind rather than self-critical way. Further, this concept incorporates nonjudgmental understanding of personal failures, pain, and inadequacies, so that an experience is connected to others within the realm of a shared human experience (Neff, 2003b).Self-compassion (Neff, 2003a) involves a combination of mindful awareness of painful emotions, seeing one's personal occurrences as part of the larger human experience, and treating oneself with kindness and compassion in instances of failure.

Self-kindness versus self-judgment. Self-kindness involves treating oneself with gentleness and understanding after making mistakes, when it comes to flaws or imperfections, or when things don't go as planned. Someone who incorporates aspects of self-kindness will be less likely to ruminate about a negative event or circumstance. Instead of engaging in harsh self-criticism, she might recognize the experience for what it is in a non-judgmental way, recognize and accept herself for her flaws and imperfections,

and forgive herself for mistakes. Self-kindness is an attempt to heal one's personal suffering (Neff, 2003b).

Common humanity versus isolation. Common humanity refers to one's understanding of the shared human experience, recognizing that all humans are imperfect and experience suffering. A person exhibiting higher levels of self-compassion will see herself as connected and similar to other people, simply because she is human. When someone is in tune with her common humanity, she will be less likely to isolate herself and feel alone in her sadness or negative experiences. Instead she might think about the possibility that others may have experienced, or might even presently be experiencing similar trials and tribulations. Further, she will be aware of the fact that imperfection is part of life and that as part of the human community, it is normal to have weaknesses as well as strengths.

Mindfulness versus over-identification. Mindfulness can be conceptualized as an internal, introspective awareness of one's personal thoughts and feelings. Mindful individuals consider and recognize their thoughts and feelings and monitor these along with their emotional and cognitive reactions to various events and circumstances. Instead of over-identifying with negative emotions by getting wrapped up in them, a mindful person steps back from a painful experience and holds it in objective awareness. He or she will acknowledge and allow the painful emotions to occur, without becoming overly submerged in them. Mindfulness allows one to engage in thoughtful appraisal, and ultimately opens one to a place where it is easier to engage in self kindness and understanding (Neff, 2003b).

These three components together constitute self-compassion, a healthy way of treating oneself in times of pain or failure. There are a great many benefits to the self-compassionate individual. Research has linked self-compassion to adaptive psychological functioning that serves as a buffer in self-evaluative situations. For instance, Neff, Kirkpatrick, & Rude, 2007) asked undergraduates to describe their greatest weakness as part of a mock job interview. Those with higher levels of self-compassion felt less anxiety after the task. In another study of undergraduate college students, Neff, Rude, and Kirkpatrick (2007) found a positive relationship between self-compassion and happiness, optimism, initiative, conscientiousness, and curiosity.

Given that rumination is based on overwhelming negative and bothersome thoughts, it is not surprising that self-compassion is negatively related to rumination (Neff, 2003). A self-compassionate person will hold negative events in mindful awareness, but instead of hyper-focusing on them, will acknowledge and then process these feelings. Neff (2003a) determined that increases in self-compassion were linked to lowered levels of rumination, anxiety, and thought suppression. Recent research investigating the relationship between self-compassion and people's reactions to unpleasant self-relevant events found that self-compassion buffered psychological distress (Leary, Tate, Adams, Allen, & Hancock, 2007). Leary et al. (2007) also found that self-compassionate individuals tended to accept personal responsibility for negative events in their lives. Instead of attributing unpleasant occurrences to outside forces, self-compassionate individuals considered their own contributions. Despite this acceptance, however, self-compassionate individuals also treated their mistakes with kindness and

understanding (Leary, et al., 2007). Given that part of the human experience is about making mistakes, a strength of self-compassion is that is allows one to hold his or her flaws and imperfections in mindful awareness.

It is important to note that self-compassion is not the same thing as the commonly used construct of self-esteem. While the two are moderately correlated with one another, there are crucial key differences. Self-esteem in its prime was considered to be a healthy and positive measure of self-concept but researchers have increasingly found that the concept has several drawbacks. Self-esteem is based on positive self-evaluations, (Neff, Kirpatrick & Rude, 2007) and while the term was originally conceptualized as a measure of psychological well being, research has recently suggested that it is possibly a more complicated construct than originally thought. Self-esteem has been shown to correlate with narcissism (Neff, 2003a; Neff, 2000b; Neff, Hsieh, & Dejitterat, 2005), prejudice and violence, (Crocker & Park, 2004). Further, while individuals with higher self-esteem may view themselves favorably, this self-regard may be contingent upon certain factors in one's life. Since self-esteem is associated with one's self-perception, it may shift depending on one's life circumstances. Self-esteem can be associated with negative factors such as self-evaluative anxiety, contingent self-worth, and negative self-evaluations when under threat of isolation (Crocker et al, 2003; Neff, Kirkpatrick, & Rude, 2007).

Self-compassion on the other hand, is more likely to remain stable regardless of negative or positive circumstances in one's life (Neff, 2003a). Regardless of whether or not an individual gains or losses weight; becomes employed or unemployed, or any other

number of factors, self-compassionate treatment of oneself ought to remain constant. Neff and Vonk (2009) examined state self-worth 12 times over an 8 month time frame, and found that self-compassion was a stronger predictor of self-worth stability than self-esteem. Furthermore, self-compassion was found to be negatively associated with contingent self-worth in general, as well as contingent self-worth based on appearance specifically, which was not the case for self-esteem. Self-compassion was also associated with less social comparison and public self-consciousness than self-esteem.

Neff (2003b) argues that self-compassion does not require that people inflate their egos to feel good about themselves, due to an improved ability to embrace both strengths and weaknesses simultaneously. The attempt to maintain contingent self-worth may result in maladaptive behaviors (Crocker & Park, 2004). For example, if one's self-esteem is based on looks and physical appearance, he or she may experience a lowered self-esteem in the instance of a small weight gain, because the positive evaluation that was linked to his or her higher self-esteem has shifted. The self-compassion level for this same individual however, would not be expected to change, as self-compassion is not contingent upon success or failure, but is a means of dealing with negative evaluations.

Self-Compassion and Disordered Eating

Self-compassion may be especially helpful as a protective factor against disordered eating. The self-compassionate feature of mindfulness suggests one might have a more balanced perspective of her eating patterns and habits and be aware of her thoughts and feelings. Mindfulness has a negative relationship with maladaptive

psychological traits such as emotional distress, while conversely; disordered eating cognitions tend to have a negative relationship to psychological health. An investigation of these factors revealed that mindfulness plays a mediating role in the relationship between disordered eating cognitions and emotional distress (Masuda & Wendell, 2010); with emotional stress such as rumination being the immediate precursor to emotional eating. There may in fact be a reciprocal link between bulimia and rumination (Nolen-Hoeksema, Stice, Wade, & Bohon, 2007). In other words, disordered eating and rumination tend to contribute to one another. Harrell and Jackson (2008) suggest that a ruminative coping style may link disordered eating behaviors to experiences of depression.

The self-compassionate feature of self-kindness, offers a healthy alternative to rumination. Instead, self-kindness could involve a gentle treatment of the body in the form of self-care and healthy eating, for example. Further, a self-compassionate individual, recognizing her common humanity, would be more likely to recognize that failures or negative events happen to everyone and that she is not alone. He or she would view experiences with eating as part of the larger human experience, as opposed to becoming isolated and feeling alone in over or under-eating, for example. The mindfulness component of self-compassion might be particularly helpful as a protective factor against eating problems. For example, instead of becoming emotionally overwhelmed and upset about eating, the self-compassionate individual would understand and be in better touch with his or her own hunger cues, and be able to ideally differentiate emotional from physical triggers to eat or not. Further, in instances of small weight gain,

a self-compassionate individual would be likely to attribute the weight gain to the extra desserts she consumed the prior week, and merely adjust her dessert intake as needed the following week.

Recent research investigated the possible connection between self-compassion and restrained or guilt eating. In a study using female college students as subjects, Adams & Leary (2007) set up self-compassion as the independent variable, pre-loads of an unhealthy food as an experimental situation, and measured the subsequent likelihood of engaging in disordered eating as the dependent variable. Two groups of women were brought in under the guise of a different study and given a donut which they were told to eat as part of a bogus taste test. The experimental group was given priming to be self-compassionate about eating the donut while the control group was not. In the second part of the study, candy was provided to participants. In the scale created specifically for this study, the "Reversed Rigid Restraint Scale," the authors combined restrained eating with a measure to evaluate the guilt that accompanies disordered eating behaviors. This research determined, based on the amount of candy in weight eaten by participants; that restrained eaters who had been primed with self-compassion in the previous scenario with the donut, despite having been in the pre-load condition of eating the unhealthy food, performed significantly better than the control group in a second scenario in which treats were offered. In other words, the self-compassion primed group was more likely to monitor and control their eating effectively compared with participants who had not received self-compassion priming (Adams, & Leary, 2007).

This relationship suggests that self-compassionate attitudes may reduce the risk of engagement in disordered eating. An individual who is more self-compassionate ought to be more likely to accept and respect her body in whatever shape or condition it is in, regardless of appearance and be more forgiving of diet faux pas. A self-compassionate person might appreciate her body beyond specific appearance characteristics or bodily features. She would likely accept changes her body goes through physically as part of life, something that happens to people. She might therefore, be more likely to appreciate this realization and treat her body with more respect and kindness.

As self-compassion is not based on evaluations or appraisals of the self, it might allow for more positive feelings about oneself that do not rely on physical appearance. Due to its stable nature, as well as its encouraging association with other positive mental health factors, self-compassion may be an ideal protective factor that minimizes one's risk for developing disordered eating habits.

Self-Compassion, Body Dissatisfaction, Perfectionism, and Contingent Self-Worth

Embodying self-compassion may help alleviate disordered eating by improving body image, reducing unrealistic expectations of personal perfectionism, and improving a person's capacity to see his or herself as a worthwhile individual despite setbacks or failures, regardless of domain.

Body dissatisfaction. Body dissatisfaction stems from a negative evaluation of one's physical body. Self-compassion on the other hand, entails a more positive and understanding self-view. As self-compassionate attitudes incorporate kindness and

understanding toward imperfections and flaws, this way of being may be a protective factor against body dissatisfied thinking and associated feelings. A self-compassionate person, regardless of body weight, size, or shape would be more likely to appreciate and accept her appearance, as opposed to ruminating about perceived imperfections. Self-compassion was investigated as a potential moderating variable in the relationship between body image to both depression and self-esteem. Brown (2007) found a significant negative relationship between self-compassion and body dissatisfaction, as it accounted for a significant amount of variance in the negative relationship between self-esteem and depression. Thus, higher levels of self-compassion may be linked to more kindhearted, flexible ways of viewing one's own body. Perhaps individuals who are more self-compassionate are more aware of unrealistic societal images of women's bodies and thus have personal standards that are more reasonable and attainable. Another possibility is that regardless of awareness of societal standards, a self-compassionate individual may be more likely to accept his or her body the way it is, and view it as something to appreciate.

