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Consequences Of Normative Body Image Dissatisfaction: The Development Of Two Scales

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CONSEQUENCES OF NORMATIVE BODY IMAGE DISSATISFACTION: THE DEVELOPMENT OF TWO SCALES

by

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ABSTRACT

Body image dissatisfaction is often seen as a predictor variable for the development of eating disorders; however, this study contends that the consequences of body dissatisfaction itself are problematic. Body image dissatisfaction of both men and women can have negative effects on psychological health and well being. This study examined the literature on body image and body image dissatisfaction, specifically emphasizing various mental health consequences as well as the influence of sex and sexual orientation. The purpose of this paper is twofold: to investigate the consequences of normative body image dissatisfaction among non-clinical adult populations, and to offer initial validation of two new scales, the Body Image Dissatisfaction Scale (BIDS) and the Consequences of Body Image Dissatisfaction Scale (CoBIDS).

Specifically this study examined the interaction between body image dissatisfaction, sex, sexual orientation, self-esteem, depression, and anxiety. The previously mentioned constructs were measured via an online survey of non-clinical male and female adults. This study looked at both the factor structure and reliability of the BIDS and CoBIDS. It was hypothesized that the BIDS and CoBIDS would provide clinicians and researchers measures that could be used with non clinical adult population to address normative body image dissatisfaction and the possible psychosocial consequences. The findings of this study support the use of two new scales that broaden the examination of the construct and possible consequences. Additionally the limited differences found based on sex and sexual orientation may point to the importance of

examining body image dissatisfaction further in a non clinical population to better understand the consequences of high levels of dissatisfaction with one's body.

CHAPTER I

INTRODUCTION

It has been suggested that eating disorders lie on a continuum with considerable overlap between clinical populations of women with eating disorders and "normal" women in terms of eating behaviors and attitudes towards body (Rodin, Silberstein, & Striegel-Moore, 1985; Scarano & Kalodner-Martin, 1994; Tylka & Subich, 1999). Groups along this continuum appear to share similar psychological characteristics such as dissatisfaction with body image, and differ only in frequency or severity of these characteristics and eating problems (Scarano & Kalodner-Martin, 1994; Tylka & Subich, 1999). In spite of this, most of the literature on body image dissatisfaction has focused on the construct as a predictor variable for development of clinical eating disorders (Forbes, Adams-Curtis, Rade, & Jaberg, 2001; Gettelman & Thompson, 1993). However, body image dissatisfaction itself has been found to have negative effects on psychological health and well-being, and further research is needed to address the issue (Brownell & Rodin, 1994a; Polivy & Herman, 1987; Rodin, et. al., 1985).

This study examines the relationship between body image dissatisfaction and psychological consequences. The purpose of this study is to investigate the consequences of normative body image dissatisfaction among non-clinical adult populations, and to offer initial validation of two scales, the Body Image Dissatisfaction Scale (BIDS) and the Consequences of Body Image Dissatisfaction Scale (CoBIDS). Specifically this study will examine the interaction between body image dissatisfaction, sex, sexual orientation,

self-esteem, depression, and anxiety. Studies on college campuses have found that in addition to the estimated 1-4% of female college students meeting the full DSM diagnosis (American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*, 2000) criteria for a clinical eating disorder, an additional 35-70% report direct and indirect symptoms of disordered eating such as periodic use of laxatives, purging or excessive exercise to inhibit weight gain, body image dissatisfaction and distortion, obsessive monitoring of caloric and fat content, and unhealthy weight fluctuations (Edwards-Hewitt & Gray, 1993; Hoyt & Ross, 2003; Heatherton, Nichols, Mahamedi, & Keel, 1995; Katzman, Wolchik, & Braver, 1984; Schwitzer, Bergholz, Dore, & Salimi, 1998). A study examining binge eating and bulimia in a non-clinical college sample of both men and women found 49% of their sample indicated they sometimes binge eat, with no significant sex differences (Katzman, Wolchik, and Braver, 1984). In a survey of 1,300 first-year college students, a comparison of bulimic and nonbulimic students found that fear of fat was so pervasive among nonbulimic women that its usefulness as a differentiating variable clinical status was negligible (Pyle, et. al., 1983). Although these individuals did not meet the full DSM diagnostic criteria the first year college students clearly displayed problematic behaviors; the authors concluded that these students may account for most of the eating pathology seen on college campuses Hoyt & Ross, 2003).

