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Philadelphia College of Osteopathic Medicine

Department of Psychology

THE RELATION BETWEEN SELF-COMPASSION, BODY-IMAGE, AND MOOD: HOW
DO WOMEN INTERNALIZE WEIGHT-RELATED FEEDBACK?

By Nicole Helverson

Submitted in Partial Fulfillment of the Requirements of the Degree of

Doctor of Psychology

May 2013

**PHILADELPHIA COLLEGE OF OSTEOPATHIC MEDICINE
DEPARTMENT OF PSYCHOLOGY**

Dissertation Approval

This is to certify that the thesis presented to us by Nicole Helverson
on the 28th day of May, 2013, in partial fulfillment of the requirements for the degree of
Doctor of Psychology, has been examined and is acceptable in both scholarship and
literary quality.

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Abstract

Objective: Body dissatisfaction has been identified as a risk factor for depression and eating pathology, whereas, self-compassion has been associated with higher quality of life. This study sought to examine the relationship between negative body image and self-compassion as risk or protective factors for weight and body composition related feedback mood changes.

Method: This deception study used a true-experimental, pre- and post-test design in a sample of 117 female graduate and medical students and college staff, aged 18 to 45 years; women diagnosed with eating disorders were excluded. After completing baseline questionnaires (including mood, body image, and self-compassion), participants had their weight and body fat percentage measured. Changes in self-reported mood were examined after participants were given weight and body fat readings, respectively, that were either: (a) accurate; (A) (b) false higher (*FH*) by 5 pounds and 4 body fat percentage points; or (c) false lower (*FL*) by 5 pounds and 4 body fat percentage points.

Results: The *FH* group reported an average 14.6% mood reduction, whereas the *FL* and *A* feedback groups showed very little change in mood. In addition, self-compassion and body image served both as protective and as risk factors in the *FH* condition.

Discussion: Findings suggest self-compassion and body image as important targets of intervention for the prevention of depression and eating disorders because they may play an important role in how women subjectively experience weight and body fat related feedback.

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Chapter 1

Introduction

Statement of the Problem

Body dissatisfaction has become a topic of great interest among psychologists because it is potentially detrimental to overall well-being and psychological functioning. Given the fact that almost half of all women report global, negative evaluations of their bodies, other contributing variables must be examined in order to account for individual differences, add to treatment approaches, and contribute to the development of potential preventative techniques. The overarching research question is to what extent does weight-related feedback affect mood, and do self-compassion and body image act as protective factors?

Purpose of the Study

It is the intention of this study to add to the existing literature on body image and self-compassion by investigating how the variables relate to changes in mood following weight-related feedback.

Chapter 2

Literature Review

Research suggests that body dissatisfaction is commonly experienced among young girls and women in a vast number of countries (Cash & Prusinsky, 2002). The influence of the media has largely been viewed as a negative contributor to increasing body dissatisfaction in our culture because society places great emphasis on the thin ideal. Women often compare their physical appearances and perceived attractiveness to media representations of the ideal female body, which may result in negative body image and decreased acceptance of one's own appearance (Wertheim, Paxton, & Blaney, 2004). This objective discrepancy between ideal and actual weight has become more widespread because the body ideal for women has become thinner; however, approximately 34% of women between the ages of 20 to 59 are considered overweight or obese (National Center for Health Statistics, 2012).

This disconnect may be explained by the self-discrepancy theory as it seeks to account for the link between one's perceptions and expectations of self with mood and affect (Higgins, 1987). Higgins proposed that individuals hold three components of self: the *actual* self, *ideal* self, and *ought* self. The *actual* self comprises one's beliefs about the qualities that he or she actually possesses; the *ideal* self comprises all the positive qualities that one desires to possess, and the *ought* self represents all that the individual believes that he or she should be, which may be influenced by a sense of responsibility or duty.

The self-discrepancy theory has been utilized in numerous studies as a means of gaining a greater understanding of body image discrepancies, including a number of variables such as body dissatisfaction, negative mood, depression, self-esteem, eating behaviors, and negative affect (Anton, Perri, & Riley, 2001; Bessenoff, 2006; Halliwell & Dittmar, 2006). The results of these

studies have revealed that greater discrepancies between one's perception of his or her physical appearance and his or her ideal or ought body image are associated with greater negative symptoms, such as negative affect and mood.

Body Image and Mood

Research has consistently found body dissatisfaction and negative mood to be linked in both clinical and nonclinical samples of women (Dunkley, Masheb, & Grilo, 2010; Santos, Richards, & Bleckley, 2007). Several studies have demonstrated body dissatisfaction as a contributor to negative mood; however, findings also suggest depression as a potential risk and maintaining factor for body dissatisfaction (Bearman, Presnell, Martinez, & Stice, 2006; Keel, Mitchell, Davis, & Crow, 2001). It is theorized that depression may lead to body dissatisfaction because of the experience of broader negative feelings developing into more focused negative feelings regarding weight and physical appearance; this is due to unrealistic expectations of the thin ideal (Keel et al., 2001). Negative mood is thought to contribute to poor body image because women who are more easily prone to experience negative mood states are more vulnerable to representations of the thin ideal and are more likely to experience distortions related to body image perception (Tylka & Subich, 2004).

To study this link further, researchers have utilized mood induction procedures in an effort to manipulate mood and explore its effect on body dissatisfaction in non-clinical female participants. Findings have been mixed. Studies have found success in inducing negative mood states, which led to reports of increased body dissatisfaction (Baker, Williamson, & Sylve, 1995; Cohen-Tovée, 1993; Taylor & Cooper, 1992). However, other studies have not found the same success (Carter, Bulik, Lawson, Sullivan, & Wilson, 1996). Small sample size, absence of control condition for comparison, and lack of baseline reports of mood and body dissatisfaction

may have contributed to discrepancies in findings among these previously discussed studies. More than likely there is a reciprocal relationship, in which body dissatisfaction and negative mood influence and possibly exacerbate one another. It would be crucial to discover factors that may positively impact this unhealthy cycle of negative influences; this would be a beneficial step in improving mood and self-perception.

Self-compassion

Borrowing from Buddhist principles, Neff (2003b) proposed the concept of self-compassion, a non-judgmental view of one's perceived weaknesses, limitations, and failures. In Neff's (2003b) definition of self-compassion, the construct comprises three components: *self-kindness*, *common humanity*, and *mindfulness*. *Self-kindness* involves the individual's engaging in an understanding perspective of his or her perceived flaws in the place of demeaning criticism. It also promotes learning from one's experiences and recognizing that, as human beings, we are not without flaws and imperfections. *Common humanity* is framed as the individual's experience of stressors and perceived failures as being part of the shared human experience. If one feels removed from the shared human experience, he or she may feel disconnected from others. Last, in *mindfulness*, the individual has an increased level of openness because he or she is aware of his or her own suffering and views negative experiences in a manner which promotes healthy healing. Suffering is not ignored or exaggerated, but acknowledged and simply experienced. Rather than perseverating on perceived negative experiences or negative thoughts, the individual instead remains attentive to the present moment (Bishop et al., 2004).

Self-compassion has been correlated with lower levels of depression, anxiety, and self-consciousness, as well as with greater levels of life satisfaction, social connectedness, positive health behaviors, performance, and improved interpersonal relationships (Adams & Leary, 2007;

Neff, 2003a, Neff, Hseih, & Dejitthirat, 2005; Neff, Kirkpatrick, & Rude, 2007). Self-compassion has been found to increase overall health; therefore it may also have a positive impact on body image perception because holding greater self-compassion may lead to decreased risk of experiencing unrealistic expectations of physical appearance. Research has supported a positive connection between self-compassion and body image. Women who reported having more positive body images also reported experiencing less anxiety related to perceived physical flaws; they were more likely be accepting of their bodies overall, and were not as vulnerable to experiencing cognitive dissonance related to exposure to the thin ideal (Wood-Barcalow, Tylka, & Augustus-Horvath, 2010).

This is a potentially critical avenue of treatment because, as a society, individuals are generally more kind and forgiving towards others than they are towards themselves.

Overwhelming self-criticalness tends to lead to fixation on negative thoughts and perceived failures. Utilization of self-compassion techniques may prove to be effective in addressing issues which are driven by feelings of shame, over-evaluation, self-criticism, and guilt; these are often found in those who experience distorted body image and distorted eating (Laithwaite et al., 2009; Gilbert & Procter, 2006). Self-compassion may be successful in the promotion of healthier concepts of self, particularly when related to body satisfaction.

Weighing and Deception

It may be assumed that the practice of weighing oneself may be a positive and motivating experience for those who desire to lose weight. However, negative psychological consequences may be experienced by those who experience weight gain. Research has suggested that women may view the scale as an emotional barometer and their daily weighing of self may determine their moods for the rest of the day and influence self-evaluation (Garner, Rockert, Olmsted,

Johnson, & Coscina, 1985). Such a seemingly benign practice may have serious influence on one's state of mind.

Tiggeman (1994) asked male and female university students to report their current height and weight at baseline. After seven months, the participants were again asked to report their current weight, and indicate whether or not they had gained or lost weight within the previous seven months. All participants were also asked to report their levels of happiness concerning any weight change. For restrained (dieting) eaters, those who had lost weight reported to be happier, in comparison with restrained eaters who gained weight. In addition, restrained eaters who had gained weight reported greater levels of unhappiness, compared with those who had experienced no weight change. For unrestrained (non-dieting) eaters, weight change had little impact of levels of happiness.

Although research on the effects of weighing and weight fluctuations has been more closely examined, little research has been conducted on the effects of false weight-related feedback in female samples. Ogden and Evans (1996) examined the effect of the manipulation of a perceived weight category on normal-weight male and female participants. Participants were randomly assigned to the underweight, average weight, or overweight category, based on a fictional height-weight chart. Self-report measures were completed before participants were weighed and also after they were assigned to a weight category. For the participants who were assigned to the average weight category, improvements in depression and self-esteem levels were found. Those in the underweight category also reported decreased depression; however, lower levels of self-esteem were also found among this group. Increases in depression and decreases in self-esteem were reported among the participants in the overweight group. A consideration of the participants who did not correspond to the appropriate weight norm, led to

the conclusion that weighing individuals and comparison of their weight to social norms contributed to negative psychological states.

In another deception study, undergraduate female participants were weighed either five pounds heavier or five pounds lighter than their actual weight or were not weighed at all (McFarlane, Polivy, & Herman, 1998). Participants, unrestrained and restrained eaters, were also asked to participate in a perceptual taste test in which they were presented with plates of three different kinds of cookies and were asked to eat as many cookies as needed to obtain accurate ratings for the taste test. Both unrestrained and restrained eaters who were told that they weighed five pounds less reported that they were not affected by the false weight feedback. Restrained eaters who were told that they weighed five pounds heavier reported lower self-esteem and greater negative mood. Restrained eaters in this false feedback group also ate significantly more food during the taste test. It was concluded that the restrained eaters who received the higher weight feedback experienced lower levels of self-worth as well as poorer mood, which led to lapses in dietary restraint.