Perfectionism. Self-compassionate individuals are also less likely to become upset by unrealistic or unhealthy personal standards, because self-compassion involves accepting ones shortcomings and imperfections. Perfection by contrast, alludes to a lack of flaws and perhaps involves behaviors related to seeking to achieve unrealistic standards. Self-compassion has a negative relationship with maladaptive perfectionism (Neff, 2003a), an unhealthy, maladaptive form of the trait involving highly unrealistic personal standards.

Perfection has also been disentangled by some researchers in terms of potential positive and negative aspects of the trait. Slaney et al. (1996) described aspects of perfectionism: discrepancy and adaptive, with the latter measuring personal standards and the former, negative reactions when these standards are not met. People with higher levels of perfectionism tend to have unrealistically high standards that are generally difficult to obtain. Simply having high standards for oneself is not necessarily unhealthy in and of itself. Maladaptive perfectionism occurs when the distance between these standards and perceived achievement or lack thereof is combined with a negative reaction to this discrepancy. Maladaptive perfectionism had a significant negative relationship with self-compassion, as self-compassionate individuals, though sufficiently setting high personal standards did not become as upset when faced with discrepancies between these standards and actual performance (Neff, 2003a). In other words, they were less likely to experience the negative aspects of perfectionist attitudes. Perhaps more self-compassionate attitudes protect an individual from being as concerned with both social and self internalized aspects of perfectionism by helping a person be more realistic about accepting of the self as a flawed, imperfect being.

Stuart (2010) determined that after just a one-hour self-compassion enhancing workshop, self-compassion partially mediated the relationship between maladaptive perfectionism and disordered eating in college women. Stuart (2010) advertised the workshop with a flyer posted around a college campus entitled "Quiet Your Inner Critic" (p.105). Participants took the workshop through the counseling center on campus, which included a combination of writing and meditation exercises designed to increase self-

compassion, and subsequently experienced a reduction of maladaptive perfectionism and disordered eating post-workshop.

Contingent self-worth. A self-compassionate individual's perceived worth is less likely to be contingent on physical appearance. Rather, a self-compassionate person values him or herself because all people are intrinsically worthy of kindness and respect. Further, contingent self-worth, like perfectionism, may incorporate self-regulation, as a means of attaining goals linked to self-worth (Crocker, etl al, 2003); this may lead to maladaptive behaviors intended to enhance the area or areas upon which one bases his or her self-value. In other words, inherent efforts to improve one's personal worth, could lead to unhealthy behaviors, in instances where personal worth is invested largely in areas where change is not always ideal or beneficial, for example. Contrary to a person high in contingent self-worth, a self-compassionate person ought to be less likely to focus on her appearance as the sole means of her worth as an individual.

Disordered eating behaviors may be a means of coping with sources of dissatisfaction with one's physical appearance, particularly if his or her self worth is contingent upon this domain. Self-compassion is a stable source of self-worth that is less contingent on particular outcomes, including physical appearance (Neff & Vonk, 2009), and thus this more stable sense of self-worth is likely to reduce the tendency to engage in disordered eating. In other words, for a self-compassionate individual, positive self-views are not dependent upon things like dieting success, and can therefore remain steady despite weight fluctuation, etc. This provides the emotional stability and self-concern needed to refrain from unhealthy eating behaviors.

College: a Crucial Period of Life

Disordered eating behaviors occur more frequently during the transitional period of emerging adulthood, in comparison with other times of life (Littleton, 2003). Adolescence typically lasts from the early teens until the early to mid twenties, thus, in general, undergraduate females are in the midst of this crucial developmental period. In recent years, Arnett (2010) posited the concept of a developmental stage between adolescence and young adulthood which he calls emerging adulthood, and which can last until age thirty. According to Arnett, emerging adulthood has come into existence over the last thirty years as a response to social changes such as later ages for marriage and childbearing, as well as increased college enrollment. As a result, emerging adulthood, roughly from the late teens to mid twenties, is characterized by a great deal of identity exploration and focus on the self. Depending on what one deems important in terms of identity status or formation, intense focus on the self during this stage could contribute to a variety of behaviors, be they adaptive or not.

Given that most undergraduate college students are between the ages of 18-22, they fall into this critical period in their lives, a time of identity formation, introspection, and, eventually intimate partner seeking. The emerging adult is in a phase in which one tries to understand where one fits into society. The need to "fit in" and be a part of the surrounding world may cause concern and distress for a young person who doesn't feel he or she measures up to societal standards. Marcia et al. (1993) views this process of identity exploration in terms of commitment dimensions. If a young woman successfully navigates this phase of life, she will come to a place of understanding her identity. If not

however, she may feel she is a failure for not managing to conform to perceived standards. In this quest for identity development, late-stage adolescents may be particularly vulnerable to external factors; thus, peer influence may be at its greatest at this time. Due to these influences and the strong desire to meet these perceived expectations and fit in, young adults in particular may be especially inclined to assert personal agency over factors in their own lives. Many scholars also believe it is around this time that the transition to Erikson's (1963) Intimacy versus Isolation stage generally occurs. At this time, the emergent young adult may be seeking connections with others and thus, may be thinking of how she measures up to the imagined standards of potential romantic partners.

Looking in the mirror is a concrete way of visibly confirming how one matches or fails to match up to societal standards of attractiveness, which subsequently contribute to defining who one truly is. Disordered eating may be one way of helping shape one's identity, because these behaviors could potentially yield observable results, as well as contribute toward developing personal agency. This might be especially true for one who places her personal value or self-worth in her appearance. Thus, an emerging adult's self-concept and how he or she relates to himself or herself might be helpful in understanding disordered eating. A positive self-concept might act as a potential barrier from disordered eating, while negative self-views may increase vulnerability to problematic eating behaviors. Self-compassion might have particular relevance to eating issues as one transitions into adulthood given the focus on healthy ways of relating to oneself and greater body acceptance. As a means of enhancing disordered eating prevention

therefore, working to instill a self-compassionate attitude may serve as an important safeguard, in terms of enhancing protective factors as a buffer against unhealthy eating.

Literature Summary

Because self-compassion has been positively linked with healthy psychological functioning and negatively related to maladaptive traits, it may be a protective factor against disordered eating which is, by nature, the antithesis of a self-compassionate way of behaving. There has also been a small amount of research indicating that self-compassion is negatively to disordered eating behaviors (Adams & Leary, 2007). Two common manifestations of disordered eating are emotional eating and restrained eating. Body dissatisfaction, contingent self-worth, and perfectionism are potential mediating factors in the relationship between self-compassion and disordered eating, as all have been found to be positive risk factors for engagement in disordered eating: (Brannan & Petrie, 1997; Levine & Smolak, 1992; McVey, et al., 2002; Mussell, et al., 2000; Paxton et al., 1991; Peck & Lightsey, 2008; Sanchez & Crocker, 2005; Smolak & Levine, 2001; Stewart Carter, Drinkwater, Hainsworth, & Fairburn, 2001). By contrast, self-compassion has been linked with lower levels of maladaptive perfectionism (Neff, 2003b), body dissatisfaction (Brown, 2007), and contingent self-worth (Neff & Vonk, 2009) in prior research. Therefore, the significance of the negative relationship between self-compassion and disordered eating may be partly accounted for by the positive relationships of body dissatisfaction, contingent self-worth, and perfectionism to disordered eating.

Present Research: Hypotheses and Rationales

First Hypotheses. It is predicted that there will be a negative relationship between self-compassion and disordered eating.

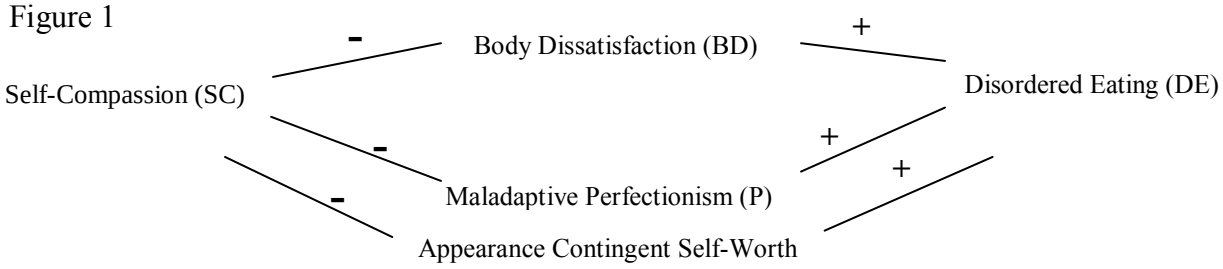
Rationale for First Hypotheses. Given the unique, harmful nature of binge eating behaviors, they may be seen as a way of mistreating one's body. As self-compassion involves treating oneself kindly and compassionately, it may serve to insulate one from engaging in these harmful actions. Further, because self-compassionate attitudes incorporate mindfulness, a self compassionate individual may be more mindful of regulating treatment of the physical body, and thus, more likely to eat due to hunger, as opposed to eating as a result of emotionality, or restricting food intake. As prior research strongly suggests self-compassion may serve as a buffer against disordered eating behaviors (Adams & Leary, 2007), it was anticipated these results would be replicated.

Second Hypotheses. It is predicted that there will be a negative relationship between self-compassion with the variables of perfectionism, body dissatisfaction, and contingent self-worth. It is also predicted that there will be positive relationship between disordered eating and each of these same variables.

Rationale for Second Hypotheses. Body dissatisfaction, perfectionism, and contingent self-worth have all been positively linked in numerous studies to disordered eating (Downey & Chang, 2007;; McKee, 2006; Sanchez & Crocker, 2005; Welch, Miller, Ghaderi, &Vaillancourt, 2009). On the other hand, self-compassion appears to be negatively linked with all three mediating variables: body dissatisfaction, perfectionism, and contingent self-worth (Brown, 2007; Neff, 2003b; Neff & Vonk, 2009).

Third Hypotheses. Perfectionism, self-worth contingent upon appearance, and body dissatisfaction will partially mediate the negative relationship between self-compassion and disordered eating. (See Figure 1)

Figure 1



Rationale for Third Hypotheses. Self-compassion is expected to impact disordered eating in part, due to its negative relationship with body dissatisfaction, perfectionism and contingent self-worth. Self-compassionate attitudes incorporate self-acceptance, especially in light of flaws and imperfections. Body dissatisfaction, perfectionism and contingent self-worth on the other hand, require an individual to self-evaluate. Given the connection between all of these, the negative relationship between self-compassion and disordered eating is expected to be partially accounted for by the mediating variables.

Exploratory Question. An exploratory investigation of the differential impact of self-compassion on restrained versus emotional eating will be conducted, to determine if relationships between variables differs for these two types of disordered eating behaviors. In other words, is the strength of the relationship between self-compassion and disordered eating the same in terms of emotional and restrained eating? Also, do the same meditational pathways occur for both types of disordered eating?

Rationale for Exploratory Question. Learning more about whether there is a differential impact of self-compassion on restrained or emotional eating may inform future research on disordered eating, and help us better understand how to alleviate this growing problem. The mechanisms by which self-compassion impact restrained eating may differ from that of emotional eating in terms of the mediation variables. For instance, if self-compassion was found to be linked to emotional eating mainly through the mechanism of body dissatisfaction, but it was linked to restrained eating mainly through the mechanism of perfectionism and contingent self-worth, this may suggest different ways that self-compassion should be used to intervene when considering different types of disordered eating behavior.