Body dissatisfaction has been found to be related to lower levels of self-esteem and self-concept, higher rates of depression, extreme levels of dieting, distortion of body image, and disordered eating patterns (Cook-Cottone & Phelps, 2003; McAllister & Caltabiano, 1994; Rodin, et al., 1985; Schwitzer, Rodriguez, Thomas, & Salimi, 2001).

With the high overlap between eating disorders and "normal" body dissatisfaction it has been difficult to distinguish between many behaviors that are categorized as disordered and normative (Rodin, et. al., 1985).

Much of the literature on body image has focused on adolescent and adult females and the influence of body image on the development of clinical eating disorders. However, research has begun to note that it has become "normal" for individuals to express concern about their weight and engage in attempts to change it (Polivy & Herman, 1987). What is considered an acceptable body size has become increasingly narrow for both women and men. With this increase pressure to look a certain way, not only have we seen an increase in clinical eating disorders but also the normalization of body image dissatisfaction which may itself have negative consequences on factors such as dieting and exercise, depression, self-esteem, and anxiety.

Normal eating is defined as eating in response to internal hunger and satiety signals (Blood, 1996, Polivy & Herman, 1987). However, Polivy, Garner, and Garfinkel (1986) found in their study that among young women and adolescent girls, dieting was more prevalent than not dieting and thus concluded that dieting has become normative or normal behavior (Rodin et al., 1985). The shift in preference toward a thin ideal has led to an increasing prevalence of dieting such that "normal" eating for women is now characterized by dieting (Polivy & Herman, 1987). Often "normal" weight women, with no clinically diagnosed disordered eating pattern, display an over concern with weight and body image (Polivy, Garner, and Garfinkel, 1986; Rodin et al., 1985). Women whose weight is actually close to the population mean for their age and height may be seen as and feel "overweight" (Polivy & Herman, 1987). Polivy and Herman (1987) suggest that

chronic dieting is now the norm, but it requires behaviors and attitudes that are self-destructive and pathological. This has implications for the emotional well-being of women within a culture which emphasizes an ideal of thinness (McAllister & Caltabiano, 1994).

Body image is a difficult construct to measure and researchers have investigated many aspects of this construct. However, many measures focus too narrowly on body image dissatisfaction as a precursor to eating disorders and primarily on women. Investigators have increasingly focused on sociocultural influences on one's perception of body image as well as other social–cognitive constructs, such as the degree of attention one pays to body shape the importance of body esteem, social comparison and feedback from others (Cusumano & Thompson, 1997; Mendelson, McLaren, Gauvin, & Steiger, 2002). Such factors are particularly interesting because they may mediate or moderate body image effects.

This study examined the literature on body image and body image dissatisfaction, specifically emphasizing various mental health consequences as well as the influence of sex and sexual orientation. The purpose of this study was to further explore the construct of body image dissatisfaction and the psychosocial costs of normative body dissatisfaction across sex, sexual orientation, and age. This study investigated the initial validation of two newly developed scales, the Body Image Dissatisfaction Scale and the Consequences of Body Image Dissatisfaction Scale which examines various consequences of body image dissatisfaction including anxiety, depression, and self-esteem.

CHAPTER II

LITERATURE REVIEW

This chapter reviews the current theories and related research exploring body image dissatisfaction, including factors influencing body image. Then I will review possible psychosocial consequences of body image dissatisfaction: dieting, depression, low self-esteem and anxiety. Following this will be a review of differences in body image based on sex and sexual orientation. Finally, I will present the purpose and rationale for the study and conclude with specific hypotheses.

Body Image

Body image is a person's experiences with their own body (Harper-Guiffre & MacKenzie, 1992). Body image has also been defined as a loose mental representation of the body's shape, form and size which is influenced by a variety of factors (Slade, 1994). Although body image is generally seen as a multidimensional construct, there have been considerable variations in defining and assessing body image (Bergstrom & Neighbors, 2006).

Body image is often divided into two components, perceptual and attitudinal (Keeton, Cash, and Brown, 1990; Slade 1994). Perceptual body image, or body size estimation, has been the focus of much of the literature (Cash & Deagle, 1997; Keeton,

Cash, and Brown, 1990). The second component, attitudinal body image, focuses on body image affect and cognitions (Keeton, Cash, and Brown, 1990).