Mills and Miller (2007) replicated the previously discussed study, but instead, provided, verbally, a false weight feedback by the experimenter who presented herself either as an undergraduate student (peer) or a graduate student (non-peer). Female undergraduate participants reported either their current weight with no feedback (the no feedback condition) or had their weight guessed at 15 pounds heavier than their actual weight (the negative feedback condition). All participants were weighed a week prior to their participation in the study. In the negative feedback condition, participants generally reported higher levels of anxiety and felt “fatter.” Greater body dissatisfaction, depression, and feeling “fatter” were found when a peer provided

the negative weight feedback. Results suggest that peers' perceptions of weight have a significant influence on one's psychological well-being.

Treating distorted body image and distorted eating is difficult and often unsuccessful (Cooper & Fairburn, 2011). Ramifications of such distortions have far-reaching consequences because they have potentially detrimental effects to overall well-being and psychological functioning. Self-compassion has been proposed as a potential area of focus in counteracting the negative impact of distorted and unrealistic expectations of one's appearance, because it has been shown to have positive effects on mood and self-perception (Polivy & Herman, 2002; Stice & Shaw, 2002). To date, limited research has been done in the area of weight-related feedback to account for impact on mood and the degree to which body image and/or self-compassion buffer this impact. The aims of this study were to examine whether or not (a) higher levels of self-compassion and/or (b) more positive body image served as protective factor(s) for women's mood when provided with their weight and body fat readings. The following hypotheses were examined: (1) Participants who report higher self-compassion will report more positive mood post assessment regardless if weight-related and body-fat percentage readings are false lower (*FL*), accurate (*A*), or false higher (*FH*); (2) Among participants given *FH* readings, those who report lower self-compassion will report lower mood post assessment; (3) Among participants given *FL* readings, those who report lower self-compassion will report more positive mood post assessment; (4) Participants who report more positive body image will report more positive post assessment mood post assessment, regardless of the type of feedback received; (5) Participants who report a more negative body image will report lower mood post assessment if given *FH* readings; and (6) Participants who report a more negative body image post assessment will report more positive mood if given *FL* readings.

Chapter 3

Methods

This study used a true-experimental, pre and post-test design with deception. Participants were randomly assigned to one of three groups, accurate weight and body fat percentage (*A*), false higher weight and body fat percentage (*FH*), and false lower weight and body fat percentage (*FL*). A single self-reported item of mood, given at two separate time points, functioned both as a predictor and as an outcome variable. In addition to baseline mood, feedback type (with three levels: *FL*, *A*, and *FH*), body image and self-compassion constitute the independent variables.

Deception was used because in large part, there is a great discrepancy between an individual's actual weight and her perceived weight. Previous deception studies have used manipulation of higher and lower weight readings in order to provide more favorable and more unfavorable outcomes than individuals may desire, because providing only accurate weight readings does not truly capture the potential mood effects (McFarlane, Polivy, & Herman, 1994). The decision was made to provide false feedback for weight at 5 pounds higher or lower and for body fat percentage 4% higher or lower, based upon other research that has found a mood effect using similar parameters (McFarlane, Polivy, & Herman, 1998). Additionally, the inclusion of only female participants was decided because research suggests that differences exist according to gender. Women have a drive to attain a thin ideal but men typically desire to attain a more muscular ideal (McCabe & Ricciardelli, 2004). Inclusion of male participants was incompatible with the purpose of this study.

Participants and Procedure

One hundred and seventeen female graduate and medical students and college staff were recruited from the Philadelphia College of Osteopathic Medicine (PCOM) community and activity center. Each feedback condition (*FL*, *A*, *FH*), respectively, consisted of 39 participants. Women between and including the ages of 18 to 45, who were not pregnant, who had no self-reported current or past treatment of eating disorders, and who had access to the gym facility were eligible for participation. Women who did not meet the criteria were excluded from the study. The potential of one participant winning a \$150 Amazon gift card was used as an incentive for participation.

After eligibility was determined, based upon inclusion criteria, the participant was provided with a brief education on body fat percentages to ensure that each individual had a basic knowledge of the range of healthy body fat percentages. To limit the impact of the participant's recent weighing herself on the success of the deception, the researchers read the following script:

I am going to start by obtaining a measure of your weight and body fat. So in a minute, I'll ask you to step on the scale. The reason why we take your readings along with your self-reports of weight and body fat is because people are often inaccurate when reporting these readings. This is true because most people use their bathroom scale to weigh themselves, and because these scales are bumped around, they are often knocked off balance. Another issue is that the floor where people weigh themselves is typically a little uneven. As a result, your scale at home is not a very accurate measure of your true weight. This is a typical precision scale (pointing to scale) that you would see in any doctor's office and is therefore much more accurate than a bathroom scale. This scale is

professional-grade and is very precise. In order to maximize the accuracy of the measure, I would like you to remove your shoes/boots, jacket, sweater, and also take off any heavy pieces of jewelry before you step on the scale (Adapted from McFarlane, Polivy, & Herman, 1998).

Each participant was asked to complete a demographic questionnaire, the Visual Analog Mood Scale (VAMS; Stern, 1997), the Self-Compassion Scale (SCS; Neff, 2003a), and the Multidimensional Body Self-Relations Questionnaire-Appearances Scales (MBSRQ-AS; Cash, 2000). The researcher or research assistant then measured the participant's weight and body fat percentage via a weight scale that provides both results (Tanita TBF-300A). Accurate or inaccurate readings of the participant's weight and body fat percentage were provided immediately on a sheet that contained their accurate or inaccurate readings, with the range of healthy and unhealthy weight and body fat readings according to height and age on the bottom. Following this, the participant was again asked to complete the Visual Analog Mood Scale (VAMS). Participants took approximately 15 minutes to complete all procedures, which took place over one session.

At the conclusion of this portion of the study, all of the participants were asked not to discuss the study with others in order to protect the integrity of the study. After the full completion of this study, participants would receive, via email, a debriefing message from the researcher stating that 39 participants were given false higher readings; 39 were given false lower readings, and 39 were given accurate readings. The email also invited participants to contact the researcher with questions about the study.

Materials

Demographic Questionnaire. This questionnaire requested information about age, gender, ethnicity, self-reported estimations of body weight and body fat percentage, self-reported confidence percentages in the accuracy of their predictions, days from last menstrual cycle, and the last time their weight and body fat readings were taken were gathered.

Weight and Body Fat. Participants' body weight and body fat percentages were assessed using the Tanita TBF-300A scale, a precision scale that was provided by the PCOM gym staff. The participant's age, gender, and height were entered into the operating system. Following this, the participant was asked to step up onto the platform with bare feet. Electrodes in the foot sensor pads then sent a low, safe signal through the body. To obtain body fat percentage, this scale uses bioelectrical impedance analysis (BIA) to measure the resistance to an electrical signal as it travels through water in muscle and fat. BIA is considered one of the most reliable and accessible methods of screening body fat (Böhm & Heitmann, 2013).

Visual Analogue Mood Scale. The VAMS has been widely used, particularly in other weight-related deception studies to assess changes in mood states because of its brief completion time and the decreased potential of repeated responses pre-to-post (McFarlane, Polivy, & Herman, 1998; Mills & Miller, 2007; Thompson, 2004). VAMS consists of a single 100mm horizontal line, depicting mood from 0 (very unhappy) to 100 (very happy). The use of horizontal line scales versus vertical line scales is often preferred because research suggests increased sensitivity and more standardized allocation of scores (Wewers & Lowe, 1990). Many versions of the VAMS have been developed, with test-retest reliability ranging from 0.55 to 0.87 (House, Arruda, Andrasik, & Grazi, 2012; Stern, 1997).

Self-Compassion Scale – Long Version. The Self-Compassion Scale – Long Version (SCS, Neff, 2003b) is a 26-item measuring three domains of self-compassion: self-kindness, common humanity and mindfulness, using a 5-point scale, with items ranging from 1 (almost never) to 5 (almost always). Three (*Self-Kindness*, *Self-Judgment*, *Over-Identification*) of the six subscales were utilized in this study. *Common Humanity*, *Isolation*, and *Mindfulness* were excluded from the study, because the subscales were found to be incompatible in testing the hypotheses accurately. The subscales include *Self-Kindness* (five items; e.g., “I try to be understanding and patient towards those aspects of my personality I don't like”), *Self-Judgment* (five items; e.g., “I'm disapproving and judgmental about my own flaws and inadequacies”), and *Over-Identification* (four items; e.g., “When I fail at something important to me I become consumed by feelings of inadequacy”). Higher scores for the *Over-Identification* subscale indicate less self-compassion, and lower scores on this dimension are indicative of more self-compassion. For this study, the internal consistency was .78.

Multidimensional Body Self-Relations Questionnaire—Appearance Scales (MBSRQ-AS). The MBSRQ-AS (Cash, 2000), which contains 34 items that are rated on 5-point Likert scales, measures attitudes and perceptions of five appearance-oriented aspects of body image. For this study, one of the five subscales of the MBSRQ-AS was used (*Overweight Preoccupation*). The remaining four subscales (*Body Areas Satisfaction*, *Appearance Evaluation*, *Appearance Orientation*, and *Self-Classified Weight*) were excluded because they were found to be incompatible in testing the hypotheses accurately. The *Overweight Preoccupation* subscale measures anxiety concerning weight, dieting, behaviors, and weight vigilance. Higher scores on this subscale indicate increased anxiety related to weight concerns. The internal consistency in

this study was .72, which is slightly less than the internal consistency (.78) found in others studies (Cash, 2000).

Data Analysis

Two 2x3 analyses of covariance (ANCOVA) were conducted for this study; a single ANCOVA was utilized to examine the independent variables of body image and self-compassion, respectively. To test for higher and lower body image and self-compassion, scores were split at the median value of the sample. For body image, scores below and including 2.5 served as lower body image, and scores above and including 2.51 served as higher body image. For self-compassion, scores below and including 9.8 served as lower self-compassion, and scores above and including 9.81 served as higher self-compassion. Baseline mood served and also actual weight served as control variables; post assessment mood served as the outcome variable.

Chapter 4

Results***Random Assignment***

Because the participants were randomly assigned to one of three feedback groups, any baseline differences in self-compassion and body image should have been randomly distributed across the groups. To verify that the random assignment was successful, an analysis of variance was run to test for any differences in self-compassion and body image between the groups. No differences emerged ($p > .05$).

Demographics

Table 1

Participant Characteristics (N = 117)

<i>Characteristic</i>	<i>M</i>	<i>SD</i>
Age		
Overall	27.82	6.12
FL condition	27.74	6.54
A condition	25.85	4.16
FH condition	28.87	6.96
BMI		
Overall	23.70	4.74
FL condition	23.72	4.86
A condition	22.84	4.54
FH condition	24.54	4.79

There were statistically significant differences in age because participants in the A condition were slightly younger than participants in the FL and FH conditions ($F(2, 114) = 3.16$, $p < .05$). The average BMI of the sample was 23.70 ($SD = 4.74$) and mean BMI was found to be consistent among feedback conditions ($F(2, 114) = 1.28$, $p < .05$). The majority of participants fell within the normal range (18.50 to 24.99) of BMI (72.6%); 12.8% of participants were within

the overweight (≥ 25.00) range, and 10.3% were within the obese (≥ 30.00) range. Three participants fell within the underweight category (3.4%). A comparison of the BMI of this sample with the sample of the national average may be seen in Figure 1.