Chapter 3

Methodology

Procedure

Participants read and signed a consent form (Appendix A) and were instructed to complete all questionnaires online (Appendix B), anonymously, on a survey website. This process took approximately an hour or less. At the end of the survey, participants were provided a debriefing statement (Appendix C).

Measures

Demographic survey. A demographic survey was given to all participants requesting: age, year in school, and race/ethnicity. All participants filled out the survey online, and received course credit. Descriptive data was gathered in order to gain a better understanding of the sample as a whole in terms of such factors as ethnicity, and student status, and to help ensure the sample was an accurate representation of the make-up at the university.

Self-Compassion. The Self-compassion Scale Short Form (SCS-SF: Raes, Pommier, Neff, & Van Gucht, 2011) assesses six features of self-compassion, with negative aspects reverse coded. Negative aspects are: isolation, over-identification, and self-judgment. Positive aspects are: mindfulness, common-humanity, and self-kindness. The SCS demonstrates convergent and discriminating validity, as well as test-retest reliability (Neff, Rude, & Kirkpatrick, 2007). The SCS-SF was developed from the original Self-Compassion Scale (Neff, 2003a) and the total scores of all short form

subscales together have a near perfect correlation with the original version. SCS-SF items are on a five-point Likert Scale with response options ranging from "almost never" to "almost always." Sample items include: "I try to be understanding and patient towards those aspects of my personality I don't like," and "When I fail at something that's important to me, I tend to feel alone in my failure" (reverse scored). Factor analysis of the SCS has shown that inter-correlations between the six subscales were explained by a single higher order factor for self-compassion, thus making it "an overarching factor emerging out of the combination of subscale" (Neff, 2003a p.234).

Disordered eating. The Dutch Eating Behaviors Questionnaire (DEBQ) was used to assess disordered eating. The DEBQ (Strien et al., 1986) is comprised of three subscales; the two of interest in this study are restrained and emotional eating. The ten items of the restrained eating subscale are measured using a five-point Likert scale. Sample items include: "If you have put on weight, do you eat less than you usually do?" "Do you take into account your weight with what you eat?" (Strien et al., 1986) Cronbach's alpha values for this subscale were .95 in a sample of both obese and non-obese men and women, and remained .95 in the female portion of the sample, which was comprised of both obese and non-obese females. (Strien, et al., 1986). The 13 items of the emotional eating subscale are also measured using a five-point Likert scale, ranging from "strongly agree" to "strongly disagree." Sample items of this subscale include: "Do you have a desire to eat when you have nothing to do?" "Do you get the desire to eat when you are anxious, worried, or tense?" (Strien, et al., 1986). Cronbach's alpha values for this subscale were .94 in a sample of both obese and non-obese men and women, and .95

in the female portion of the sample, which was comprised of both obese and non-obese females. (Strien, et al., 1986).

Body Dissatisfaction. Body Dissatisfaction (BD) was measured using the Eating Disorders Inventory-2 (EDI-2: Garner. 1991). The measure is considered reliable for adolescent populations ages 11 and up; however, it is recommended for populations ages 12 and up. Body dissatisfaction has frequently been measured using the body dissatisfaction subscale of the EDI-2 (Garner) or the original EDI (Garner, Olmsted, & Polivy, 1983) in research in this area (Paxton et al., 1991; Kostanski & Gullone, 1998; Rosen, Silberg & Gross, 1988; Goodman, 2000), and was the measure for this variable in the current study. The measure was developed and validated for use with both patient and non-patient populations. The nine-item Body Dissatisfaction subscale has an estimated reliability between .91 and .93 for non-patient females, and .90 to .92 for samples of patients suffering from eating disorders (Garner, 1991). The items are on a six-point Likert scale, where participants are to respond based on whether or not an item applies "always, usually, often, sometimes, rarely, or never." Sample items of the (BD) measure include: "I feel satisfied with the shape of my body," (reverse scored) and "I think that my thighs are too large" (Garner, 1991).

Perfectionism. Perfectionism was measured using the discrepancy subscale of the Almost Perfect Scale-Revised (Slaney, et. al, 1996), which is designed to capture maladaptive perfectionism. Maladaptive perfectionism is captured with the 12 item Discrepancy subscale, which measures distress caused by the discrepancy between performance and standards, with items such as "My best just never seems to be good

enough for me." Reliability and validity of this scale have been demonstrated in research (Slaney, et al., 1996).

Contingent self-worth based on appearance. Contingent self-worth was measured using the Contingencies of self-worth scale (CSWS; Crocker, Luhtanen, Cooper, & Bouvrette, 2003). The five item subscale of the CSWS on physical appearance was used in order to determine participants' investment in appearance in determining personal self-worth. The test has good test-retest reliability; the items are on a 7-point Likert scale with responses ranging from strongly agree to strongly disagree. Sample items include: "My self-esteem is unrelated to how I feel my body looks," and "When I think I look attractive, I feel good about myself" Cronbach's alpha is .081 for the contingent self-worth scale (Crocker, et. al, 2003).

Chapter 4

Results

Participants.

Participants included 226 female students randomly assigned from the subject pool at the Department of Educational Psychology at The University of Texas at Austin. The mean age of participants was M=20.9, SD=1.94, with a range of 18 - 34. The sample distribution by race/ethnicity was 8% African American/Black, 22.1% Asian/Southeast Asian, 40.3% European American/White, 24.8% Hispanic/Latina, 0.4% Indigenous/Native American, and 4.4% Biracial/Multiracial. Participants distributed by year in school were 4 % freshman, 8% sophomores, 32% juniors, 55% seniors, and 0.4 % graduate student. Participants were overall a representative sample of a typical college student age range, and the general ethnic breakdown of students at the university (Education portal, 2011).

Data Analyses

Descriptive Statistics and Preliminary Analyses of Data. Prior to analyzing data, all scale measures that included items needing reverse coding, were adjusted as needed, in order to allow appropriate calculations of data. Further, descriptive categorical data was dummy-coded in order to establish numbers and percentages in these categories. To note, the original dataset did not have improbable values, as participants could only designate response choices that were given, and all options provided were probable values for each scale and measure. In order to establish homogeneity of variance and

ensure the findings would not violate the assumptions necessary for multiple regression techniques, the data was analyzed for outliers; reliability of all measures was also computed. There did not appear to be significant outliers in this dataset.

All scales were tested for internal consistency using Cronbach's alpha coefficients and were found to be reliable, ranging from a low of 0.74 for Contingent Self-Worth to 0.95 for Emotional Eating, and the discrepancy subscale of the Almost Perfect Scale. See Table 1 for a listing of all means, standard deviations, and reliability values. Item-total correlations were reviewed to ensure success of these items in measuring respective data. All items in all measures were found to have acceptable item-total correlations with values above .30, the vast majority well above this value. Further, scale variances would not have changed significantly had any items been deleted.

In order to determine relationships between study variables, correlations were calculated that controlled for age to ensure any variations in participant age did not impact results, as self-compassion has demonstrated a significant positive association with age in previous research (Neff & Vonk, 2009). See Table 2 for the correlation matrix of all paired scale variables and levels of significance.

Main Analyses

Table 1: Scale Statistics - Mean, Standard Deviation, Item Count, and Reliability*				
Scale	# Items	Reliability*	M	SD
Self-Compassion Score	12	0.84	3.49	0.64
EDI Body Dissatisfaction Scale	9	0.89	3.38	1.16
DEBQ Restrained Eating	10	0.92	2.61	0.95
DEBQ Emotional Eating	13	0.95	2.73	1.04
Almost Perfect Scale - Discrepancy	12	0.95	3.93	1.34
Contingent Self-Worth - Appearance	5	0.74	5.22	1.06
**Cronbach's Alpha* *EDI = Eating Disorders Inventory; DEBQ = Dutch Eating Behaviors Questionnaire*				

Test of First Hypothesis. Partial correlations were conducted for self-compassion and restrained and emotional eating, respectively. An alpha level of .05 was used in order to determine significance of this relationship, controlling for age. As hypothesized, the relationship between self-compassion was found to be significant for both measures of disordered eating: restrained and emotional, at the .01 alpha level, with moderate, negative correlations in both instances. The strength of correlations were determined using general guidelines established by Cohen (1988) with a correlation of .10 or greater considered to be weak, .30 or greater as moderate, and .50 or greater as strong (Table 2).

Table 2: Pearson Correlations: Partial Correlations Controlling for Age						
Scale Measure	Self-C	Body Diss	Restr	Emo	Perf	Cont-Sw
Self-Compassion	1	-.48**	-.30**	-.30**	-.57**	-.37**
Body Dissatisfaction		1	.55**	.47**	.38**	.25**
Restrained Eating			1	.37**	.22**	.33**
Emotional Eating				1	.23**	.26**
Perfectionism					1	.27**
Cont –Self-worth						1

*(N=226, **p<.01, *p<.05) (Self-C = Self-Compassion; Body Diss = Body Dissatisfaction; Restr = Restrained Eating; Emo = Emotional Eating; Perf = Perfectionism; Cont-Sw = Contingent Self-Worth)*

Test of Second Hypothesis. A partial correlation analysis was performed to determine the relationships between self-compassion, disordered eating, and the potentially mediating variables of perfectionism, body dissatisfaction, and contingent self-worth. All findings were significant and in the expected direction. As hypothesized, self-compassion was found to have a moderate negative relationship to body dissatisfaction, a strong negative relationship to maladaptive perfectionism, and a moderate negative link to contingent self-worth. These findings suggest that people higher in self-compassion tend to experience less body dissatisfaction, are less likely to base their personal value on physical appearance, and are less likely to experience distress when they are unable to live up to perfectionist personal standards.

Regarding the link between disordered eating and the proposed mediating variables, all relationships were significant and consistent with hypotheses. Restrained eating was found to have a strong positive relationship with body dissatisfaction, a positive weak relationship with maladaptive perfectionism, and a positive moderate relationship with contingent self-worth. Emotional eating was found to have a moderate positive relationship with body dissatisfaction, a weak positive relationship with

maladaptive perfectionism, and a weak positive relationship with contingent self worth (See Figures 2 & 3 for visual representation of each of these relationships). This implies that females engaging in emotional or restrained forms of disordered eating are less likely to be satisfied with their bodies, are more likely to base their sense of self-worth on personal appearance, and are more likely to experience distress when unable to conform to personal standards of perfectionism.