Perceptual distortion occurs when a person has difficulty accurately gauging his or her body size. The role of body image distortion is seen as a core aspect of eating disorders, particularly anorexia nervosa (Slade, 1994; Slade & Brodie, 1994). Perceptual body image is typically measured by whole body techniques and evaluation of specific body parts (Cash & Deagle, 1997). Eating-disordered individuals are hypothesized to estimate their size as larger than is objectively true. However, Slade and Brodie (1994) concluded that although those with an eating disorder do tend to overestimate the side of their bodies, the tendency to overestimate physical size is not necessarily unique to individuals suffering from an eating disorder.

Attitudinal body image, which appears to be independent from perceptual body image, is often referred to as body dissatisfaction or disparagement. Notably fewer investigations of body image focus specifically on the attitudinal component of body image (Cash & Deagle, 1997). Attitudinal body image is a multidimensional concept regarding the evaluation of one's size, shape, or some other aspect of body appearance that includes cognitive/evaluative, affective, and behavioral elements (Brown, Cash, & Mikulka, 1990; Cash, 1994). Specifically the attitudinal component has to do with the attitudes/feelings an individual has towards their own body (Slade, 1994).

In a meta-analysis of body-image assessments, Cash and Deagle (1997) examined 66 studies (from 1974 to 1993) of perceptual and attitudinal parameters of body image among anorexics and bulimics relative to control groups. The study concluded that there is a significant difference between perceptual size estimation (i.e., distortion) and

questionnaire measures of body dissatisfaction. As predicted, relative to perceptual distortion indices, attitudinal measures produced significantly larger effects. The study reported strong evidence for the distinction between perceptual and attitudinal modalities of body experience.

Factors Influencing Body Image Dissatisfaction

Body-image experiences appear to not only predict the severity of problematic eating patterns but body-image disturbances may serve as precursors of disordered eating (Striegel-Moore, Silberstein, Frensch, & Rodin, 1989; Bergstrom & Neighbors, 2006). Many factors influence the development of body image, body satisfaction, and eating pathology such as direct and indirect feedback from others, actual experiences, self-esteem, and gender socialization (Harper-Guiffre & MacKenzie, 1992). Factors such as the thin-ideal or a sociocultural pressure for thinness, the focus on the physical appearance and attractiveness, social pressure to diet, and depression may also influence the development of body image (Beren, Hayden, Wilfley, & Grilo, 1996; Stice & Shaw, 1994); Striegel-Moore, Tucker, & Hsu, 1990).

Cultural Ideals of Body Image

Sociocultural factors may play a central role in the promotion and maintenance of eating disorders and body image dissatisfaction (Stice & Shaw, 1994). Sociocultural influences on body-image development are often deemed responsible for the greater prevalence of eating disorders among women, especially young Caucasian women in Western society (Anderson & DiDomenico, 1992; Striegel-Moore, Silberstein, & Rodin, 1993). Some even identify bulimia as an over adoption of a cultural norm or an increased internalization of this thin-ideal stereotype (Stice & Shaw, 1994). These ideals are

communicated through various ways, including through peers, family, and mass media (Levine, Smolak, & Hayden, 1994; Stice, 1998; Stice & Shaw, 1994).

Levine, Smolak, & Hayden (1994) identified four examples of sociocultural factors that influence cultural ideals of body image. First, they noted that the portrayals of women in fashion magazines have gotten thinner despite real American women getting heavier. Second, the thin shape has become a symbol of both beauty and professional success. Third, women are led to believe that the thin "look" can be obtained through dieting, exercise, and other weight management techniques, which has led to an internalization of the thin ideal. Finally, direct exposure to emphasis on importance of body shape and slenderness increases the risk of unhealthy management behavior (Levine, Smolak, & Hayden, 1994).

Thin Ideal

Body weight ideals are culturally defined (Hesse-Biber, 1991). Research has proposed that the current standard of female beauty has become increasingly thin, often referred to as a 'thin ideal' (Silverstein, Peterson, & Perdue, 1986; Striegel-Moore, et al, 1990). Our culture's emphasis on thinness, especially for women, is important because a significant relationship exists between body image dissatisfaction and eating pathology.

McCarthy (1990) hypothesized that the cultural ideal of thinness for women, which is well below the average weight of women in this culture, directly causes body dissatisfaction at a higher rate among women than men. Internalization of the thin-ideal may contribute to body dissatisfaction because of a social comparison process where women compare themselves to idealized images and judge themselves as not meeting social expectations (Stice, Spangler, & Agras, 2001). Striving to attain this thin standard

has caused some to starve themselves and others to develop unhealthy strategies, such as purging or laxative abuse (Silverstein, et. al., 1986).