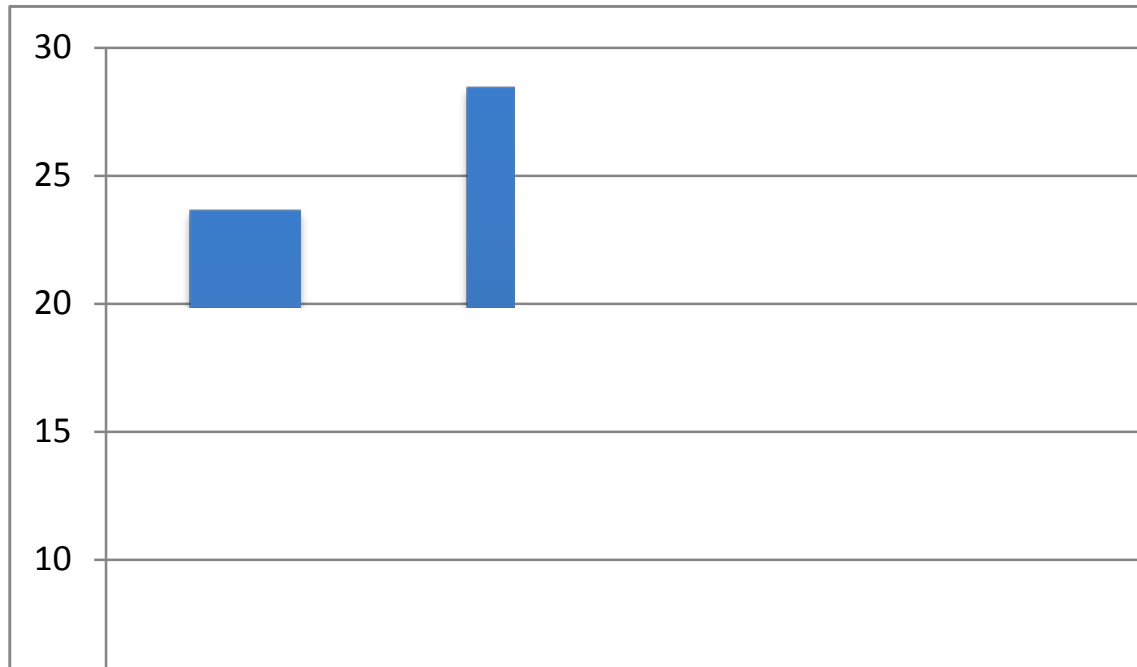


Figure 1. BMI averages. This figure illustrates a comparison between average BMI of the current sample versus average BMI of women in the United States (Fryar, Gu, & Ogden, 2012).

Overall, the participants were accurate in their estimations of their actual weight. Twelve percent of the sample estimated about five or more pounds higher or lower than actual weight. In contrast, participants were far less accurate in their estimations of their body fat percentage. Approximately 50.9% provided an estimate that was within 5% of their true body fat percentage. Optimal body fat differs according to age for women. Between the ages of 20 to 29, optimal body fat percentage ranges from 20 to 28. For women between 30 to 39 years, body fat percentages ranging from 21 to 29 are recommended. Last, for the 40 to 49 age group, a body fat percentage between 22 to 30 is suggested as a healthy target range. The remaining demographic variables may be viewed in table (*see Table 2*).

Table 2

Participant Characteristics (N = 117)

<i>Characteristic</i>	<i>n</i>	<i>%</i>
Ethnicity		
Caucasian	91	77.8
African American	13	11.1
Hispanic	4	3.4
Asian/Pacific Islander	5	4.3
Other	4	3.4
Participants who are currently menstruating	12	10.3
Participants who are currently dieting	46	39.3
Weight last taken		
Less than 3 days ago	39	33.3
Less than 1 week ago	26	22.2
Less than 1 month ago	29	24.8
Less than 3 months ago	12	10.3
Between 3 to 6 months ago	7	6.0
Between 6 to 9 months ago	3	2.6
Between 9 to 12 months ago	1	.9
More than 12 months ago	0	0
Never	0	0
Body fat last taken		
Less than 3 days ago	7	6.0
Less than 1 week ago	2	1.7
Less than 1 month ago	6	5.1
Less than 3 months ago	6	5.1
Between 3 to 6 months ago	5	4.3
Between 6 to 9 months ago	5	4.3
Between 9 to 12 months ago	4	3.4
More than 12 months ago	38	32.5
Never	44	37.6

Self-Compassion and Mood

Table 3

Analysis of Covariance of Self-Compassion and Mood

Source	SS	df	MS	F	p
Intercept	537.50	1	537.50	26.56	.128
ActualW	878.14	1	878.14	3.84	.053
Pre mood	28932.41	1	28932.41	126.42	.000**
Fbtype	7076.02	2	3538.01	15.46	.000**
SC	1745.58	1	1745.58	7.63	.007*
Fbtype*SC	550.79	2	275.39	1.20	.304
Error	6300.82	109	175.02		
Total	625504.00	117			

Note. ActualW = Actual weight; Fbtype = Feedback type; SC = Self-Compassion.

* $p < .05$; ** $p < .001$

A 2x3 ANCOVA was conducted, with $p < 0.05$ considered statistically significant (see Table 3). Satisfactory results were found during evaluation of the assumptions of normality, independent observations, linearity, and homogeneity of variance. Effect sizes were also included in the ANCOVA analysis. Results indicate a partial eta squared that is small ($\eta^2 = .07$).

Results of the ANCOVA revealed a significant decrease in mood pre-to-post among participants with low self-compassion, regardless of feedback condition. Participants who report low self-compassion may be more than likely to be self-critical of their appearances and perceived flaws, hence experiencing poor mood regardless of the type of external feedback received ($F(1, 109) = 7.63, p < .05$). Therefore, Hypothesis 2 was supported. Participants who were provided *FH* readings and reported *lower* self-compassion, reported *lower* mood post assessment in comparison with individuals who reported higher self-compassion within this group. Conversely, participants who were provided *FL* readings and reported *lower* self-compassion did not report more *positive* mood post assessment as originally hypothesized. Therefore, Hypothesis 3 was not supported.

Self-compassion was found to be protective only in the *FH* condition. Therefore, mood was more resilient for those who are more kind and non-judgmental towards themselves. Self-compassion was not found to be a buffer in the *FL* and *A* conditions. Therefore, Hypothesis 1 was partially supported. Participants who reported *higher* self-compassion did not report more *positive* mood regardless of the readings provided. This hypothesis was supported only among the *FH* condition. In addition to main effects found in self-compassion, feedback type ($F(2, 109) = 15.46, p < .001$) and pre mood ($F(1, 109) = 126.42, p < .001$) were found to be statistically significant.

Interaction effects between feedback type and self-compassion were not found to be statistically significant ($F(2, 109) = 1.20, p = ns$). Post hoc testing (Bonferroni) yielded statistically significant differences between *FH* feedback condition and *FL* ($p < .001$) and *A* ($p < .01$) feedback conditions, respectively. Minimal changes in mood in *FL* and *A* conditions may have contributed to the lack of interaction effect. As demonstrated in Table 4, mean differences among feedback conditions for pre to post mood are greatest in the *FH* group, particularly among the participants who reported low self-compassion, in comparison with the *FL* and *A* groups.

Table 4

Means of Pre and Post mood based upon Low/High Self-Compassion and Feedback Type

Feedback Type	Self-Compassion	<i>M</i>	<i>SD</i>	<i>N</i>
<i>FL</i>	Low SC			
	Pre mood	69.32	18.78	25
	Post mood	71.24	25.36	25
	High SC			
	Pre mood	78.93	21.56	14
	Post mood	85.57	16.83	14
<i>A</i>	Low SC			
	Pre mood	69.24	19.97	17
	Post mood	65.12	20.66	17
	High SC			
	Pre mood	76.32	13.16	22
	Post mood	76.55	12.31	22
<i>FH</i>	Low SC			
	Pre mood	70.41	12.80	17
	Post mood	47.35	30.82	17
	High SC			
	Pre mood	76.32	16.81	22
	Post mood	68.41	21.52	22

Note. SC = Self-Compassion

Body Image and Mood

Table 5

Analysis of Covariance of Body Image and Mood

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Intercept	168.89	1	168.89	.77	.384
ActualW	400.65	1	400.65	1.82	.181
Pre mood	29981.83	1	29981.83	135.84	.000**
Fbtype	6651.50	2	3325.75	15.07	.000**
BI	831.31	1	831.31	3.77	.056
Fbtype*BI	2393.43	2	1196.71	5.42	.006*
Error	24058.24	109	220.72		
Total	625504.00	117			

Note. ActualW = Actual weight; Fbtype = Feedback type; BI = Body Image.

* $p < 0.05$; ** $p < .001$

A 2x3 ANCOVA was conducted, with $p < 0.05$ considered statistically significant (see Table 5). Interaction effects between feedback type and body image were found to be statistically significant ($F(2, 109) = 5.42, p < .05$). Differences between *FH* group in comparison to the *FL* ($p < .001$) and *A* ($p < .001$) groups were found to be statistically significant during post hoc analysis (Bonferroni). Effect sizes were also included in the ANCOVA analysis, which indicated a partial eta squared that is small ($\eta^2 = .09$).

Results revealed that for participants who reported more negative body image, mood was found to decrease from pre-to-post in the *FH* condition, in comparison with participants who reported a more positive body image within that feedback group. Participants who reported a negative body image indicated experiencing anxiety related to weight gain and dieting practices (*Overweight Preoccupation*). Therefore, Hypothesis 5 was supported. On the other hand, participants who reported a negative body image and who were provided with *FL* readings did not experience an improvement in mood following weight and body fat readings as originally hypothesized. Therefore, Hypothesis 6 was not supported.

For the individuals within the *FH* group, having a healthier body image appeared to be protective because there were no significant mood changes from pre-to-post. Individuals with healthier body image experienced little to no anxiety related to weight gain and dieting practices (*Overweight Preoccupation*). Therefore, Hypothesis 4 was partially supported.

Self-Compassion and Body Image

In conducting a correlation analysis to examine the relations between self-compassion and body image, several relationships were found. All three self-compassion subscales were found to be significantly, negatively correlated with the body image subscale. *Self-kindness* ($r = -.19, p < .05$), *self-judgment* ($r = -.34, p < .001$), and *over-identification* ($r = -.25, p < .01$), were

found to be correlated, respectively, with *overweight preoccupation*. Therefore, the participants who engage in self-kindness are more accepting of their shortcomings, engage in less self-judgment, and are more closely connected with their emotions; these report less weight-related anxiety.

Effect of Deception

Results yielded highly significant between-group differences in mood changes following the deception ($F(2,114) = 11.69, p < .001$). The *FH* group reported an average 14.6% mood reduction whereas the *FL* and *A* feedback groups showed very little change in mood. Deception was found to be successful in the *FH* condition only (see *Figure 2*).