Figure 2: Partial Correlations of variable relationships in Mediation Analysis for Restrained Eating – all significant p <.01

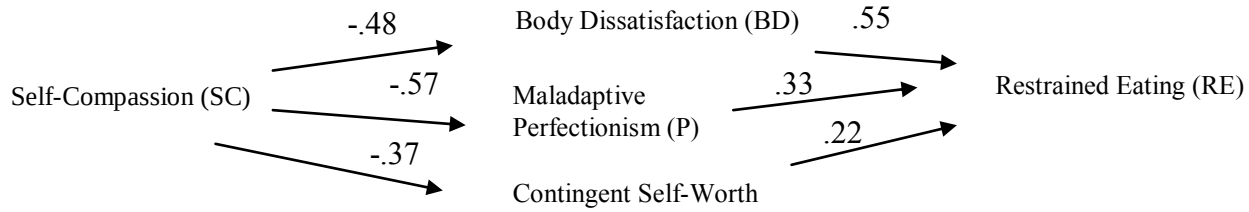
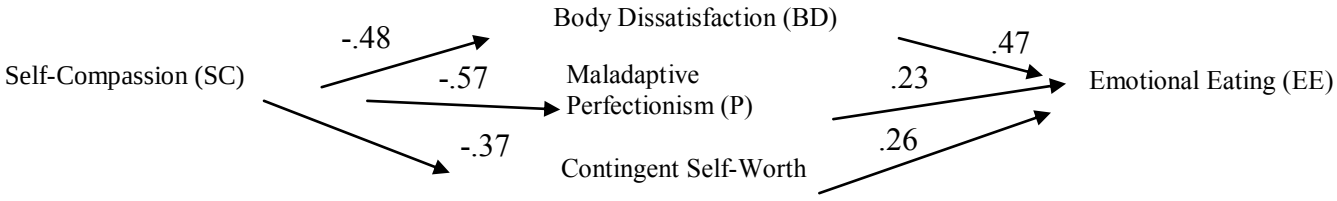


Figure 3: Partial Correlations of variable relationships in Mediation Analysis for Emotional Eating – all significant p <.01



Test of Third Hypothesis. Baron and Kenney's (1986) procedure was used in order to establish partial mediation. Values in the model were as follows: X constitutes the independent variable: self-compassion, Y constitutes the disordered eating variable being used, and M represents mediators used, in this case perfectionism, contingent self-

worth worth based on appearance, and body dissatisfaction. The relation between X and M is represented by *a*, the relation between M and Y adjusted for the effect of X is represented by *b*. Finally, *c* represents the relation between X and Y, and c' represents this same relationship, adjusted for the effects of partial mediators M. When a partial mediation exists*, a ,b,* and *c* will be statistically significant and the absolute value of *c* will be larger than the absolute value of *c'* (Baron and Kenny, 1986). (See figures 4 & 5)

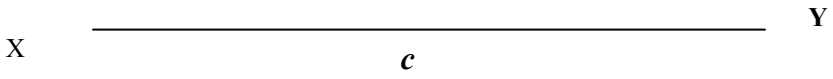


Figure 4

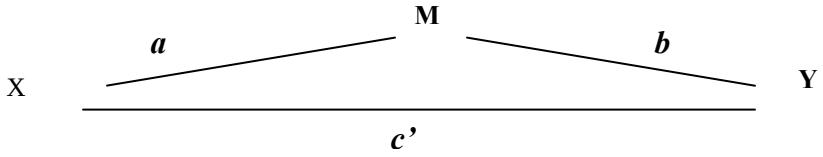


Figure 5

The four steps in Baron and Kenny's (1986) technique are as follows. The first step requires that significance of the predictor (self-compassion) and outcome (disordered eating) be established (*c*). The second step involves establishing significant relationships for path *a,* and the third involves establishing significant relationships for path *b*. For step four, when self-compassion and all mediators (perfectionism, appearance contingent self-worth, and body dissatisfaction) are included in the model to predict disordered eating, path (*c'*), the value of c will be compared with c'. If perfectionism, appearance contingent self-worth, and body dissatisfaction are complete mediators, *c'* will not be different from

zero. If they serve as partial mediators as proposed however, *c'* will be significantly reduced, but still significant. (Frazier; Tix, & Barron, 2004; Kenny, 1986).

The first step occurred by testing the first hypothesis, with significant relationships established between self-compassion and disordered eating, ensuring there was an effect to mediate. The second step was confirmed by establishing the link between self-compassion and the mediating variables: perfectionism, body dissatisfaction, and contingent self-worth. The third step was confirmed by establishing the link between disordered eating and the mediating variables. Finally, for step four, the potential mediating variables were incorporated into a regression equation examining self-compassion as a predictor of the disordered eating relationship after controlling for age, in order to see if this relationship would be significantly reduced (indicating mediation). After incorporating mediators into the model along with self-compassion, there was a significant reduction in the relationship between self-compassion with both restrained and emotional eating. In fact, the value of c' reduced to the point of non-significance, thus establishing a full mediation for both forms of disordered eating. Results of step four are presented in tables 3 and 4 respectively. This finding was different then the partial mediation that was expected, as the mediating variables together accounted for the significance of the relationship between self-compassion and disordered eating.

A brief investigation of individual contributions to the overall variability in disordered eating was done by comparing beta coefficients and their levels of significance in the mediation analyses. Interestingly, maladaptive perfectionism as a predictor did not contribute significantly to the overall variance when examined in

combination with body dissatisfaction and contingent self-worth as mediators (Tables 3 and 4). Thus, body dissatisfaction and contingent self-worth appear to be stronger predictors when all three mediators are tested together in the relationship. Moreover, body dissatisfaction appeared to be a stronger predictor of restrained and emotional eating than contingent self-worth. These results suggest that the mechanism by which self-compassion and disordered eating behaviors are negatively related largely occurs through the pathway of two factors: dissatisfaction with one's body, and a tendency to base one's personal self-worth specifically on appearance. Findings further imply that maladaptive perfectionism is not as crucial a factor in the relationship between self-compassion and disordered eating, once the impact of negative bodily perceptions, and appearance based self-worth are taken into account.

Table 3: Standardized Regression Coefficients for Self-compassion and Mediating Variables in Predicting Emotional Eating

Variables (DEBQ-Emotional)	**β**	**R^2**	**Δ R^2**	**Δ F**
Step 1	--	.02	.02	4.27
Age	-.14*	--	--	--
Step 2	--	.11	.09	8.85***
Age	-.10	--	--	--
Self-Compassion***	-.30***	--	--	--
Step 3	--	.26	.15	6.47***
Age	-.08	--	--	--
Body Dissatisfaction***	.40***	--	--	--
Perfectionism - Discrepancy	.01	--	--	--
Contingent SW: Appearance*	.15*	--	--	--
Self-Compassion	-.04	--	--	--
* p<.05; ** p<.01; *** p<.001; N=226				

Table 4: Standardized Regression Coefficients for Self-compassion and Mediating Variables in Predicting Restrained Eating				
Variables (DEBQ-Restrained)	**β**	**R^2**	**Δ R^2**	**Δ F**
Step 1	--	.00	.00	.02
Age	-.01	--	--	--
Step 2	--	.09	.09	10.96***
Age	.03	--	--	--
Self-Compassion	-.30***	--	--	--
Step 3	--	.34	.25	23.04**
Age	.05	--	--	--
Body Dissatisfaction	.51***	--	--	--
Perfectionism	-.03	--	--	--
Contingent SW: Appearance	.22**	--	--	--
Self-Compassion	.01	--	--	--
* p<.05; ** p<.01; *** p<.001; N=226				

Test of Exploratory Question. In order to determine whether or not self-compassion protects differently based on specific type of disordered eating behavior, the relative beta-weights of self-compassion as a predictor of restrained versus emotional eating were compared. The negative relationships between self-compassion with both restrained and emotional eating were found to be significant at the .001 alpha level after controlling for age, and beta weights were exactly the same (.30). This suggests that self-compassion is negatively related to both restrained and emotional eating to the same degree. Another question concerned whether there were differences in the meditational pathways between self-compassion and each type of disordered eating. A comparison of these two mediation analyses revealed similar results and in both instances, the link between self-compassion and disordered eating was fully mediated by body dissatisfaction and contingent self-worth, but perfectionism was not a significant

mediator (Tables 3 and 4). This finding implies that the way self-compassion impacts emotional eating and restrained eating via the pathways of body dissatisfaction and contingent self-worth based on appearance, is similar.

Chapter 5

Discussion

The present study used a sample of primarily undergraduate women taking educational psychology courses at a large public university. As predicted by the first hypothesis, there was a significant negative relationship found between self-compassion and disordered eating. The finding is consistent with previous findings that self-compassion is negatively related to disordered eating (Adams & Leary, 2007), further strengthening the notion that self-compassion is a possible buffer against both emotional and restrained disordered eating.

The second hypothesis that both self-compassion and disordered eating would be significantly related to body dissatisfaction, perfectionism, and contingent self-worth was also confirmed. These findings corroborate the negative links found previously between self-compassion and body dissatisfaction (Brown, 2007), maladaptive perfectionism (Stuart, 2010), and contingent self-worth (Neff & Vonk, 2009). Given the sparse literature exploring these relationships, the fact that findings were replicated adds confidence that they are not spurious. Results also confirm previous findings that disordered eating is significantly positively related to body dissatisfaction (Brannan, & Petrie, 2004; Littleton & Ollendick, 2003; Tiggemann, 2001), perfectionism (McVey et. al, 2002), and contingent self-worth (Sanchez & Crocker, 2005).

The main hypothesis of this study, that the link between self-compassion and disordered eating would be mediated by body dissatisfaction, perfectionism and

contingent self-worth was partially confirmed. Both body dissatisfaction and contingent self-worth significantly mediated the link between self-compassion and both restrained eating and emotional eating, but perfectionism did not play a mediating role. Moreover, the link between self-compassion and disordered eating was fully, as opposed to partially mediated by these variables.

The relationship between self-compassion and body-dissatisfaction appeared to account for a relatively large portion of the relationship between self-compassion and disordered eating, regardless of emotional or restrained eating. As body dissatisfaction is a factor strongly related to disordered eating, self-compassion may be a critical buffer against it. One reason may be that self-compassion tends to reduce self-criticism and social comparison (Neff, 2003a; Neff & Vonk, 2009). Given body dissatisfaction incorporates social comparison (Tylka & Sabik, 2010) and unrealistic ideals for the self (Mussell, et. al, 2000), the enhancement of self-compassion appears to be a promising protective factor against disordered eating via the path of lowering body dissatisfaction. An individual that is more self-compassionate will be less likely to by dissatisfied with his or her body and instead embrace flaws and imperfections, thus reducing the impact of body dissatisfaction on disordered eating.

The relationship between self-compassion and contingent self-worth accounted for the other portion of the relationship between self-compassion and disordered eating in this study. Self-compassionate people are less likely to exhibit contingent self-worth that is based upon appearance (Neff & Vonk, 2009). Therefore, they do not need to engage in disordered eating in order to feel good about themselves. Rather, they can accept

themselves as they are flaws and all. This stable form of self-worth appears to allow for healthier forms of eating behaviors.

In contrast with contingent self-worth and body dissatisfaction, perfectionism was not found to be a significant mediator in the relationship between self-compassion and disordered eating. One possible reason is that perfectionism in and of itself could be related to a wide variety of goals, including financial, social or academic to name a few. By contrast, appearance based contingent self-worth and body dissatisfaction are specifically related to weight issues. Since maladaptive perfectionism is a more general construct, it may not have been relevant enough to act as mediator in this particular relationship, given the crucial role appearance seems to play in terms of disordered eating.

The exploratory hypothesis investigated whether a different mediation model between self-compassion and disordered eating would be found depending on whether the disordered eating pattern was restrained versus emotional. Results did not differ according to the type of disordered eating examined. Body dissatisfaction and contingent self-worth mediated the link between self-compassion and restrained as well as emotional eating, but not perfectionism. This finding implies that the way self-compassion impacts disordered eating may be generalized across disorders of this variety. If so, disordered eating treatment programs may not necessarily have to tailor self-compassion related approaches based on the type of disorder that is targeted. This would need to be confirmed in future research, however.