Some suggest that this desire for thinness is reflected in, and reinforced by, the media (Cusumano, & Thompson, 1997; Hamilton & Waller, 1993). Many researchers (Hamilton, & Waller, 1993; Hesse-Biber, 1991; Spitzer, Henderson, Zivian, 1999; Stice & Shaw, 1994; Stice, Spangler, Agras, 2001) propose that media is one of the most powerful forces in the reinforcement of societal definitions of beauty including weight ideals. The presentation of the thin-ideal in films, television, magazines, and newspapers serve to continuously reinforce the cultural slim ideal. Furthermore, compared to the most popular men's magazines, women's magazines contain 10 times the number of diet-promoting articles and advertisements, further promoting a thin body ideal for women (Andersen & DiDomenico, 1992; Spitzer, Henderson, Zivian, 1999).

Mesomorphic Muscular Ideal

Contrary to the emphasis on a thin slender body, there may be more of a focus on muscularity for men (Agliata & Tantleff-Dunn, 2004). The ideal male body is growing steadily more muscular (Pope, Olivardia, Gruber, & Borowiecki, 1999). Boys and men may not be as focused on a drive for thinness, but research suggests there may be a mesomorphic muscular ideal where men may wish to be bulkier and more muscular than they currently see themselves (McCreary & Sasse, 2000).

Pope, et. al., (1999) illustrated the evolving ideals of male body image by examining the change in action toys sold in the United States. The study concluded that many of the action figures today are consistently much more muscular than their predecessors. Additionally many of the modern figures displayed physiques of advanced

bodybuilders and some display levels of muscularity far exceeding the outer limits of actual human attainment (Pope, et. al., 1999).

Another example of this increase in muscular ideal may be linked to the rise in a condition called muscle dysmorphia, which is more prevalent in men. This is seen as another form of body image disturbance and/or body dysmorphic disorder, frequently affecting men, in which muscular men perceive themselves to be thin and underdeveloped (Pope, Gruber, Choi, Olivardia, & Phillips, 1997). Individuals with muscle dysmorphia report an obsessional preoccupation with their muscularity, to the point where their social and occupational functioning may be severely impaired. For example, they may abandon important social and family relationships, or even relinquish professional careers, in order to spend more time at the gym (Pope et. al., 1997). Additionally, a study examining the drive for muscularity in high school students found that those who have a high drive for muscularity weight trained more, adopted a diet designed to increase bulk, and may be at greater risk for use of anabolic-androgenic steroids (McCreary & Sasse, 2000).

An increasing number of studies have demonstrated a trend that illustrates the growing importance of the mesomorphic muscular body build in Western culture (Agliata & Tantleff-Dunn, 2004; McCreary & Sasse, 2000; Pope et al., 1997). Still, while one-third of adolescent boys may desire a larger and more muscular body, it is estimated that about one-third of adolescent boys desire a thinner body size (Drewnowski & Yee, 1987; McCabe & Ricciardelli, 2001; Ricciardelli & McCabe, 2003). Further examination of body ideals in men is needed to better understand the various factors influencing body image dissatisfaction among men.

Body Mass

Body mass has been linked with body dissatisfaction, dieting, negative affect, and eating pathology (Cooley & Toray, 2001; Killen et. al., 1994; Paxton, Eisenberg, & Neumark-Sztainer, 2006; Stice, 2002; Stice & Bearman, 2001; Stice et. al., 2000). The influence of shape or weight on one's self evaluation, is also considered a core psychological feature across eating disorders and is a diagnostic feature in the *DSM-IV-TR* (2000). It has been proposed that a larger body size increases vulnerability to body dissatisfaction (Stice, 2002; McCabe & Ricciardelli, 2003). The most common measure of body mass is the use of the Body Mass Index (BMI). BMI is a statistical measure of the weight of a person scaled according to height.

Research in adolescents finds BMI to be a significant factor contributing to body image and weight loss (McCabe & Ricciardelli, 2003; O'Dea, 2006). Studies have found that boys and girls who have a higher BMI are more dissatisfied with their body sizes and wanted to be thinner (Candy & Fee, 1998; McCabe & Ricciardelli, 2001; Oliver, & Thelan, 1996). BMI was also closely related to dieting behavior among children. Those children who had a larger BMI reported higher levels of dieting (Candy & Fee, 1998; McCabe & Ricciardelli, 2003).

Similar to research in children, BMI in adult populations has also been found to be related to body dissatisfaction (Stice, 2002). A study of two hundred and eight adult women and men found BMI to be significantly related to body satisfaction and dieting behaviors (Markey & Markey, 2005). Additionally, a higher level of body dissatisfaction was related to higher BMI for both heterosexual and homosexual men (Hospers & Jansen, 2005).