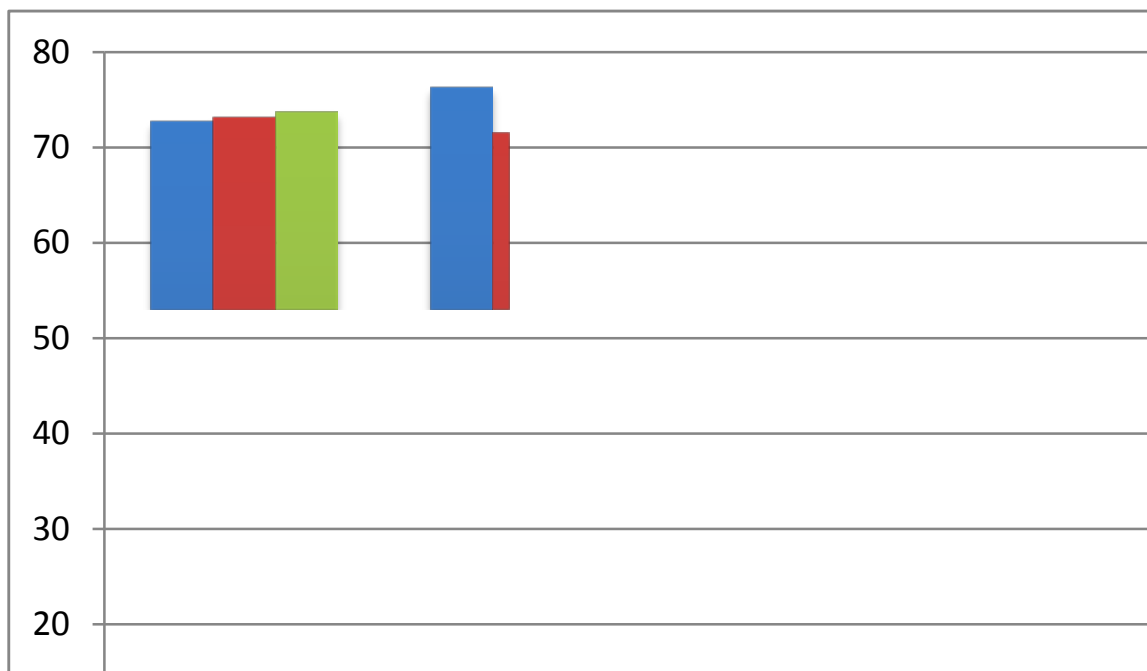


Figure 2. Mood changes among participants. This figure illustrates participants' baseline and post assessment mood based upon feedback condition. $**p < .001$

Chapter 5

Discussion

This study examined the potential of self-compassion and body image as protective or as risk factor(s) for women's mood when presented with accurate or deceptive weight and body fat related readings. Results indicated that the false higher (*FH*) group was susceptible to the manipulation because mood significantly decreased following negative written feedback. Significant mood changes were not found in the accurate (*A*) and false lower (*FL*) groups. In fact, when looking at mood, differences between these two groups were not evident. Significant differences in mood emerged only for the *FH* group when looking at self-compassion and body image, independently. Self-compassion and positive body image, respectively, served as protective and risk factors in the *FH* condition. For example, having low self-compassion led to decreases in mood, regardless of the type of feedback provided. These findings suggest that body image and self-compassion buffers mood change when pre-mood serves as a control variable.

Findings suggesting self-compassion as a protective factor is consistent with previous research (Wasylikiw, MacKinnon, & MacLellan, 2012). Authors found that high self-compassion was predictive of a healthy body image to a greater degree than self-esteem. In addition, self-compassion was found to buffer the relationship between symptoms of depression and body preoccupation. Self-compassion has also been shown to be a protective factor for emotional issues such as depression (Raes, 2011). Additionally, self-compassion has been shown to be a buffer in decreasing the experience of cognitive distortions (Akin, 2010). Therefore, healthy self-compassion may lessen the likelihood of holding distorted thoughts related to one's appearance and/or pertaining to body image, which may lead to healthier experiences of emotions.

Previous studies have found that the education and practice of self-compassion has the potential to lead to significant reductions in feelings of shame and self-criticism, with the added potential of improvements in other symptoms. For example, improvements in depression and anxiety levels in individuals with long-term mental health problems (Gilbert & Procter, 2006), reduction of auditory hallucinations (Mayhew & Gilbert, 2008), and improvements in levels of depression and shame in individuals during inpatient hospitalizations (Laithwaite et al., 2009) have been found in individual who engage in self-compassion practices. In addition, self-compassion induction, via a short talk about overeating, was found to be successful in the reduction of distress levels and episodes of overeating in nonclinical samples (Adams and Leary, 2007). In addition to self-compassion, certain interventions have been found to be successful in improving body image perception and reducing body dissatisfaction (O'Dea & Abraham, 2000; Yager & O'Dea, 2010). Therefore, research suggests that self-compassion and body image are malleable constructs. This knowledge is valuable in understanding that self-compassion and body image are important targets of intervention for healthy maintenance of one's mood, therefore having the potential to lessen the occurrence of depression and eating disorders.

These findings have clinical relevance because there is a significant emotional impact when an individual is less self-compassionate and holds negatives views pertaining to her physical appearance. Participants in the *FH* condition were particularly vulnerable to the manipulation because their moods significantly decreased after receiving false feedback. Deception was implemented with the intention of simulating negative or positive feedback regarding body image in the environment. Research has indicated countless times that there is a great discrepancy between an individual's actual weight and her perceived weight. This dissonance may lead to depression, poor eating habits, and the increased experience of cognitive

distortions pertaining to self. Looking towards self-compassion in protecting against and limiting the experience of poor body image before possible engagement in unhealthy eating and exercise practices is an important avenue of further exploration.

Limitations

In addition to the small sample size, the inclusion of only female participants and the fact that the majority of the sample identified themselves as Caucasian, generalizability of the results is limited. Also, the location in which the study took place, the PCOM gym, must be considered. Various resources were utilized during the recruitment process (i.e. fliers, emails, in-person recruitment); however, one must consider the potentially skewed sample of those who participated. These individuals may have been more heavily invested in their physical appearances.

Future Research

In summary, negative weight-related feedback had a significant, negative impact on the participants' moods. The results may be applied to cognitive behavioral therapy (CBT) because of the need to build healthier coping skills to manage negative comments from others more appropriately regarding weight and appearance. In addition, CBT may also be beneficial in examining the costs and benefits of relying on the assumptions and feedback from others; it may also be useful in recognizing the fact that assuming the ideals of others impacts an individual heavily. Psychoeducation on the impact and influence of social ideals, positive and negative coping behaviors, and concept of self is integral in providing a healthier standard of self-compassion in order to minimize the occurrence of negative mood and affect states related to body image perception.

In considering the increasing public health risks associated with body image concerns and the severity and challenge of treating eating disorders, prevention of these issues should be of primary importance. Future research should explore techniques in how to promote healthier levels of self-compassion using the Self-Compassion Scale (Neff 2003a; 2003b) and self-compassion practices in order to reduce disordered eating, poor self-concept and body image, and also assist in building healthier views of self and others for men and women across age demographics. Poor body image perception may lead to eating disturbances, poor mood and affect, as well as to other negative consequences. Utilization of self-compassion treatment approaches may prove to be effective in treating disorders which are driven by feelings of shame, over-evaluation, self-criticism, and guilt and may be used in promotion of healthier concepts of self. Emphasis on preventative measures would be a critical avenue of practice to minimize such negative consequences.

Previous research suggests weight-related feedback provided by a peer poses a significant threat to an individual's body image, even for individuals who report having little concern regarding weight and eating habits (Mills & Miller, 2007). This study did not examine the potential effect of having peers or having someone in a 'student status' provide feedback. Given the fact that the majority of the sample consisted of medical and graduate-level students, it would be interesting if further studies examined this potential relationship. In addition, it would be interesting and potentially relevant to examine whether or not differences in mood and body image perception exist when feedback comes from a student and is provided to a professional (professors/graduate-level staff) or from a female in young adulthood to a woman in middle to late adulthood. Age or perceived status of the individual that one receives feedback from, may have a significant impact on an individual's mood and affect how feedback is internalized.

Age is considered to be an important factor in body image perception because women in their 20s, 30s, and 40s and beyond continue to experience body dissatisfaction. Research on body image, eating disorders, and other related variables have focused primarily on adolescent and college age samples. Few research studies have examined body image among older female samples and the research that has been done has yielded varying results. However, the most singularly prominent consistency between younger and older women is the pervasiveness of body dissatisfaction (Webster & Tiggemann, 2003). Research consistently yields the fact that women report a discrepancy between their current and ideal body shapes during early adulthood, midlife, and older adulthood (Tiggemann & Lynch, 2001). Notably, no differences between age groups in body image, mood, and self-compassion emerged within this study. However, in consideration of the relative consistency of body dissatisfaction throughout the life span, more studies should examine body image perception, self-compassion, and mood effects in middle to late adulthood for women.

Similar to the limited research focusing on middle to late adulthood, the majority of research done in the area of body image and related variables has examined primarily Caucasian female samples. Research suggests that Caucasian women, overall, are more dissatisfied with their bodies in comparison with non-Caucasian women. However, little research has been done in examining potential differences among distinct ethnic groups.

Women from different ethnic/racial backgrounds may vary in the extent to which they are dissatisfied with their bodies because meanings of the body depend on cultural and social group context (Crago & Shisslak, 2003). For instance, Mintz and Kashubeck (1999) found that although overall levels of body dissatisfaction were consistently found among White and Asian American women, Asian American women reported lower satisfaction with race-specific body

parts (i.e., eyes and face), because race-specific parts visually differentiate them from the White standard of beauty held in the Western culture. Additionally, it has been reported that African American women tend to be significantly more satisfied with their appearances (Annesi & Gorjala, 2010). Research suggests that African American women adopt a larger ideal body size, are more accepting of an overweight figure, experience fewer weight-related societal pressures, and, as a result, experience greater levels of body satisfaction than Caucasian women (Streigel-Moore, Schreiber, Pike, Wilfley, & Rodin, 1995). However, it is believed that minority females are not entirely unsusceptible to the pressures to maintain thin ideals (Roberts, Cash, Feingold, & Johnson, 2006).

Although research is even more limited in examining body satisfaction among Hispanic women, it has been found that large, full-bodied women are considered healthy and experience high status in many Latin American cultures (Gil-Kashiwabara, 2002). Therefore, what is perceived to be the female body ideal appears to be much more open and accepting among Hispanic cultures in comparison with overall Western culture. Nonetheless, cultural factors such as adherence to the traditional feminine gender role is associated with body image concerns and may potentially result in body dissatisfaction among Hispanic women, comparable with the dissatisfaction found among White women (Avila & Avila, 1995). It is suggested that research explore the potential impact of culture and ethnicity in levels of self-compassion and body image perception and how this impact, in turn, may be a risk or protective factor for mood.

Regardless of age, ethnicity, or gender, an individual's body image perception may impact physical activity engagement, nutrition intake, and other health behaviors, which in turn, affects his or her weight, physical health, and state of mind. Therefore, inaccurate weight perceptions have the potential to lead to negative mood, unhealthy eating, and weight

management practices. When discussing weight perceptions, it is important to note that women have a tendency to under report their actual weight (Engstrom, Paterson, Doherty, Trabulsi, & Speer, 2003). However, the participants in this study were quite accurate in their estimations of their weight. Only 12% of the sample overestimated or underestimated their weight by five or more pounds. Most women typically weigh themselves in the morning, which is the time when their weight is typically the lowest during the day. Despite the varying times of the day that participants completed their weighing, these participants may have accurately accounted for weight variability as their day progressed. In addition, participants were asked whether or not they were dieting at the time of the study. There was an even distribution across feedback groups among the 39% of the sample who were engaged in dieting practices. Although results did not indicate that dieters were more likely to have lower self-compassion, results revealed that participants who were dieting at the time of the study also reported a higher amount of anxiety about weight gain.