Limitations

It is important to the discuss limitations of this research. For one thing, this study relied upon a correlation analyses, and thus, the directionality of the relationships cannot be determined. It is possible that engaging in disordered eating behaviors, for instance, spurs increased self-criticism and thus reduces self-compassion. Such possibilities should be explored in future research using experimental designs. Care must also be taken when considering the generalizability of findings. For instance, this study was limited to female participants only, and results cannot be used to make any assumptions about the link between self-compassion and disordered eating for men. It was also limited to a college aged population, so the impact of these relationships on younger adolescents, children, middle-aged or older adults cannot be generalized from these findings. Moreover, this study was designed to capture sub-clinical behaviors and thus, may not generalize to populations with disordered eating related diagnosis, such as anorexia or bulimia for example.

Implications

Implications for both the prevention and treatment of disordered eating should be considered. Findings suggest that self-compassion, by lessening body dissatisfaction and contingent self-worth, may buffer against disordered eating behaviors. Considering self-compassion encompasses certain cognitive skills, self-compassion might be enhanced through training. In these training modules, issues specifically related to body image and the importance of valuing oneself conditionally could be emphasized. In other words,

interventions might be developed that improve self-compassionate attitudes within individuals, with the intention of subsequent positive impact on body image, as well as more realistic ways to value one's worth as a human being. Given that training in self-compassion is possible in a potentially short amount of time, as was the case with Stuart's (2010) one-hour self-compassion outreach workshop, it may be possible to include training modules such as this one in other interventions for eating disorders.

There have been some limitations to the success of treatment programs to reduce disordered eating, and perhaps emphasizing self-compassion could strengthen such programs. For instance, Stewart et al. (2001) investigated the effectiveness of a six-week school-based eating disorder prevention intervention that was designed to reduce dietary restraint and concern about weight and shape for adolescent girls. The researchers observed a small but significant reduction in dietary restraint and concern with weight and shape when comparing the intervention versus control group. This result, however, was no longer significant at a six-month follow up. Perhaps if the concept of self-compassion was included, reframing the way girls relate to themselves in general, results would be more likely to persist over time. Similarly, in their research regarding the effects of sexist advertising on women's body satisfaction, Lavine, Sweeney, and Wagner (1999) determined that despite knowledge regarding sexist advertising and an ability to recognize it, feminists and non-feminists were equally susceptible to suffering from increased body dissatisfaction as a result of exposure to sexist advertising. Given self-compassionate people tend to be more accepting of personal imperfections and shortcomings; perhaps even in the event the advertisements are markedly different from

their own personal appearances, self-compassionate people will not be as impacted by this discrepancy. Thus, incorporating self-compassion elements into education about sexism and advertising may be an ideal component in reducing some of the many negative impacts of sexism in this vein.

General treatment for eating disorders according to the NIMH (2007) typically includes treating psychological issues related to the disorder, as well as reducing or eliminating the behaviors associated with that particular disorder. For bulimia specifically, the NIMH recommends cognitive behavioral therapy (CBT), and possibly certain antidepressants, as well as nutritional counseling. Treatment for binge-eating disorder is similar to that of bulimia except appetite suppressants may also be prescribed. Perhaps it would be beneficial, to help individuals with eating disorders develop self-compassion, in combination with these other modalities of treatment.

It is important to consider how self-compassion may be relevant not only in terms of treatment but also prevention. If self-compassion is instilled in adolescents, would this in turn offer an additional buffer against body dissatisfaction and contingent self-worth and therefore, disordered eating ultimately? Previous research investigating factors associated with self-compassion in adolescents found a negative relationship between self-compassion and maternal criticism, conflicted households, and insecure attachment styles (Neff & McGehee, 2010). Given adolescence is a crucial developmental, identity forming period in a person's life, it is essential we consider these factors related to self-compassion, as early development and/or enhancement of self-compassion could have positive, lifelong benefits.

Previous research in the area of prevention has yielded varying results in terms of disordered eating prevention in general. One study incorporating a program promoting positive body image for sixth grade girls did not yield significant results between the control versus experimental groups (McVey & Davis, 2002). Knowledge and understanding regarding harmful effects of various sources on one's self concept may not be sufficient for prevention. Perhaps helping these young girls develop a healthy sense of self that is based more on loving, accepting and compassionate self-attitudes as opposed to simply focusing on positive body image in general, would yield stronger effects. Consider the well-known proverbial saying: "Give a man a fish, and you feed him for a day; show him how to catch a fish and you feed him for a lifetime." Perhaps simply promoting a positive body image is the equivalent of the former, while enhancing self-compassionate attitudes is the equivocal of the latter. Considering that self-compassion is a stable trait, teaching self-compassionate attitudes in adolescent girls may be a missing key in terms of disordered eating prevention,

Unfortunately, self-compassion interventions have not yet been developed specifically for adolescents. There are interventions designed for adults, however, that have been found to increase self-compassion. For instance, Mindfulness-Based Stress reduction (MBSR) programs (Kabat-Zinn, 1991), a widely available program designed to enhance mindfulness, has been found to increase self-compassion (Shapiro, Astin, Bishop, & Cordova, 2005; Shapiro, Brown, & Biegel, 2007). Courses in MBSR tend to be taught by mental health professionals to help people cope with the various forms of mental distress people experience. Training in mindfulness helps people become more

aware of painful emotional and cognitive experiences, which help them deal with these in an accepting and non-judgmental way. Given that mindfulness is an essential component of self-compassion, it is perhaps unsurprising that research has shown that self-compassion is significantly increased with MBSR training. In addition, Mindfulness based cognitive therapy has also been found to increase self-compassion (Kuyken et. al, 2010). Currently in the works is the development of a training program specifically with the intention of helping increase self-compassion, called Mindful Self-Compassion (MSC) (Neff, 2011). In a recent randomized control study, researchers compared outcomes for a group in a MSC group versus a control group. The MSC training incorporated such items as: self-compassion education, self-compassion exercises (i.e., writing oneself a compassionate letter), and meditation practice. The training lasted a total of 8 sessions, in addition to a half-day retreat. Results indicated several positive results including increases in self-compassion, mindfulness, and life satisfaction (Neff [of Science of Self-Compassion], in press, Chapter 6). This type of self-compassion training might offer an additional resistance against disordered eating behaviors, via developing healthier attitudes about appearance and more realistic, positive body perceptions in general.

Future research directions

The findings of this research suggest numerous directions for future studies. While three potential mediators of the link between self-compassion and disordered eating were investigated in this study, there may be other important influences on this

relationship that could be explored in future research. For example, it might be beneficial to investigate the role of drive for thinness, as this is known to be another variable highly associated with disordered eating styles (Groesz, Levine, & Murnen,2002; Peck & Lightsey, 2008). Notably, placing one's worth on weight has been linked with drive for thinness in previous research (Sabik, Cole, & Ward, 2010), and it may be that self-compassion, by reducing contingent self-worth, also reduces drive for thinness. Future research might also usefully examine mental health variables such as anxiety, rumination or depression. Given the strong link between self-compassion and well-being (Neff, 2004), these factors may also impact disordered eating – especially in clinical populations (Nolen-Hoeksema, Stice, Wade, & Bohon, 2007).

Additional research might include manipulations enhancing self-compassionate thinking to determine effectiveness of self-compassionate priming on body satisfaction, contingent self-worth based on appearance and eating attitudes in the short term, and also over time. In fact, while the current investigation was carried out on a one time basis, it would be valuable to look at these relationships via a longitudinal study. This might help determine if self-compassion buffers against disordered eating over a longer time frame, and may also provide information about the developmental trajectory of the link between self-compassion and disordered eating.

Conclusion

This study found a significant link between higher self-compassion and less restrained and emotional eating, and this link was fully mediated by body dissatisfaction

and self-worth contingent upon appearance. Results suggest that the way people relate to themselves – with kindness or harsh self-criticism – impacts how women feel about their bodies and themselves, and therefore their tendency to engage in disordered eating behaviors. These findings can hopefully help inform future research and interventions for eating disorders, and ultimately reduce some of the suffering caused by body image concerns among young women.

Appendix A: Study Cover Letter and Consent Form

Dear participant,
Thank you for your participation in my survey study regarding social and personal attitudes and behaviors. The study is being conducted by Angela Finley-Straus, M.Ed. Department of Educational Psychology of The University of Texas at Austin, 1 University Station D5800, Austin, TX 78712, **vegetarian@mail.utexas.edu.**

The purpose of this study is: to examine how self-attitudes and treatment toward the self impact lifestyle behaviors, such as health and eating habits. Your participation in the survey will contribute to a better understanding of positive and negative factors that impact psychological well-being. We estimate that it will take approximately 60 minutes of your time to complete the questionnaire. You are free to contact the investigator at the above address to discuss the survey at any time.

Risks to participants are considered minimal. There will be no costs for participating, nor will you benefit from participating. You may experience some unpleasant feelings during or after completing the survey. If you want to speak to someone about any feelings after taking the survey, you are encouraged to contact the university counseling and mental health center at: 512-471-3515.

At the end of the survey, you will be provided instructions on how to receive credit for participating in this study. We will collect UTEIDs for credit purposes but will not associate them with the responses you give on the surveys. Your survey responses will be anonymous. All survey data will be stored on a password protected computer and a limited number of researchers will have access to the data.

If you have any questions or would like us to update your email address, please send an email to vegetarian@mail.utexas.edu.

This study has been reviewed and approved by The University of Texas at Austin Institutional Review Board. If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact - anonymously, if you wish - the Institutional Review Board by phone at (512) 471-8871 or email at orsc@uts.cc.utexas.edu. IRB Approval Number: 2011-02-0046
Thank you.

Principal Investigator:

Angela Finley-Straus, M.Ed., vegetarian@mail.utexas.edu
Kristin Neff, PhD, Faculty Sponsor, kristin.neff@mail.utexas.edu
Department of Educational Psychology
University of Texas at Austin

In order to participate in this study you must agree to answer all questions, however, should you decide that you do not want to answer questions for any reason during the course of completing the survey, you have the ability to withdraw from the study at any point and are not required to continue with the survey. You may then contact the subject pool coordinator for further information on the alternate assignment or the possible option to complete another study.

By selecting yes to this question, you are providing your consent to participate in this study. Please be reminded that if you do not wish to participate, there is the option of an alternative assignment. If you agree to complete the survey, select yes in the dropdown menu below, or no if you decline: yes/no.

Appendix B: Survey

Demographic Form

Read the items below and (a) circle the letter that best describes you, or (b) write in the information that reflects you.