Overall it appears that many factors such as cultural ideals and body mass significantly influences levels of body dissatisfaction. These factors may influence individuals differently based on sex, age, and sexual orientation. In general, the literature suggests that body dissatisfaction may be increasing and becoming more of a normative experience for both men and women. A greater understanding of the underlying causes of body image dissatisfaction is vital to addressing the possible psychological and behavioral consequences.

Mental Health Consequences of Body Image Dissatisfaction

Body image dissatisfaction has been strongly correlated with eating disorders (Bergstrom & Neighbors, 2006; Cooley & Toray, 2001). Additionally, body image dissatisfaction is thought to be correlated with eating-disordered attitudes and behaviors such as elevated dieting and negative affect. Although it is difficult to determine a causal relationship, it is clear that a high level of dissatisfaction with one's body is linked to both psychological and behavioral consequences. The next section will specifically review four possible consequences that have been closely linked to body image dissatisfaction including dieting, low self-esteem, depression, and anxiety.

Dieting. Dieting to lose weight has become increasingly widespread. Dieting is motivated in part by health concerns and by the belief that dieting is helpful in proving appearance (French & Jeffery, 1994). Both psychological and physiological consequences of dieting have been well-documented, however, dieting is still considered to be normative behavior, particularly among women (Blood, 1996). Furthermore, even among individuals who do not show signs of significant eating disturbance, associations

between dieting and psychological distress have been identified (Johnson & Wardle, 2005).

The cultural preference and pressure of the thin-ideal has led to an increase in the prevalence of dieting and dieting to lose weight has become "normal" and widespread (French & Jeffery, 1994; Polivy & Herman, 1987). Societal preference for slimness has corresponded with a preoccupation with dieting and weight loss and has affected eating behavior and attitudes towards food (Polivy & Herman, 1987). There is increasing concern that dieting itself may have negative psychological effects on health and well being (Brownell & Rodin, 1994b; Polivy & Herman, 1987).

Dieting is defined as reduction of caloric intake for the purpose of weight loss (Brownell & Rodin, 1994a). However, dieting also extends beyond behavior to included cognitions, which may include preoccupation with shape and weight, perceived deprivation, and dysfunctional beliefs about food and exercise (Brownell & Rodin, 1994a; Lowe, 1993). Many women restrict their food because of feelings of self-dissatisfaction or a desire to improve or transform their bodies, and to rectify perceived "flaws" (Blood, 1996). However, repeated cycles of weight loss and weight gain or yo-yo dieting is highly prevalent in men and women and in both overweight and nonoverweight individuals.

This weight cycling has been found to have negative psychological and behavioral consequences such as increase risk for psychopathology, life dissatisfaction, and binge eating (Brownell, & Rodin, 1994b). Studies have shown dieters to have higher levels of negative affect and lower self worth than nondieters (Johnson & Wardle, 2005; Rosen, Gross, & Vara, 1987). Specifically, consequences related to dieting can include

fatigue, irritability, fear of food, feelings of inadequacy, anxiety, low self-esteem, and a sense of personal failure as weight lost through dieting is regained (Blood, 1996). Dieting can also increase the probability that an individual will overeat in an effort to counteract the effects of calorie deprivation which may increase the risk for binge eating onset (Stice, Presnell, Spangler, 2001).

French and Jeffery's (1994) review of dieting literature found that approximately 61% of adults report having ever dieted, 32% report currently trying to lose weight, and 20% report currently dieting to lose weight. Furthermore, women were twice as likely as men to be currently trying to lose weight, currently dieting, or have a history of weight loss efforts. Several studies reported that a majority of their sample (> than 60%) of college women reported engaging in subclinical eating behaviors such as chronic dieting, binge eating, fasting, diuretics, dieting pills, and purging (Hesse-Biber, 1991, Scarano, et al., 1994). One study found 64% of "normal" weight women, who had never had a weight problem, and 23% of "normal" weight men who had never had a weight problem had previously dieted to lose weight (Jeffery, et. al., 1984).

A study of 166 high school and college women found that 59% of their sample indicated skipping meals to control their weight, 36.7 % reported eating less than 1200 calories a day, 30.1% reported eliminating fats from their diet, and 25.9% reported fasting for 24 hours or more to lose weight (Tylka & Subich, 2002a). Additionally, women who reported use of maladaptive weight control techniques were found to rate the effectiveness and safety of these techniques higher than women who did not use these techniques (Tylka & Subich, 2002a).