When discussing weight perception, dieting, and feedback, it is interesting to note that in this study, only three participants identified themselves as being underweight (3.4% of the sample). However, 16 participants reported that they believed others considered them underweight (14.6% of the sample). This suggests a great discrepancy between how participants may view themselves in comparison with how they believe others view them. Self-compassion may help to mediate emotional distress related to discrepancies between self-perception and external feedback received; this may negatively influence body image perception. Future research should focus on the potential of factors such as self-compassion in promoting healthier body image in the prevention and treatment of distorted self-perception, depression, and eating disorders.

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Appendix A

Literature Review

Introduction

In the past several decades, the perception of the ideal body has changed drastically for both men and women. As a result of pressures placed by the media and by cultural expectations, body image dissatisfaction has become progressively more apparent, particularly among women. In addition to television, magazines, and movies, the internet has proven to be problematic because it is a contributing factor in the exposure of individuals to poor ideals and poor eating behaviors. Although there are numerous websites promoting quality education regarding the impact of eating disordered behaviors on the individual's emotional, physical, and psychological health, there are also numerous sites promoting the practice of Anorexia Nervosa, or "pro-ana" sites, or more generally "pro-eating disorder" sites which include the range of eating disordered behaviors. On these sites, 94% had motivational content in the form either of pictures or of writing (Chesley, Alberts, Klein, & Kreipe, 2003) and 67% provided tips on how to lose weight (Norris, Boydell, Pinhas, & Katzman, 2006).

Wilson, Peebles, Hardy, and Litt (2006) asked 76 individuals, between the ages of 10 to 22 who had been diagnosed with an eating disorder, whether or not they had searched the internet for tips or education on eating disordered behaviors. Twenty-seven of the individuals viewed pro-eating disorder sites and 31 viewed pro-recovery sites. The majority of individuals who viewed the pro-eating disorder sites stated that they learned techniques by which to lose weight or to purge. Those individuals who viewed the pro-recovery sites also gained such information.

Harper, Sperry, and Thompson (2008) surveyed 1,575 undergraduate women on their viewership of a number of websites, including pro-eating disorder sites, pro-recovery sites, and professional sites that provided information regarding eating disorders. From the sample, 199 individuals (13%) reported viewing one or more of the three sites. Seventy-five participants viewed more than one site, and 134 viewed only one of the three sites. From the 134 women who viewed only one site, 31 participants viewed only pro-eating disorder websites; 87 viewed only professional websites, and six participants viewed only pro-recovery sites. Results indicated that the individuals who viewed the pro-eating disorder websites had higher levels of body dissatisfaction and of eating disturbances, in comparison with the individuals who viewed only the professional sites. Studies such as these emphasize the impact of the media's influence on body image and on its contribution to negative behaviors.

When presented with idealized images of the female body whether or not it is in person or through media outlets, women often find themselves comparing their own appearances to that of the ideal, which may result in negative body image and decreased acceptance of their own appearances (Wertheim, Paxton, & Blaney, 2004). Thus a discrepancy exists between their ideal weight and appearances and their actual weight and appearances. This has become increasingly problematic because the body ideal for women has become thinner; however, more than half of the female population is overweight (National Center for Health Statistics, 2010).

Less than 5% of the female population weighs what may be considered equal to that of the average thin model (Grogan, 2008). Research indicates that 90% of females have or will at some point diet (Grogan, 2008). However, dieting may result in less than satisfying outcomes, considering that diets typically result in weight fluctuations and weight gain. Such a discrepancy between ideal and actual weight is critical because body image is integral to one's perception of

self and self-esteem. This, in turn, may negatively influence and affect eating behaviors and psychological functioning (Cash & Pruzinsky, 2002; Halliwell & Dittmar, 2006). Despite a large number of women who have accepted a slender figure as the ideal and have misconceptions of their own body size, few actually go on to develop an eating disorder.

Body Image

Body image is a multidimensional construct that encompasses an individual's thoughts, emotions, behaviors, and perceptions pertaining to one's appearance (Cash & Pruzinsky, 1990). Body image attitudes, the individual's thoughts, feelings, and behaviors, comprise two sub-constructs – body image evaluation/affect and body image investment. The satisfaction or dissatisfaction with appearance, as well as the emotions and beliefs related to it, is body image evaluation/affect. Body image investment refers one's perception of the importance, value, and meaning of his or her own appearance (Cash, Jakatdar, Williams, 2004).

Negative body image appears to be a relatively stable construct (Tiggemann & Lynch, 2002). However, situational variations have also been reported in a number of studies (Tiggemann, 2001). Situational influences have also been identified as influencing one's self-concept. Also, one's body image may differ from one situation to another. Simply imagining one's self trying on clothes, eating, or going to the beach has been found to influence self-reports of body image perception (Tiggemann, 2001).

Research has found that low self-esteem, depressed mood, in addition to high body mass index (BMI), are risk factors for increased body dissatisfaction (Paxton, Eisenberg, & Neumark-Sztainer, 2006; Presnell, Bearman, & Stice, 2004). Additionally, previous research has demonstrated that negative mood can have an impact on state body image. Utilizing a variety of mood induction procedures, studies have indicated that negative mood states lead to higher

estimations of body size and stronger body dissatisfaction (Baker, Williamson, & Sylve, 1995). Along with individual factors, cultural pressures such as the media's perception of the ideal women, dieting habits of family members and peers, and ridicule of one's weight by others are additional contributing risk factors (Groesz, Levine, & Murnen, 2002; Stice & Whitenton, 2002).

Additionally, early separation anxiety and anxious adult attachment have been associated with body dissatisfaction, negative affect, and restrained eating among women diagnosed with Anorexia and Bulimia (Tasca et al., 2006; Troisi et al., 2006). Broberg, Hjalmer, and Nevenon (2001) compared young women who have current eating disordered symptoms with a community sample. Results indicated that insecure attachment was more frequently found in the clinical sample and, more notably, was more closely associated with severity of symptoms. The researchers found that this relationship extended to those women in the community sample who reported having a history of disordered eating behaviors but who have no current symptoms.

Minimal research has been done in examining the link between insecure attachment and body dissatisfaction in men. Cash, Thériault, and Annis (2004) examined a number of attachment measures, including romantic attachment, in college men and women and found that anxious attachment was the strongest predictor of body image disturbances in men and the sole predictor in women. Similarly, Koskina and Giovazolias (2010) found that attachment avoidance directly impacted eating behaviors for both men and women.

Because of the impact of the media on our society, body comparison by males and females to those ideals projected by the media has been largely studied as a potential mediator of individual and cultural factors and body dissatisfaction. The conception of body comparison has been strongly influenced by Festinger's (1954) Social Comparison Theory, which suggests the idea that social comparison is a process in which individuals seek to gather information and then

make judgments about themselves by comparing themselves to others. In this process, an individual may engage in upward or downward social comparison. Negative outcomes are thought to result when individuals compare themselves upwardly to someone who is “above them” in physical attractiveness, thinness, intelligence or SES. In contrast, positive outcomes are believed to result when individuals compare themselves downward to someone who is “below them,” thus improving their view of self.

Body comparison has been correlated with body dissatisfaction and negative self-evaluation (Jones, 2004; Schutz, Paxton, & Wertheim, 2002). Body comparison is not necessarily negative. If used as a means of self-improvement or self-enhancement, one may be motivated to greater achievement (Halliwell & Dittmar, 2005). For adolescent girls and for young men and women, body comparison occurs much more frequently in relation to peers and media images. Although females more frequently report eating and body image disturbances, such issues are not uncommon among males (Barry & Grilo, 2002).

Differences Among Gender. In comparison with men, women are more susceptible to cultural pressures to maintain appearance ideals (Saucier, 2004). However, recent research has shown that adolescent and adult males have become increasingly and negatively influenced by the lean-muscular male ideal body portrayed in the media and may have negative thoughts and affect concerning their own physical fitness and muscle mass (Leit, Gray, & Pope, 2002). In fact, research suggests that 10% of individuals with Anorexia and Bulimia and 25% of individuals with Binge Eating Disorder are men (Weltzin et al., 2005).

Social comparison by adolescent males towards male models in the media has been linked with an increased engagement in behaviors to increase muscle mass, such as consideration of taking and of actually taking pills and supplements (O’Dea & Abraham, 2002). Exposure to

media influences has been identified as a key factor in the occurrence of poor body image and of eating disturbances, with a reported prevalence rate of 20% among young men (Botta, 2003; O'Dea & Abraham, 2002). In addition to taking supplements to increase muscle mass is the use of diet restriction, laxative use, and purging to control weight. Males are not immune to the pressures of maintaining a physical ideal. Research has found that young boys and young men also experience body dissatisfaction, which has led in some instances to negative health behaviors and psychological distress (Carfi et al., 2005).

In recent years, body image and eating disturbances (BIED) and muscle dysmorphia (MD) have become more prevalent among the male population. Having a poorer self-concept and elevated levels of depression, anxiety, and interpersonal issues are predictive variables in individuals with body dissatisfaction as well as those with muscle dysmorphia (McFarland & Kaminski, 2009). In males with muscle dysmorphia, obsessive-compulsive symptoms, paranoia, hostility, and eating disordered behaviors (i.e. vomiting, diet pills, and dieting) were commonly found.

Body Image and Siblings. The sociocultural theory of body image disturbances suggests that Western women experience pressures from multiple sources, including parents, peers, and the media, in order to maintain a certain level of thinness. Family dynamics is an integral factor in the transmission of sociocultural pressures to women who, in turn, internalize the messages put forth by their families. For example, young females who obtained high scores on self-report measures of binge and purge behaviors had mothers who were more critical of their daughters' attractiveness and weight than were mothers of females with low scores on those same measures (Pike and Rodin, 1991).

There also appears to be a positive correlation between direct parental pressure to be slender and the broader measures of weigh concern, dieting behavior, and other disordered eating behaviors. Paxton et al. (1991) found that high school girls who reported that their parents encouraged them to engage in dieting practices were more likely to engage in those behaviors, regardless of their body mass. Perceived parental pressure to be thin was associated with nonpathological dieting and disturbed eating practices in middle school girls (Levine, Smolak, Moodey, Shuman, & Hessen, 1994).

Tsiantas and King (2001), through self-report questionnaires, examined the sociocultural theory of body image disturbances and social comparison theory in 41 closest-in-age sisters. The sisters who did not have self-reported eating disturbances were between the ages of 14 to 25, were within a four-year age range of one another, and were in contact with one another at least five hours each week. Within the sample, a mean age of 20.73 years for older sisters and 18.59 years for younger sisters was found. Two sets of twins (zygosity was not confirmed), aged 21 and 24 years, were also included in this sample. Overall, the sisters were within an approximate two-year range of one another and were within a normal body mass index range; the average was a BMI of 21.78.