Classification (circle one)

A. Freshman
B. Sophomore
C. Junior
D. Senior
E. Graduate Student

Gender (circle one)

A. Female
B. Male
C. Transgender

Race/Ethnicity (circle one)

A. African American-Black
B. Asian /Southeast Asian
C. Caucasian-White-European American
D. Hispanic-Latino/a
E. Multiracial-Biracial
F. Native American-Indigenous

What is your age in years? _____

Self-Compassion Scale Short Form

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES
Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

Almost never				Almost always
1	2	3	4	5

_____1. When I fail at something important to me I become consumed by feelings of inadequacy.

_____2. I try to be understanding and patient towards those aspects of my personality I don't like.

_____3. When something painful happens I try to take a balanced view of the situation.

_____4. When I'm feeling down, I tend to feel like most other people are probably happier than I am.

_____5. I try to see my failings as part of the human condition.

_____6. When I'm going through a very hard time, I give myself the caring and tenderness I need.

_____7. When something upsets me I try to keep my emotions in balance.

_____8. When I fail at something that's important to me, I tend to feel alone in my failure

_____9. When I'm feeling down I tend to obsess and fixate on everything that's wrong.

_____10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

_____11. I'm disapproving and judgmental about my own flaws and inadequacies.

_____12. I’m intolerant and impatient towards those aspects of my personality I don’t like.

Eating Disorders Inventory II

Body Dissatisfaction Subscale

Circle one response for each statement to indicate how much you agree with it.

1. I think that my stomach is too big.

Always Usually Often Sometimes Rarely Never

2. I think that my thighs are too large.

Always Usually Often Sometimes Rarely Never

3. I think that my stomach is just the right size.

Always Usually Often Sometimes Rarely Never

4. I feel satisfied with the shape of my body.

Always Usually Often Sometimes Rarely Never

5. I like the shape of my buttocks.

Always Usually Often Sometimes Rarely Never

6. I think my hips are too big.

Always Usually Often Sometimes Rarely Never

7. I think that my thighs are just the right size.

Always Usually Often Sometimes Rarely Never

8. I think my buttocks are too large.

Always Usually Often Sometimes Rarely Never

9. I think that my hips are just the right size.

Always Usually Often Sometimes Rarely Never

Dutch Eating Behaviors Questionnaire:

Restrained Eating Subscale (1-10) and Emotional Eating Subscale (11-23)

Circle a number for each statement to indicate how much you agree with it.

1. If you have put on weight, do you eat less than you usually do?

Strongly Disagree 1 2 3 4 5 Strongly Agree

2. Do you try to eat less at mealtimes than you would like to eat?

Strongly Disagree 1 2 3 4 5 Strongly Agree

3. How often do you refuse food or drink offered because you are concerned about your weight?

Strongly Disagree 1 2 3 4 5 Strongly Agree

4. Do you watch exactly what you eat?

Strongly Disagree 1 2 3 4 5 Strongly Agree

5. Do you deliberately eat foods that are slimming?

Strongly Disagree 1 2 3 4 5 Strongly Agree

6. When you have eaten too much, do you, do you eat less than usual the following days?

Strongly Disagree 1 2 3 4 5 Strongly Agree

7. Do you deliberately eat less in order not to become heavier?

Strongly Disagree 1 2 3 4 5 Strongly Agree

8. How often do you try not to eat between meals because you are watching your weight?

Strongly Disagree 1 2 3 4 5 Strongly Agree

9. How often in the evening do you try not to eat because you are watching your weight?

Strongly Disagree 1 2 3 4 5 Strongly Agree

10. Do you take into account your weight with what you eat?

Strongly Disagree 1 2 3 4 5 Strongly Agree

11. Do you have the desire to eat when you are irritated?

Strongly Disagree 1 2 3 4 5 Strongly Agree

12. Do you have a desire to eat when you have nothing to do?

Strongly Disagree 1 2 3 4 5 Strongly Agree

13. Do you have a desire to eat when you are depressed or discouraged?

Strongly Disagree 1 2 3 4 5 Strongly Agree

14. Do you have a desire to eat when you are feeling lonely?

Strongly Disagree 1 2 3 4 5 Strongly Agree

15. Do you have a desire to eat when somebody lets you down?

Strongly Disagree 1 2 3 4 5 Strongly Agree

16. Do you have a desire to eat when you are cross?

Strongly Disagree 1 2 3 4 5 Strongly Agree

17. Do you have a desire to eat when you are approaching something unpleasant to happen?

Strongly Disagree 1 2 3 4 5 Strongly Agree

18. Do you get the desire to eat when you are anxious, worried, or tense?

Strongly Disagree 1 2 3 4 5 Strongly Agree

19. Do you have a desire to eat when things are going against or when things go wrong?

Strongly Disagree 1 2 3 4 5 Strongly Agree

20. Do you have a desire to eat when you are frightened?

Strongly Disagree 1 2 3 4 5 Strongly Agree

21. Do you have a desire to eat when you are disappointed?

Strongly Disagree 1 2 3 4 5 Strongly Agree

22. Do you have a desire to eat when you are emotionally upset?

Strongly Disagree 1 2 3 4 5 Strongly Agree

23. Do you have a desire to eat when you are bored or restless?

Strongly Disagree 1 2 3 4 5 Strongly Agree

The Almost Perfect Scale Revised

Discrepancy subscale

The following items are designed to measure attitudes people have towards themselves, their performance, and towards others. There are no right or wrong answers. Please respond to all of the items. Use your first impression and do not spend too much time on individual items in responding. Using a pencil, please mark all of your responses on the computer answer sheet that is provided.

Respond to each of the items by using the scale below to describe your degree of agreement with each item. Write the number that best describes your degree of agreement after each statement.

Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

I often feel frustrated because I can't meet my goals.

My best just never seems to be good enough for me.

I rarely live up to my high standards.

Doing my best never seems to be enough.

I am never satisfied with my accomplishments.

I often worry about not measuring up to my own expectations.

My performance rarely measures up to my standards.

I am not satisfied even when I know I have done my best.

I am seldom able to meet my own high standards for performance.

I am hardly ever satisfied with my performance.

I hardly ever feel that what I've done is good enough.

I often feel disappointment after completing a task because I know I could have done better.

Contingent Self-Worth: Appearance Subscale

INSTRUCTIONS: Please respond to each of the following statements by circling your answer using the scale from "1 = Strongly disagree" to "7 = Strongly agree." If you haven't experienced the situation described in a particular statement, please answer how you think you would feel if that situation occurred.

		Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Strongly Agree
1.	When I think I look attractive, I feel good about myself.	1	2	3	4	5	6	7
2.	My self-esteem is unrelated to how I feel about the way my body looks.	1	2	3	4	5	6	7
3.	My self-esteem is influenced by how attractive I think my face or facial features are.	1	2	3	4	5	6	7
4.	My sense of self-worth suffers whenever I think I don't look good.	1	2	3	4	5	6	7
5.	My self-esteem does not depend on whether or not I feel attractive.	1	2	3	4	5	6	7

Appendix C: Debriefing Statement

You have just participated in a study designed to better understand the self-attitudes and behaviors of college students. It is my hypothesis that many of these factors influence one another in potentially helpful or unhelpful ways, and I am looking into some ways to help reduce and/or prevent some of the negative effects of certain attitudes and personal behaviors.

To receive course credit for this study, please send an email to Angela Finley-Straus at: vegetarian@mail.utexas.edu and include your name or UT EID. If you are interested in learning more about this research study, feel free to contact Angela Finley-Straus at vegetarian@mail.utexas.edu.

I understand that you may want to take extra precautions to ensure no one else can access your responses to the survey. Below are two methods that will help keep anyone else from accessing your survey answers.

Suggestions on how to further PROTECT YOUR CONFIDENTIALITY:
1. After completing the survey, be sure to close the browser window. This will ensure that other individuals will not have access to your survey responses by pressing the "back" button.
2. Be sure to delete temporary internet files. This will ensure that other individuals will not be able to access your survey responses if subsequent participants were to open the webpage (using the same computer) to complete the survey.

Thank you for your participants in this important research.
Angela D. Finley-Straus, MEd, LPC-Intern, PhD Candidate

_____ _____
Angela Finley-Straus, Principal Investigator Date

_____ _____
Kristin Neff, Faculty Sponsor Date

References

Ackard, D.M., & Peterson, C.B. (2001). Association between puberty and disordered eating, body image, and other psychological variables. *International Journal of Eating Disorders,* 29, 187-194.

Adams, C. E., & Leary, M. R. (2007). Promoting self-compassionate attitudes toward eating among restrictive and guilty eaters. *Journal of Social and Clinical Psychology, 26, 1120-1144.*

Alvarenga, M.S., Scagluisi, F.B., & Philippi, S.T.(2010). Development and validity of the disordered eating attitudes scale (DEAS).*Perceptual and Motor Skills, 110, 2*, 379-395.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders: DSM-IV-TR*. Washington, DC: Author.

Anderson, D.A., Simmons, A.M., Martens, M.P., Ferrier, A.G., & Sheehy, M.J. (2006). The relationship between disordered eating behavior and drinking motives in college-age women. *Eating Behaviors, 7,* 419-422.

Arnette, J.J. (2010). Oh, grow up!: Generational grumbling and the new life stage of emerging adulthood – commentary on Trzesniewski & Donnellan. *Perspectives on Psychological Science, 5(1),* 88-92.

Ashby, J.S., Kottman, T., & Schoen, E. (1998). Perfectionism and eating disorders reconsidered. *Journal of Mental Health Counseling, 20(3),* 261-271.

Baranowski, M.J., & Hetherington, M.M. (2001). Testing the efficacy of an eating disorder prevention program. *International Journal of Eating Disorders*, 29: 119-124.

Bardone-Cone, A.M., Weishuhn, A.S., & Boyd, C.A. (2009).Perfectionism and bulimic symptoms in African American college women: Dimensions of perfectionism and their interactions with perceived weight status. *Journal of Counseling Psychology (56:2),* 266-275.

Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.

Bastiani, A.M., Rao, R. Weltzin, T., & Kaye, W.H. (1995).Perfectionism in anorexia nervosa. *International Journal of Eating Disorders*, 17, 147-152.

Berry, K, Kowalski, K.C., Ferguson, L.J., & McHugh, T.F. (2010). An empirical phenomenology of young adult women exercisers' body self-compassion. *Qualitative Research in Sports and Exercise, 2(3)*, 293-312.

Brannan, M.E., & Petrie, T.A. (2004). Moderators of the body-dissatisfaction –eating disorder symptomatology relationship: Replication and Extension. *Journal of Counseling Psychology, Vol. 55, No. 2,* 263-275.

Brown, B.L. (2007). *Self-compassion as a moderating factor in the relation of body image to depression and self-esteem*. (Doctoral dissertation, University of Houston, 2007). Retrieved from University of Texas Libraries Website Link.

Brumberg, J.J. (1998). The body project: An intimate history of American girls. Vintage books: New York.

Center for Disease Control and Prevention. (2008). Department of Health and Human Services. Retrieved December 1st, 2008, 8:48AM CDT, http://www.cdc.gov/nccdphp/dnpa/obesity/index.htm

Cohen, D.L., & Petrie, T.A. (2005). An examination of psychological correlates of disordered eating among undergraduate women. *Sex Roles, 52(1/2),* 29-42.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Crocker, J., Luhtanen, R.K., Cooper, M.L., & Bouvrette, S. (2003). Contingencies of self-worth in college students: Theory and measurement. Journal of Personality and Social Psychology, 85, 894-908.

Crocker, J., & Park, L.E. (2004). *The costly pursuit of self-esteem.* Psychological Bulletin. 130 (3), 393-414.

Dingemans, A.E., Martijn, C., Jansen, A.T.M., & van Furth, E.F. (2009). The effect of suppressing negative emotions on eating behavior in binge eating disorder. *Appetite, 52,* 51-57.

Downey, C.A. & Chang, E.C. (2007). Perfectionism and symptoms of eating disturbances in female college students: Considering the role of negative affect and body dissatisfaction. *Eating Behaviors, 8,* 497-503.

Education Portal. (2011). Texas colleges, universities and career schools. Accessed online http://www.education-portal.com

Erickson, E. (1963).*Childhood and society*. New York: Norton.

Fairburn, C.G., & Beglin, S.J. (1994). Assessment of eating disorders: Interview or self-report questionnaire? *International Journal of Eating Disorders, 16 (4),* 363-370.

Fallon, A.E., & Rozin, P. (1985). Sex differences in perceptions of desirable body shape. *Journal of Abnormal Psychology*, 94:1, 102-105.

Fallon, P., Katzman, M., & Wooley, S. (1994).*Feminist perspectives on eating disorders.* New York: Guilford Press.

Frazier, P.A., Tix, A.P., Barron, K.E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology*, 51:1, 115-134.

Frederick, D.A., Buchanan, G.M., Sadehgi-Azar, L., Peplau, L.A., Haselton, M.G., Berezovskaya, A. (2007). Desiring the muscular ideal: Men's body satisfaction in the United States, Ukraine, and Ghana. *Psychology of Men and Masculinity*, 8:2, 103-117.

Frederick, D.A., Fessler, D.M.T., & Haselton, M.G. (2005). Do representations of male muscularity differ in men's and women's magazines? *Body Image*, 2, 81-86.

Frost, R.O., Marten, P.A., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research*, *38*, 1439-1448.

Garner, D.M. (1991). Eating Disorders Inventory –2. Professional Manual. Psychological Assessment Resources, Inc.

Garner, D., Olmsted, M., & Polivy, J. (1983). Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. *International Journal of Eating Disorders, 2*, 15-34.

Ghaderi, A. (2003). Structural modeling analysis of prospective risk factors for eating disorder. *Eating Behaviors (3),* 387-396.

Goodale, K.R., Watkins, P.L., & Cardinal, B.J. (2001). Muscle dysmorphia: A new form of eating disorder? *American Journal of Health Education, 2001.*

Goodman, J.R.P. (2000). *Mirroring mediated images of women: How media images of thin women influence eating disorder-related and how women negotiate these images.* (Doctoral dissertation, The University of Texas at Austin, 2000). Retrieved from University of Texas Libraries Website Link.

Gravener, J.A., Haedt, A.A., Heatherton, T.F., & Keel, P.K. (2008). Gender and age differences in associations between peer dieting and drive for thinness. International Journal of Eating Disorders, 41, 57-63.

Gordon, K.H., & Dombek,J.J. (2010). The associations between two facets of narcissism and eating disorder symptoms. *Eating Behaviors, 11,* 288-292.

Groesz, L.M., Levine, M.P., & Murnen, S.K. (2002). The effect of experimental presentation of thin media images on body satisfaction: A meta-analytic review. *International Journal of Eating Disorders*, 31: 1-16.

Grogan, S. (1999). Body images: Understanding body dissatisfaction in men, women and children. New York: Routledge.

Harrell, Z.A.T., & Jackson, B. (2008). Thinking fat and feeling blue: Eating behaviors, ruminative coping, and depressive symptoms in college women. *Sex Roles, 58,* 658-665.

Herman, C.P., & Mack, D. (1975). Restrained and unrestrained eating. *Journal of Personality*, 43, 647-660.

Herman, C.P. & Polivy, J. (1975). Anxiety, restraint and eating behavior. *Journal of Abnormal Psychology*, 84, 666-672.

Hewitt, P.L., & Flett, G.L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology,* 60:3, 456-470.

Hobza, C., Walker, K.E., Yakushko, O., & Peugh, J.L. (2007). What about men? Social comparison and the effects of media images on body and self-esteem. *Psychology of Men and Masculinity*, 8:3, 161-172.

Johnson, C., Powers, P.S., & Dick, R. (1999). Athletes and eating disorders: The National Collegiate Athletic Association study. *International Journal of Eating Disorders, 26*, 179-188.

Kabat-Zinn, J. (1991). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. New York: Dell Publishing.

Kilbourne, J. (1994). Still killing us softly: Advertising and the obsession with thinness (pp. 395 – 418). In Fallon, P., Katzman, M., & Wooley, S. (Eds.) *Feminist perspectives on eating disorders*. New York: Guilford Press.

Kilbourne, J. (2000). Can't buy my love: How advertising changes the way we think and feel. Touchstone: New York, NY.

Koff, E., & Sangani, P. (1997). Effects of coping style and negative body image on eating disturbance. *International Journal of Eating Disorders*, 22:51-56.

Kornblau, I.S., Pearson, H.C., & Breitkopt, C.R. (2007). Demographic, behavioral, and physical correlates of body-esteem among low-income female adolescents. *Journal of Adolescent Health*, 41: 566-570.

Kostanski, M., & Gullone, E. (1998). Adolescent body-image satisfaction: Relationships with self-esteem, anxiety, and depression controlling for body mass. *Journal of Child Psychology and Psychiatry*, 39:2, 225-262.

Kuyken, W., Watkins, E., Holden, E., White, K., Taylor, R.S., Byford, S., … Dalgleish, T. (2010). How does mindfulness-based cognitive therapy work? *Behavior Research and Therapy, 48,* 1105-1112.

Lacour, M.A.N. (1997). *Creating a model to predict eating disturbances in women from the components of perfectionism and self-silencing* (Doctoral dissertation). Retrieved from Dissertations and Thesis database. (UMI No. 9817517)

Laliberte, M., Newton, M., McCabe, R., & Mills, J.S. (2007).*Cognitive Therapy and Research,* 31: 853-869.

Lavine, H., Sweeney, D., & Wagner, S.H. (1999). Depicting women as sex objects in television advertising: Effects on body dissatisfaction. *Personality and Social Psychology Bulletin*, 25: 1049-1058.

Leary, M.R., Tate, E.B., Adams, C.E., Allen, A.B., Hancock, J. (2007). Self-compassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology*, 92:5, 887-904.

Levine, M.P., & Smolak, L. (1992). Toward a model of the developmental psychopathology of eating disorders: The example of early adolescence. In J.H. Crowther, D.L. Tennenbaum, S.E. Hobfoll & M.A.P. Stephens (Eds.), The etiology of bulimia nervosa: The individual and familial context (pp. 59-80). Washington, DC: Hemisphere.

Lieberman, M., Gauvin, L., Bukowski, W.M., and & White, D.R. (2001). Interpersonal influence and disordered eating behaviors in adolescent girls. The role of peer modeling, social reinforcement, and body-related teasing. *Eating Behaviors*, 2, 215-236.

Littleton, H.L., & Ollendick, T. (2003). Negative body image and disordered eating behavior in children and adolescents: What places youth at risk and how can these problems be prevented. *Clinical Child and Family Psychology Review, Vol. 6, No. 1*, 51-66.

Longbottom, J., Grove, J.R., & Dimmock, J.A. (2010). An examination of perfectionism traits and physical activity motivation. *Psychology of Sport and Exercise (11),* 574-581.

Luce, K.H., & Crowther, J.H. (1999). The reliability of the eating disorder examination self-report questionnaire version (EDE-Q). *International of Eating Disorders, 25,* 349-351.

Marcia, J.E., Waterman, A.S., Matteson, D.R., Archer, S.L., & Orlosfsky, J.L. (Eds). (1993). Ego Identity: A handbook for psychosocial research. New York: Springer Verlag.

Martin, G.C., Wertheim, E.H., Prior, M., Smart, D., Sanson, A., & Oberklaid, F. (2000). A longitudinal study of the role of childhood temperament in the later development of eating concerns. *International Journal of Eating Disorders, 27*: 150-162.

Masuda, A., & Wendell, J.W. (2010). Mindfulness mediates the relation between disordered eating-related cognitions and psychological distress. *Eating Behaviors, 11*, 293-296.

McCreary, D.R., & Sasse, D.K. (2000). An exploration of the drive for muscularity in adolescent boys and girls. *Journal of American College Health*, 48, 297-304.

McKee, M.M. (2006). Socially prescribed perfectionism as a moderator of the relation between public self-consciousness and body dissatisfaction and eating pathology in women. *Dissertation International: Section B: The Sciences and Engineering, Vol 67(6-B),* p.3459.

McNamara, C., Hay, P., Katsikitis, M., & Chur-Hansen, A. (2008).Emotional responses to food, body dissatisfaction, and other eating disorder features in children, adolescents, and young adults. *Appetite, 50*, 102-109.

McVey, G.L., & Davis, R. (2002). A program to promote positive body image. *Journal of Early Adolescence*, 22:1, 96-108.

McVey, G.L., Pepler, D., Davis, R., Flett, G.L., & Abdolell, M. (2002). Risk and protective factors associated with disordered eating during early adolescence. *Journal of Early Adolescence,* 22, 75-95.

Mintz, L.B., & Betz, N.E. (1988). Prevalence and correlates of eating disordered behaviors among undergraduate women. *Journal of Counseling Psychology,* 35, 463-471.

Mussell, M.P., Binford, R.B., & Fulkerson, J.A. (2000). Eating disorders: Summary of risk factors, prevention programming, and prevention research. *The Counseling Psychologist*, 28:6, 764-796.

National Health and Nutrition Examination Survey. (2008). Healthy weight, overweight, and obesity among U.S. adults. *National Center for Health Statistics*. Retrieved December 7th, 2008 11:55AM CDT, http://www.cdc.gov/nchs/nhanes/databriefs/adultweight.pdf

National Health and Nutrition Examination Survey. (2008). Overweight among U.S. children and adolescents. *National Center for Health Statistics*. Retrieved December 7th, 2008 11:43AM CDT, http://www.cdc.gov/nchs/nhanes.databriefs/overweight.pdf

National Institute of Mental Health. (2007). U.S. Department of Health and Human Services. Retrieved December 1st, 2008, 8:30AM CDT, http://www.nimh.nih.gov/health/publications/eating-disorders/nimheatingdisorders.pdf

Neff, K. D. (in press). The science of self-compassion. In C. Germer & R. Siegel (Eds.), *Compassion and Wisdom in Psychotherapy.* New York: Guilford Press.

Neff, K.D. (2003a). The development and validation of a scale to measure self-compassion. *Self and Identity, 2,* 223-250.

Neff, K.D. (2003b). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2,* 85-102.

Neff, K.D. (2004). Self-compassion and psychological well-being. *Constructivism in the Human Sciences*, 9:2, 27-37.

Neff, K.D. (2011). Self-compassion, self-esteem, and well-being. *Social and Personality Compass, 5, 1-12.*

Neff, K.D., Hsieh, Y., & Dejitterat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. Self and Identity, 4, 263-287.

Neff, K.D., Kirkpatrick, K., & Rude, S.S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality, 41,* 139-154.