Results suggest that both younger and older sisters, to the same degree, internalized appearance- related sociocultural pressures. In addition, younger sisters were found to have engaged in appearance-based social comparisons with their older sisters, which resulted in negative self-evaluations during the younger sisters' childhood and teenage years. On the other hand, engagement of the older sisters' appearance-based social comparisons in regard to their younger sister during childhood and teenage years resulted in both neutral and positive self-evaluation of appearance. Therefore, one may assume that younger sisters engaged in upward

appearance-based social comparisons, which yield more negative outcomes and the older sisters engaged in downward appearance-based social comparison, which may yield either neutral or positive outcomes. Such negatively based comparisons made by younger sisters toward their older sisters may lead to negative beliefs concerning their own appearances and thus, may lead to negative body image. Research has also examined the relationship between changes in perception of body image and age.

Body Image and Age. Research on body image, eating disorders, and other related variables have focused primarily on adolescent and college age samples. Considering the relatively early onset of reported body dissatisfaction, research has begun to examine this construct in young children.

Dittmar, Halliwell, and Ive (2006) exposed 162 female participants, aged 5 to 8 years, to images of Barbie dolls, Emme dolls (U.S. size 16), or no dolls (baseline control) and then body image assessments were completed. Young girls exposed to Barbie reported lower body esteem and a greater desire for a thinner body shape than young girls in either the Emme dolls or no dolls groups. This suggests that the unrealistic body ideal promoted by Barbie has serious effects on the perceptions of young girls. Lower body esteem and the desire for a thinner body shape was found among girls aged 5 ½ to 6 ½ years and was even more prominent among the 6 ½ to 7 ½ age group. Exposure of distorted ideals in the form of play things at such an early age sets very disturbing aspirations for young girls and this is continually reinforced by ideals put forth by the media.

Little research has been done to examine these variables among older female samples and the research that has been done has yielded varying results. However, the most singularly prominent consistency between younger and older women is the pervasiveness of body

dissatisfaction (Webster & Tiggemann, 2003). Research consistently yields the fact that women report a discrepancy between their current and ideal body shapes during early adulthood, midlife, and older adulthood (Tiggemann & Lynch, 2001).

The negative impact of body dissatisfaction also appears to be relatively consistent throughout the life span. Tiggemann and Lynch (2001) found that women reportedly may experience high levels of shame related to their appearances, regardless of age. Also, body dissatisfaction and the significance placed on body image did not vary across young, middle-aged, and older women (Webster & Tiggemann, 2003). However, the negative relationship between body dissatisfaction and perceived self-esteem appears to diminish in intensity as one ages. This suggests that although body dissatisfaction may be prevalent across the life span, the impact it has on an individual's self-esteem may lessen over time. In addition, research suggests that as age increases, individuals have greater tolerance for varying body types. Older women are more likely to utilize cognitive control strategies to increase body acceptance and therefore minimize the impact of negative sociocultural influences (Peat, Peyerl, & Muehlenhamp, 2008).

Research on body image and aging has yielded three general results: age changes the body and its appearance, body dissatisfaction seems to be relatively stable across the lifespan, and body image becomes less important as adults age (Tiggemann, 2004). In response to changes in their bodies due to aging, elderly women deemphasize the importance of appearance as a central part of who they are. In comparison with younger individuals, those in late adulthood are less concerned about other individuals' evaluations of their bodies (Davison & McCabe, 2005). The research done in the area of body image and age has shown that body dissatisfaction may increase as the individual progresses through adulthood. However, much of this research has

been done using a primarily Caucasian sample. The following section will explore body image among varying ethnic groups.

Body Image and Ethnicity. As previously stated, the majority of research done in the area of body image disturbances, dissatisfaction, eating disorder, etc. has examined, primarily, Caucasian female samples. Research suggests that Caucasian women are, overall, more dissatisfied with their bodies, in comparison with non-Caucasian women. However, little research has been done in examining potential differences among distinct ethnic groups.

Women from different ethnic/racial backgrounds may vary in the extent to which they are dissatisfied with their bodies because meanings of the body depend on cultural and social group context (Crago & Shisslak, 2003). For instance, Mintz and Kashubeck (1999) found that overall levels of body dissatisfaction were found consistently among White and Asian American women; however, Asian American women reported lower satisfaction with race-specific body parts (i.e., eyes and face). The race-specific parts visually differentiate them from the White standard of beauty held in the Western culture.

Past research studies have indicated that African American women were less negatively affected, in comparison with Caucasian women, due to differences in cultural norms. It has been reported that African American women tend to be significantly more satisfied with their appearance (Annesi & Gorjala, 2010). However, it is believed that the minority females are not entirely unsusceptible to the pressures to maintain thin ideals (Roberts, Cash, Feingold, & Johnson, 2006). Research suggests that African American women adopt a larger ideal body size, are more accepting of an overweight figure, experience less weight-related societal pressures, and, as a result, experience greater levels of body satisfaction than Caucasian women (Streigel-Moore, Schreiber, Pike, Wilfley, & Rodin, 1995).

Although research is even more limited in examining body satisfaction among Hispanic women, it has been found that large, full-bodied women are considered healthy and experience high status in many Latin American cultures (Gil-Kashiwabara, 2002). Therefore, what is perceived to be the female body ideal appears to be much more open and accepting among the Hispanic culture, in comparison with overall Western culture. Nonetheless, cultural factors such as adherence to the traditional feminine gender role is associated with body image concerns and may potentially result in body dissatisfaction among Hispanic women, comparable with those found among White women (Avila & Avila, 1995),

Body Image Distortion. Bruch (1962) first identified body image distortion as being one of the key features of eating disorders and described it as an anorexic's overestimation of his or her body size. The drastic evolution of eating disorders is apparent throughout the course of history, with its prevalence rates increasing. Although these prevalence rates are not as substantial as other illnesses, eating disorders, particularly Anorexia Nervosa, may be life-threatening disorders. The most widely recognized eating disorders are Anorexia Nervosa (AN) and Bulimia Nervosa (BN), which have been more prevalent in Westernized countries who idealize thinness. Although eating disorders can be diagnosed both in females and males, 90 – 95% of those diagnosed are women (Berg, 2001).

According to previous research, eating disorders have been found to be more commonly diagnosed in Caucasian women and have been previously thought to affect women of higher SES. However, current studies have found increasingly higher rates of occurrences in recent years in individuals of any class or ethnicity (Franko et al., 2007). Additionally, there appear to be elevated rates of diagnoses among individuals involved in activities which idealize a slim

physique, such as dance, gymnastics, modeling, cheerleading, running, acting, rowing and figure skating (Tölgyes & Nemessury, 2004) .

Towards the end of the twentieth century, eating disorders began to be diagnosed at greater rates in females at much younger ages. This is believed to be due, in part, to portrayals of the ideal, thin female in the media and to the greater numbers of articles emphasizing weight loss techniques. Despite the fact that eating disorders typically occur in adolescence and early adulthood, an individual may be diagnosed at any age and these disorders can often be life-long issues.

Body Image, Weight, and BMI. Body dissatisfaction is linked with higher BMI, increased likelihood of bingeing behaviors, and greater levels of depression (Saules, Collings, Wiedemann, & Fowler, 2009). Environmental variables, such as continued exposure to thin ideals, and having a higher BMI have been found to be linked with increased occurrence of body comparison, which may then lead to dissatisfaction with one's appearance (van den Berg et al., 2007). Having a higher BMI is also associated with being overweight, with obesity, hypertension, dyslipidemia, and metabolic diseases such as type 2 diabetes mellitus (Bays et al., 2009).

Obesity has become a global epidemic and health concern. Negative attitudes towards those who are overweight and obese are apparent in our culture and the media reinforces the notion that thinness is equated with success, fame, and desirability (Hawkins, Richard, Granley, & Stein, 2004). As a result, those who do not adhere to the ideal may face weight related stigmas, feel ashamed, and may develop a negative body image (Puhl & Brownell, 2001; Tiggemann & McGill, 2004). An individual's body image perception may impact physical

activity engagement, nutrition intake, and other health behaviors, which in turn, affects his or her weight, physical health, and state of mind.

Inaccurate weight perceptions have the potential to lead to unhealthy eating and weight management practices. Women have a tendency to underreport their actual weight (Engstrom, Paterson, Doherty, Trabulsi, & Speer, 2003). Disordered eating and weight class have been linked with inconsistencies between self-reported weight and measured weight. Women who are obese or believe that they are overweight are more likely to underestimate their weight (Jansen, Van de Looij- Jansen, Ferreira, De Wilde, & Brug, 2006). On the other hand, research has found that obese bariatric surgery candidates were, overall, consistently accurate in self-report of weight. This may suggest that when weight management is the primary goal of clinical treatment for those who are obese, those individuals may be more inclined to report their weight accurately (White, Masheb, Burke-Martindale, Rothschild, & Grilo, 2007).

In dealing with patients with eating disorders, relative accuracy of self-reported weight is found among those with BN and Binge Eating Disorder (Masheb & Grilo, 2001). This, however, differs when comparing eating disorder subtypes. Significant discrepancies were found in accuracy of self-reported weight between individuals with AN and those with BN. McCabe, McFarlane, Polivy, and Olmsted (2001) found that individuals with Anorexia Nervosa had a tendency to overestimate their weight, whereas those with Bulimia Nervosa tended to underestimate their weight. Weight overestimation among individuals with anorexia nervosa may potentially be related to increased body dissatisfaction, which is typically found among individuals with eating disorders (Cooper & Fairburn, 1993). On the other hand, weight underestimation among those with bulimia nervosa may be due to the inaccurate assumption of

the success of their bulimic behaviors in controlling their weight (Meyer, Arcelus, & Wrigt, 2009).

Body Image and Mood. Poor mental health, depression, and overall poor mood have been found to be correlated with obesity and poor body image (Talen & Mann, 2009). As previously indicated, the way in which one may perceive his or her body may be positive or negative in nature. Depression has been linked to negative body image in a number of studies, which has led to further examination of the theory that depressive or negative mood results from negative body image (Rotenberg, Taylor, & Davis, 2004). Taylor and Cooper (1992) greatly contributed to this theory with their study that was adapted from Velten's (1968) original work on the mood induction procedure (MIP).

Taylor and Davis (2004) asked female participants to make either negative self-evaluations or positive self-evaluations. Body image dissatisfaction, which was defined as their desired body size minus perceptions of actual size, was found to be greater in the negative self-evaluations group, in comparison with the positive self-evaluations group. This was found to be particularly true in the participants who reported high body concern. Similarly, Plies and Forin (1992) performed MIPs in individuals with restrained or unrestrained eating habits. Participants were asked, initially, to recall and then relive emotions that they have associated with either negative or positive personal life events. Participants who recalled negative events reported greater estimates of their body width, particularly among those with restrained eating habits.

Critics of Velten's MIP argue that self-evaluation is influenced by cognitive priming rather than being due, or partly due, to changes in mood. With cognitive priming, the accessibility of a particular schema or concept is greater with a recent or continuous exposure to a related schema or concept. Therefore, individuals with negative body image are particularly

vulnerable to the effects of negative MIPs because their body image cognitions are highly accessible to them (Rotenberg, Taylor, & Davis, 2004). As a result, body image has been viewed as a cognitive schema that has been shown to influence perceptions of individual appearance.

Beck's (1976) cognitive theory of depression has lent support to the notion that associations between negative mood states and negative body image are attributable to cognitive mechanisms. Beck's theory (1976) states that individuals develop negative self-schemas due to early life experiences or events that were distressing; these may lead to depression if triggered by a stressful event. Individuals who are depressed are more likely to recall negative life events, negative adjectives and self-descriptive information because it is more readily accessible to them. Therefore individuals may be more likely to have negative perceptions of themselves and their body images (Cooper & Taylor, 1988). Consequently, individuals with poor body images have negative thoughts concerning their appearances and thus, may have poorer moods as a result.

Body Image Interventions. Considering the increasing public health risks associated with body image disturbances and the aggregated costs, severity and complexity of treating eating disorders, establishing preventative tools to address these issues is a public health education goal. For example, O'Dea and Abraham (2000) examined the effectiveness of an interactive, school-based, self-esteem education program on the body image and eating attitudes and behaviors of 470 adolescents (aged 11–14 yrs).

Overall, the intervention proved to increase body satisfaction significantly, including aspects of participants' self-esteem. Subsequently, it was determined that social acceptance, physical appearance, and athletic ability were viewed as less important for these participants, in comparison with the participants who did not receive the intervention. Female participants who

received the intervention had significantly higher ratings of their own physical appearance, as perceived by others; this is in comparison to the participants in the control condition. A year following the intervention, body image and attitude changes were still apparent. This was also consistently found among the 116 students with low self-esteem and higher anxiety, who were found to be particularly vulnerable to the development of an eating disorder. In addition, there was also found a significantly lower drive for thinness and greater body satisfaction following the intervention, as well as a decrease in the importance of physical appearance to their self-esteem.

Similarly, Yager and O'Dea (2010) examined the impact of two interventions on body image, eating disorder risk and excessive exercise among 170 (65% female; 35% male) trainee health education and physical education (HE&PE) teachers. The average age of the teachers was 21.6 and all were considered to be 'at-risk' for poor body image and eating disorders. In the first year of the study, the control group cohort (49 females, 20 males) received the regular didactic health education curriculum. In the second year of the study, the Intervention 1 cohort (31 females, 21 males) received a self-esteem and media literacy health education program. In the third year of the study, the Intervention 2 cohort (30 females, 19 males) received a combined self-esteem, media literacy and dissonance program, using online and computer-based activities. Intervention 2 produced the best results, with male teachers having improved significantly in self-esteem, body image and drive for muscularity. Female teachers in Intervention 2 improved significantly on Eating Disorders Inventory Drive for Thinness, Eating Disorder Examination and excessive exercise. The improvements were consistent at 6-month follow-up for females. Considering the relative success of both studies, it may be feasible to implement these

interventions in a modified format to other populations in order to promote body image, reduce body dissatisfaction, and reduce excessive exercise.

Self-compassion

Improving self-esteem has long been addressed in improving one's body image and it has found to be successful in a number of cases. However, research suggests that higher self-esteem may be problematic in many instances and may result in negative behaviors and interactions with others. The question remains, what are the alternatives in addressing one's concerns such as negative behaviors, poor mood, and negative body image?

Borrowing from Buddhist principles, Neff (2003b) proposed a construct that is thought to be a kinder and more understanding view of oneself. Self-compassion refers to having a non-judgmental view of one's perceived weaknesses, limitations, and failures. In Neff's (2003b) definition of self-compassion, the construct is composed of three components: self-kindness, common humanity, and mindfulness. Self-kindness involves the individual engaging in an understanding perspective of his or her perceived flaws in the place of demeaning criticism. It also promotes learning from one's experiences and recognizing that, as human beings, we are not without flaws and imperfections. Common humanity is framed through the individual's experience as being part of the shared human experience rather than being removed from it. If one feels removed from the shared human experience, he or she may feel disconnected from those around him or her. Last, in mindfulness the individual has an increased level of openness because he or she is aware of his or her own suffering and views negative experiences in a manner which promotes healthy healing. This suffering is not ignored or exaggerated, but acknowledged and simply experienced. Rather than perseverating on perceived negative experiences or negative thoughts, the individual instead remains in the present moment (Bishop

et al., 2004).

Although the concept of self-compassion has been alive and well for countless centuries in Eastern philosophy, it is a relatively new concept in Western thought. Throughout the last decade, the integration of Eastern philosophy with Western practices has been apparent, particularly through the practice of mindfulness principles in a number of health interventions. Given the fact that self-compassion may be viewed as a culturally driven, Eastern concept and a relatively new construct studied and practiced in Western culture, research has compared levels of self-compassion among individuals in the United States, Thailand, and Taiwan.

Neff, Pisitsungkagarn, and Hsieh (2008) asked a sample of 181 American undergraduates (64 males, 117 females, mean age = 21.4 years), 223 Thai undergraduates (122 males, 101 females, mean age = 19.8 years), and 164 Taiwanese undergraduates (45 males, 119 females, mean age = 20.5 years) to complete the Self-Compassion Scale (Neff, 2003b). Results indicate that levels of self-compassion were found to be highest in Thailand and lowest in Taiwan, with the United States falling in between. This pattern was also indicated when examining the multiple components of self-compassion. In comparison with Americans, Thais scored significantly lower on self-judgment, isolation, and over-identification. In turn, Americans scored significantly lower on these dimensions than the Taiwanese. In addition, Thais had significantly higher levels of self-kindness than Americans and Taiwanese, who did not differ from each other in this dimension. Thais also reported higher levels of mindfulness than Americans. The results suggest that the lower levels of self-compassion reported by Taiwanese is due primarily to high levels of negative self-relevant emotions, such as judging oneself harshly, feeling disconnected from others, and avoidance of negative feelings.

Due to discrepancies in media messages in Western culture, Americans appear to report moderate levels of self-compassion. Given that Western culture promotes competitiveness and hard work, it is interesting to find the drive for self-enhancement does not appear to result in especially high levels of self-kindness. To account for this inconsistency, one may look at the distinction made between self-esteem and self-compassion by Gilbert and Irons (2005).

The researchers put forth the idea that positive self-emotions of self-esteem evolve from an evaluation of superiority or inferiority that aids in establishing social status, which differs both psychologically and physiologically from the self-soothing qualities of self-compassion. Self-enhancement is likely to be more relevant to the strengthening of self-esteem than to the establishment of self-warmth and self-care.

Self-Compassion vs. Self-Esteem. Self-esteem has traditionally been studied as a major component in body satisfaction, performance, and health behaviors because it has been found to be integral in maintaining psychological well-being. However, research suggests that maintaining a high level of self-esteem may not necessarily be healthy in some instances. Individuals who report high levels of self-esteem may be more likely to participate in activities and in public speaking but they are also more likely to criticize how others approach these activities (Baumeister, Campbell, Krueger, & Vohs, 2003).

An individual's level of self-esteem evolves from both social comparison and self-evaluation. However, both practices may be viewed as more negative experiences due the individual's critiquing of him- or herself in a less constructive and healthy manner. Through self-compassion, which is believed to be a less critical alternative to these processes, one may develop self-esteem. Self-esteem is thought to differ from self-compassion because an individual who has a healthy level of self-compassion has come to accept him or herself without criticism

and without comparing him or herself with others. What this distinction suggests is that an individual may find it overwhelming and stressful to maintain a high level of self-esteem when he or she is consistently engaging in comparison with others and is engaged in self-evaluation so that his or her self-worth may be constantly validated (Berry, Kowalski, Ferguson, & McHugh, 2010). In essence, it is easier to maintain self-compassion rather than to maintain self-esteem.

Research has long looked at the relationship between self-esteem and exercise practices. A meta-analysis of 113 studies examining the effects of exercise on global self-esteem has established that engaging in exercise leads to small but significant increases in global self-esteem (Spence, McGannon, & Poon, 2005). As previously discussed, self-esteem is thought to be a more critical and, at times, potentially demeaning process in which one develops his or her perception of self and self-worth. This is not to devalue the importance of the development and maintenance of healthy self-esteem. However, the focus of self-evaluation as a way to gain self-worth may be a particularly questionable prospect in the exercise domain, where women are often motivated to exercise primarily in an attempt to attain an external societal standard that might be unrealistic. This is evident in a study by Wilson and Rodgers (2002) in which female participants who reported engaging in exercise, with the intention of adhering to societal pressures, were unlikely to develop long-term adaptive, motivational behaviors and overall self-worth. Although the impact of social pressures may act as the initial motivating force for women to initiate and/or increase their exercise engagement, this particular type of motive proves to be ineffective over long periods of time (Tiggemann & Williamson, 2000).

Although self-compassion and self-esteem constructs share many of the same benefits, examining self-compassion beyond self-esteem seems particularly relevant in exercise engagement. Magnus, Kowalski, and McHugh (2011) examined self-compassion, self-esteem,

women's self-determined motives for exercise, and exercise-related outcomes among a sample of 252 young, adult female exercisers between the ages of 17 to 43 years. Self-determination theory (Ryan & Deci, 2000) was also examined due to the belief that it is an effective framework in which to explore motivations for exercise. The theory identifies several types of motivation which include: external, introjected, identified, integrated, and intrinsic motivation. Each variable is linked with distinct outcomes for personal well-being and performance.

The varying types of motivations comprise a self-determination continuum. This continuum ranges from controlled or extrinsic motivations (i.e., external and introjected), which are behaviors pressured and are driven by environmental and intrapsychic forces, to autonomous or self-determined motivations (i.e., identified, integrated, and intrinsic), which are behaviors initiated and regulated through individual choice as an expression of oneself (Deci & Ryan, 2000). Research has linked autonomous motivation to positive motivational outcomes such as well-being, and has identified this as an effective long-term motivation for exercise (Wilson, Rodgers, Fraser, & Murray, 2004). Both the self-compassion and the self-determination literature suggest that individuals who are higher in self-compassion are more likely to possess autonomous motivation in the exercise domain (Neff, 2003b).

In the study by Magnus, Kowalski, & McHugh (2011), all female participants were required to engage in regular exercise, which was defined as exercise for at least 30 minutes, three times a week for the previous three weeks. Participants reported an average of 60.1 minutes per session, 4.3 days per week, for at least of year. Results indicated that self-compassion was linked with greater intrinsic motivation. In addition, self-compassion was found to result in lower levels of external and introjected motivation, ego goal orientation, social physique anxiety, and obligatory exercise. Self-compassion accounted for the unique variance beyond self-esteem in

predicting lower levels of introjected motivation, ego goal orientation, social physique anxiety, and obligatory exercise. The findings suggest the great potential for the construct of self-compassion as a means of promoting a healthy conceptualization of self for female exercisers.

As a society, individuals are generally more kind and forgiving towards others than they are towards themselves. Overwhelming self-criticalness tends to lead to fixation on negative thoughts and feelings associated with one's perceived failures. Rarely does one embrace his or her humanness as a sacred experience but instead may berate him or herself for not reaching a preconceived, and more than likely unrealistic, expectations of self. This may lead to isolation from others, which may only reinforce and further exaggerate negative thoughts and emotions.

Self-compassion, which promotes a healthier conceptualization of the self, has been correlated with lower levels of depression, anxiety, and self-consciousness, as well as with greater levels of life satisfaction, social connectedness, positive health behaviors, performance, and improved interpersonal relationships (Adams & Leary, 2007; Neff, 2003a, Neff, Hsieh, & Dejithirat, 2005; Neff, Kirkpatrick, & Rude, 2007). Overall, high levels of self-compassion have been linked with psychological well-being. As a result, compassion-focused therapies have been increasingly utilized in therapies.