Neff, K.D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity, 9,* 225-240

Neff, K.D., Rude, S.S., & Kirkpatrick, K. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality, 41,*908-916.

Neff, K. D., & Vonk, R. (2009). Self-compassion versus global self-esteem: Two different ways of relating to oneself. *Journal of Personality, 77(1),* 23-50.

Nelson, S.L. (2009). Perfectionism and contingent self-worth in adolescents. *Dissertation Abstracts International*, 69, Retrieved from http://web.ebscohost.com.

Nolen-Hoeksema,S, Stice, E., Wade, E, & Bohon, C. (2007). Reciprocal relations between rumination and bulimic, substance abuse, and depressive symptoms in female adolescents. *Journal of Abnormal Psychology, 116 (1),* 198-207.

O'Dea, J.A., & Abraham, S. (1999). Onset of disordered eating attitudes and behaviors in early adolescence: Interplay of pubertal status, gender, weight, and age. *Adolescence,* 34:136, 671-679.

Paxton, S.J., Wertheim, E.H., Gibbons, K., Szmukler, G.I., Hillier, L., & Petrovich, J.L. (1991). Body image satisfaction, dieting beliefs, and weight loss behaviors in adolescent girls and boys. *Journal of Youth and Adolescence*, 20: 3, 361-379.

Pearson, C.A., & Gleeves, D.H. (2006). The multiple dimensions of perfectionism and their relation with disordered eating features. *Personality and Individual Differences, 41,* 225-235.

Peck, L.D., & Lightsey, O.R. (2008). The eating disorders continuum, self-esteem, and perfectionism. *Journal of Counseling and Development*, 86: 184-192.

Pipher, M. (2005). Reviving Ophelia: Saving the selves of adolescent girls. Riverhead Books: New York, NY.

Polivy, J., & Herman, C.P. (1976a). The effects of alcohol on eating behavior: Disinhibition or sedation? *Addictive Behaviors*, 1, 121-126.

Polivy, J. & Herman, C.P. (1976b). Clinical depression and weight change: A complex relation. *Journal of Abnormal Psychology*, 85, 338-340.

Pratt, E.M., Telch, C.F., Labouvie, E.W., Wilson, G.T., & Agras, W.S. (2001). Perfectionism in women with binge eating disorder. *International Journal of Eating Disorders*, 29: 177-186.

Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (in press).Construction and factorial validation of a short form of the Self-Compassion Scale. *Clinical Psychology & Psychotherapy.*

Renfrew Center Foundation for Eating Disorders. (2003). Eating disorders 101 guide: A summary of issues, statistics and resources. Retrieved December 7, 2008, 11:00AM, CDT, www.renfrewcenter.com/uploads/resources/1067338472_1.doc

Ricca, V., Castellini, G., Lo Sauro, C., Ravaldi, C., Lapi, F., Mannucci, E., Rotella, C.M., & Faravelli, C. (2009). Correlations between binge eating and emotional eating in a sample of overweight subjects. *Appetite, 53*, 418-421.

Rogers, L., Resnick, M.D., Mitchell, J.E., & Blum, R. (1997). The relationship between socioeconomic status and eating-disordered behaviors in a community sample of adolescent girls. *International Journal of Eating Disorders*, 22: 15-23.

Root, M.P.P. (1990). Disordered eating in women of color. *Sex Roles*, 22:7/8, 525-536.

Rosen, J.C., Silberg, N.T., & Gross, J. (1988). Eating attitudes test and eating disorders inventory: norms for adolescent girls and boys. Journal of Consulting and Clinical Psychology, 56:2, 305-308.

Sabik, N.J., Cole, E.R., & Ward, L.M. (2010). Are all minority women equally buffered from negative body image? Intra-ethnic moderators of the buffering hypothesis. *Psychology of Women Quarterly, 34,* 139-151.

Sanchez, D.T. & Crocker, J. (2005). How investment in gender ideals affects well-being: The role of external contingencies of worth. *Psychology of Women Quarterly, 29*, 63-77.

Santos, M., Richards, C.S., & Bleckley, M.K. (2007). Comorbidity between depression and disordered eating in adolescents. *Eating Behaviors*, 8, 440-449.

Schooler, D. (2008). Real women have curves: A longitudinal investigation of TV and the body image development of Latina adolescents. *Journal of Adolescent Research,* 23:2, 132-153.

Scoffier, S., Paquet, Y., & d'Arripe-Longueville, F. (2010). Effect of locus of control on disordered eating in athletes: The meditational role of self-regulation of eating attitudes. *Eating Behaviors (11),* 164-169.

Shapiro, S. L., Astin, J. A., Bishop, S. R., and Cordova, M. (2005). Mindfulness-Based Stress Reduction for health care professionals: Results from a randomized trial. *International Journal of Stress Management, 12*, 164-176.

Shapiro, S. L., Brown, K. W., & Biegel, G. M. (2007). Teaching self-care to caregivers: Effects of mindfulness-based stress reduction on the mental health of therapists in training. *Training and Education in Professional Psychology, 1*, 105-115.

Silgado, J., Timpano, K.R., Bucker, J.D. & Schmidt, N.B. (2010). Social anxiety and bulimic behaviors: The moderating role of perfectionism. *Cognitive Therapy Research, 34,* 487-492.

Slaney, R.B., Mobley, M., Trippi, J., Ashby, J.S., & Johnson, D.P. (1996). *The Almost Perfect Scale – Revised*. Unpublished manuscript, The Pennsylvania State University.

Slaney, R.B., Rice, K.G., Mobley, M, Trippi, J., & Ashby, J.S. (2001). The revised almost perfect scale. *Measurement and Evaluation in Counseling and Development, 34*, 131-145.

Smolak, L., Murnen, S.K., & Ruble, A.E. (2000). Female athletes and eating problems: A meta-analysis. *International Journal of Eating Disorders, 27*, 371-380.

Smolak, L., Murnen, S.K., & Thompson, J.K. (2005). Sociocultural influences and muscle building in adolescent boys. *Psychology of Men & Masculinity*, 6, 227-239.

Stewart, D.A., Carter, J.C., Drinkwater, J., Hainsworth, J., & Fairburn, C.G. (2001). Modification of eating attitudes and behavior in adolescent girls: A controlled study. *International Journal of Eating Disorders*, 29: 107-118.

Striegel-Moore, R.H., Dohm, F.A., Kraemer, H.C., Taylor, C.B., Daniels, S., Crawford, P.B., Schreiber, G.B. (2003). Eating disorders in White and Black women. *American Journal of Psychiatry,* 160: 1326-1331.

Strien, T., Frijters, J.E.R., Bergers, G.P.A., & Defares, B.P. (1986). The Dutch Eating Behavior Questionnaire (DEBQ) for assessment of restrained, emotional, and external eating behavior. *International Journal of Eating Disorders, Vol. 5, No. 2,* 295-315.

Stuart, J.U. (2010). Maladaptive perfectionism and disordered eating in college women:

The mediating role of self-compassion (Doctoral dissertation, University of Florida, 2010). *Dissertation Abstracts International, 70*, 7865.

Sturman, E.D., Flett, G.L., Hewitt, P.L., & Rudolph, S.G. (2009). Dimensions of perfectionism and self-worth contingencies in depression. *Journal of Rational Emotive Cognitive-Behavioral Therapy, 27*, 213-231.

Sullivan, P.F. (1995). Mortality in anorexia nervosa. *American Journal of Psychiatry*, 152:7, 1073-1074.

Swami, V., Buchanan, T., Furnham, A., &Tovee, M.J. (2008). Five-factor personality correlates of perceptions of women's body sizes. *Personality and Individual Differences*, 45, 697-699.

Thompson, J.K., Altabe, M., Johnson, S., & Stormer, S.M. (1994). Factor analysis of multiple measures of body image disturbance: Are we all measuring the same construct? *International Journal of Eating Disorders, Vol. 16, No. 3,* 311-315.

Thompson, K.M., Wonderlich, S.A., Crosby, R.D., & Mitchell, J.E. (2001). Sexual violence and weight control techniques among adolescent girls. *International Journal of Eating Disorders*, 29: 166-176.

Tiggemann, M. (2001). The impact of adolescent girls' life concerns and leisure activities on body dissatisfaction, disordered eating, and self-esteem. *Journal of Genetic Psychology,* 162, 133-142.

Tissot, A.M., & Crowther, J.H. (2008). Self-oriented and socially prescribed perfectionism: Risk factors within an integrated model for bulimic symptomology. *Journal of Social and Clinical Psychology, 27(7),* 734-755.

Tylka, T.L., & Sabik, N.J. (2010). Integrating social comparison theory and self-esteem within objectification theory to predict women's disordered eating. *Sex Roles (63),* 18-31.

Vardar, E., Vardar, S.A., & Kurt, C. (2007). Anxiety of young female athletes with disordered eating behaviors. *Eating Behaviors (8),* 143-147.

Vincent, M.A., & McCabe, M.P. (2000). Gender differences among adolescents in family, and peer influences on body dissatisfaction, weight loss, and binge eating behaviors. *Journal of Youth and Adolescence*, 29, 205-221.

Welch, E., Miller, J.L., Ghaderi, A., &Vaillancourt, T. (2009). Does perfectionism mediate or moderate the relation between body dissatisfaction and disordered eating attitudes and behaviors? *Eating Behaviors, 10*, 168-175.

Wilson, C. (2009). *Graduate students, negative perfectionism, perceived stress, and disordered eating behaviors* (Doctoral dissertation). Retrieved from Dissertation and Thesis Database (UMI No. 3365575).

Wolf, N. (2002). The beauty myth: How images of beauty are used against women. HarperCollins: New York, NY.

Wolszon, L.R. (1998). Women's body image theory and research: A hermeneutic critique. *American Behavioral Scientist*, 41:4, 542-557.

Wright, S., Grogan, S., & Hunter, G. (2000).Motivations for anabolic steroid use among bodybuilders. *Journal of Health Psychology*, 5, 566-571.

Young, E.A., Clopton, J.R., & Bleckley, M.K. (2004). Perfectionism, low self-esteem, and family factors as predictors of bulimic behavior. *Eating Behaviors (5),* 273-283.

Young, L. (1999). Racializing femininity, in *Women's Bodies*. Edited by Jane Arthurs and Jean Grimshaw, pp.67-90, Cassell, New York, NY.

Vita

Angela Danielle Finley-Straus was born in Detroit, Michigan, the daughter of Clifford and Anna. She graduated advanced with honors from high school. She received her Associates degree in Spanish from Austin Community College and Bachelors degree in History from The University of Texas at Austin. She received her Masters degree in Educational Psychology at The University of Texas at Austin in 2009, obtaining provisional licensure in counseling in 2010; she is presently working toward permanent licensure status as a therapist. She has been a member of the American Psychological Association since 2009. Ms. Finley-Straus has been the recipient of multiple fellowships and presented at several conferences on a wide array of topics including: body image, domestic violence, and discrimination. She has co-authored two publications and assisted with additional publicized research. She has volunteered and been employed in academic or health-related settings since 1995. She is married to Caleb Straus and is the proud mother of Bryan, a terrific son who is the light of her life; the family is happily expecting another child in January of 2012.

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This report was typed by the author.