Compassion Focused Therapy. Numerous studies have examined the effectiveness of particular interventions in the treatment of eating disorders. Within the last decade, NICE (2005) has published major findings regarding the outcomes of evidence-based treatments. For individuals with Anorexia Nervosa (AN), improvements were established in terms of weight gain and recovery by the end of treatment. However, the sustaining of positive outcomes was unable to be maintained over the long-term. For treating this population, NICE (2005) concluded that individuals should be treated on an outpatient basis with an emphasis on exploring eating

behaviors, beliefs related to weight and shape, and the wide-ranging impact of issues related to weight gain.

Cognitive behavioral interventions geared towards treating individuals with Bulimia Nervosa (BN) were found to have the greatest potential in positive outcomes, with remission rates of 37%. Similar success was also found in the treatment of Binge-Eating Disorder (BED). Interpersonal therapy (IT) has also been found to be an alternative treatment option that is comparable to cognitive behavioral therapy (CBT). However, positive outcomes are found to be significantly delayed in IT, in comparison with the earlier achievements found in CBT. Advancements in CBT interventions have shown improvements in treatment outcomes. However, research has shown that, at 60 weeks follow up, remission is found for approximately 50% of individuals with BN.

Fairburn, Cooper, and Shafran (2003) have developed a transdiagnostic approach to the treatment of eating disorders. In their approach, individuals receive similar treatment interventions, regardless of whether or not they have been diagnosed with AN, BN, or BED. This transdiagnostic approach was put forth because previous CBT models failed to address additional maintaining factors. In addition, Fairburn, Cooper, and Shafran (2005) found similarities in maintaining pathological features across diagnoses and the frequency of diagnostic migration. However, the protocol excluded individuals with a BMI lower than 17.5.

Compassion Focused Therapy (CFT) was developed for treatment of numerous disorders in which shame, self-criticism and self-directed hostility are likely to be prominent elements of the symptom presentation, or have been identified as etiological, maintenance, or as relapse risk factors. Previous studies have found that the education and practice of self-compassion has the potential to lead to significant reductions in feelings of shame and self-criticism, with the

additional potential of improvements in other symptoms. These may include, for example, improvements in depression and anxiety levels in individuals with long-term mental health problems (Gilbert & Procter, 2006), reduction of auditory hallucinations (Mayhew & Gilbert, 2008), and improvements in levels of depression and shame in individuals during inpatient hospitalizations (Laithwaite et al., 2009).

Sanftner and Crowther (1998) found that the urge to overeat after loss of dietary restraint is commonly found in individuals with eating disorders, as well as high levels of shame and self-criticism after episodes of bingeing. Self-compassion induction, via a short talk about overeating, resulted in reductions in distress levels and in episodes of overeating in nonclinical samples (Adams and Leary, 2007). Utilization of self-compassion treatment approaches may prove to be effective in treating disorders which are driven by feelings of shame, over-evaluation, self-criticism, and guilt and may be used in promotion of healthier concepts of self.

Self-appraisals, Self-discrepancies, and Feedback

In building their self-concept, individuals may experience conflict between who they desire to be and who they believe they should be. This conflict is explained by the self-discrepancy theory (Higgins, 1987). Two self-guides are of particular relevance within the self-discrepancy theory: the ideal self and the ought self. The ideal self represents all the positive qualities to which the individual desires to aspire. Ideals are aspirations, hopes, and positive wishes for the self. Reaching the ideal successfully means attaining a value that is intrinsically desirable. The ought self represents all that the individual believes that he or she should be, which may be influenced by a sense of responsibility or duty. In the ought self, the individual feels an obligation, rather than an intrinsic desire to attain a higher self. Although the ought self may be viewed as positive because the individual desires to conform to it, there appears to be an

aspect of punishment involved. The individual seems to desire to conform to the ought self in order to avoid self-disapproval or disapproval from others. Self-discrepancy theory infers that discrepancies between the actual self and the ought self may lead to feelings of anxiety, depression, and guilt (Carver, Lawrence, & Scheier, 1999).

Conflicts with the ideal self and the actual self are related to disturbances in psychological well-being and at times, to eating disorders. Large percentages of adolescent females have engaged in dieting behaviors. For this population, age-related body changes brought on by puberty, societal norms, the media, and discrepancies between ideal, perceived, and actual body weight contribute to unhealthy behaviors (Canpolat, Orsel, Akdemir, & Ozbay, 2005). Manifestations of symptoms result from conflicts in body image representations. The individual may engage in bingeing and purging behaviors, excessive exercise or food restriction in order to comply with perceived appraisals from others or to reach their ideal selves. The media and society also play a part in continuously reinforcing distorted realities of the ideal self.

A vast number of individuals regard their body as an important domain of self. The self-discrepancy theory has been utilized in numerous studies as a means of gaining a greater understanding of body image discrepancies including a number of variables such as body dissatisfaction, negative mood, depression, self-esteem, eating behaviors, and negative affect (Anton, Perri, & Riley, 2001; Bessenoff, 2006; Halliwell & Dittmar, 2006). The results of these studies have revealed that greater discrepancies between one's body image and one's ideal or ought body image are associated with greater negative symptoms, such as negative affect and mood.

Expectations of self serve as the model for the way in which feedback is interpreted (Swann, 1990). Self-consistency and self-enhancement are thought to be two concerns that

influence how feedback is internalized. One's drive to hold a stable self-concept, whether it is positive or negative in nature, is referred to as self-consistency (Swann, 1990). As a result, the individual desires feedback that is consistent with his or her concept of self. Maintaining a more positive self-concept is referred to as self-enhancement (Steele, 1988). In this regard, the individual desires feedback from others to be more flattering than is anticipated.

Self-consistency is related to how individuals internalize the feedback received by others, by evaluating the soundness and significance of it. The individual's mood, satisfaction, and performance level is influenced by self-enhancement. Both work in influencing the individual's response to the feedback. Self-consistency influences whether or not feedback from others is accepted. Therefore, individuals with a positive concept of self are more likely to agree with positive feedback than with negative feedback because that is what they expect. Those with less positive self-concept are more likely to agree with negative feedback (Swann, Griffin, Predmore & Gaines, 1987).

Feedback, whether positive or negative, can be an extremely influential tool in an individual's motivation, understanding, learning, and achievement (Hattie & Timperley, 2007). The type of feedback and how it is delivered largely determines how it is received and internalized. In general, feedback is information given by one individual regarding another individual's performance, appearance, or other aspect of self. Feedback may be given for varying characteristics, aptitude, or any other factor, given a particular situation.

For school aged children, feedback by teachers has found to be integral on levels of performance and achievement in the classroom. In this realm, teachers may incorporate more of an instructional approach in the feedback they may provide their students. As a result, the teachers provide information to students regarding whether or not they are on the right track on

their task and also provide alternative strategies by which they may approach the task. The goal is to increase motivation within the child in order to increase the effort he or she puts into the activity. In essence, feedback provides an avenue through which the individual can be validated, learn additional information, or alter strategies which he or she may use to complete tasks.

The perception of self is also developed through recurring experiences with others and with society. As a result, reflected appraisals, which are our own beliefs concerning how we believe others perceive us, are used in development of one's self-concept. Many facets of our self, such as perceived attractiveness and self-worth, are also dependent upon how the opposite sex responds to the individual; i.e., whether it is favorably or unfavorably. Social interactions and negative feedback from others about appearance has been shown to contribute to body image issues, unhealthy eating patterns, and low self-esteem (Grogan, 2008; van den Berg, Wertheim, Thompson, & Paxton, 2002).

Deception and Feedback

It may be assumed that the practice of weighing oneself may be a positive and motivating experience for those who desire to lose weight. However, negative psychological consequences may be experienced by those who experience weight gain. Research has suggested that women may view the scale as an emotional barometer in which their daily weighing of self may determine their moods for the rest of the day and thus influence self-evaluation (Garner, Rockert, Olmsted, Johnson, & Coscina, 1985). Such a seemingly benign practice may have a serious influence on one's state of mind.

Tiggeman (1994) asked male and female university students to report their current height and weight. Seven months following this, the participants were again asked to report their current weight and indicate if they had gained or lost weight within the previous seven months. All

participants were also asked to report their levels of happiness concerning any weight change. Restrained eaters who had lost weight reported to be happier, in comparison with restrained eaters who had gained weight. In addition, restrained eaters who had gained weight were unhappier than those who had experienced no weight change. For unrestrained eaters, weight change had little impact on levels of happiness. Although research on the effects of weighing and weight fluctuations has become more closely examined, little research has been completed on the effects of false weight-related feedback in female samples.

Ogden and Evans (1996) examined the effect of manipulation of perceived weight category on normal-weight male and female participants. Participants were randomly assigned to the underweight, average weight, or overweight category, based on a fictional height-weight chart. Self-report measures were completed before participants were weighed and after they were assigned to a weight category. Improvements in depression and self-esteem levels were found in the participants who were assigned to the average weight category. Those in the underweight category also reported decreased depression. However, lower levels of self-esteem were found among this group. Increases in depression and decreases in self-esteem were reported among the participants in the overweight group. For the participants who did not correspond to the appropriate weight norm, it was concluded that weighing individuals and comparing their weight with social norms contributed to negative psychological states.

In another deception study, undergraduate female participants were weighed either five pounds heavier or five pounds lighter than their actual weights or were not weighed at all (McFarlane, Polivy, & Herman, 1998). Participants, unrestrained and restrained eaters, were also asked to participate in a perceptual taste test in which they were presented with plates of three different cookies and were asked to eat as many cookies as needed to obtain accurate ratings for

the taste test. Both unrestrained and restrained eaters who were told that they weighed five pounds less reported that they were not affected by the false weight feedback. Restrained eaters who were told that they weighed five pounds heavier reported lower self-esteem and greater negative mood. Restrained eaters in this false feedback group also ate significantly more food during the taste test. It was concluded that the restrained eaters who received the higher weight feedback experienced lower levels of self-worth and poorer mood, which led to lapses in dietary restraint.

Mills and Miller (2007) replicated the previously discussed study but instead were provided verbal false weight feedback by the experimenter who presented herself either as an undergraduate student (peer) or a graduate student (non-peer). Female undergraduate participants reported their current weight with no feedback, the no feedback condition, or had their weight guessed at 15 pounds heavier than their actual weight, the negative feedback condition. All participants had been weighed a week prior to their participation in the study. In the negative feedback condition, participants generally reported higher levels of anxiety and felt “fatter.” Greater body dissatisfaction, depression, and feeling “fatter” were found when a peer provided the negative weight feedback. Results suggest that peers’ perceptions of weight have a significant influence on one’s psychological well-being.

As previously stated, limited research has been done in the area of weight-related feedback that may account for the impact on mood and the relationship with body image. Given the relative difficulty in treating body image issues and disordered eating practices, other variables, such as self-compassion must be examined in order to account for individual differences in response to feedback regarding weight and body fat. Self-compassion may serve as a protective factor in how one conceptualizes accurate or false weight-related and body fat

feedback and therefore, may be explored in future studies as an effective tool in building positive body images and in the cognitive conceptualization of feedback received from others regarding domains of self.