Dissatisfaction with one's body or body image and a need or desire for perfection typifies both eating disorder patients and "normal" dieters (Garner, Olmstead & Garfinkel, 1983; Garner, Olmstead, Polivy, & Garfinkel, 1984). Polivy and Herman (1987) suggest that chronic dieting is now the norm however this societal norm is encouraging pathological behaviors. In addition many see dieting and the preoccupation with weight as self-destructive (Blood, 1996; Polivy & Herman, 1987).

While many studies have found that individuals report engaging in unhealthy eating behaviors such as chronic dieting and binge eating, only a minority of these meet the criteria for a clinical eating disorder (French & Jeffery, 1994; Tylka & Subich, 1999). Dieting among normal weight individuals has become so prevalent that it is considered by some to be socially normative (Polivy & Herman, 1987). Dieting may be motivated in part by health concerns and by the belief that dieting is helpful in improving appearance; however, dieting to lose weight may be more harmful than helpful in promoting health and psychological well-being (French & Jeffery, 1994; Garner & Wooley, 1991; Polivy & Herman, 1987). Dieting may lead to decreased self-esteem, depression, anxiety, and other negative psychological outcomes. (Brownell, 1993; Heatherton, 1993; Polivy, Heatherton, & Herman, 1988). Specifically, low-calorie diets and long term fasting are associated with increased depression, anxiety, nervousness, weakness, and irritability (Wadden & Stunkard, 1985). Furthermore, for many individuals, difficulties with eating and body image start when then begin dieting (Blood, 1996). Interventions aimed at challenging the beliefs about the effectiveness and safety of dieting and other maladaptive weight control techniques may be effective in addressing body image dissatisfaction.

Overall the research examining the psychological and behavioral consequences of dieting has several limitations. One limitation of the research is the tendency of studies to focus on adolescent girls and women (Lowe, 1994; Stice & Agras, 1998; Stice, Killen, Hayward, & Taylor, 1998). More research is needed with a wider age range and across both sex and sexual orientation. Another limitation of dieting research is the imprecise use of the term dieting. Often there appears to be an assumption that the term dieting means the same things in all contexts and with all populations, specifically the assumption that dieting is only related to losing weight (Brownell & Rodin, 1994a). Dieting can include a wide array of behaviors, cognitions, and affect. Secondly, Brownell and Rodin (1994a) suggest that it may be important to separate dieting in individuals who are close to average weight from dieting in those who are heavier. In general, a distinction must be made when individuals are dieting to gain weight and muscle as opposed to losing weight.

To summarize, dieting behavior may promote the development of eating disorders but may also be a consequence of body image dissatisfaction (Polivy & Herman, 1987, Striegel-Moore, et al., 1986). The correlation between body image dissatisfaction and dieting behavior is clear. However, a better understanding regarding the motivations and onset of dieting behaviors is needed to develop more effective intervention strategies.

Low Self-esteem. Self-esteem reflects feelings of self-acceptance, self-respect, and generally positive self-evaluation (Rosenberg, Schooler, & Schoenbach, 1989). Self-esteem depends on reflected appraisals, social comparisons, and self-attributions. Global self-esteem, in particular, deals with the individual's positive or negative attitude toward the self as a totality (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995)

Self-esteem has been found to be related to body dissatisfaction and studies have found that global self-esteem directly shared variance with body dissatisfaction (Beren, et. al., 1996; Forbes, et. al., 2001). For both men and women, body dissatisfaction is significantly associated with low self-esteem (Ben-Tovim, Walker, Murray, & Chin 1990). Particularly among college women, high self–esteem is known to correlate highly with body satisfaction (Tiggemann, 1996). Specifically, Beren, et. al. (1996) found low self-esteem to be significantly negatively associated with body dissatisfaction in gay men, lesbians, and heterosexual women. One proposed commonality among these groups may be the pervasive cultural pressures on them to be attractive and physically fit and lower self-esteem may increase vulnerability to internalizing messages about the importance of appearance. Overall, these findings suggest that how a one feels about their body is related to how one feels about themselves as a whole, and that body image and self–image are connected (Bergstrom & Neighbors. 2006).

A three year longitudinal study of eighty adolescent females found a significant difference in self esteem based on the weight of the participants (O'Dea, 2006). The findings suggested that heavier-weight girls had poorer overall self-worth and poorer self-concept than lower weight girls (O'Dea, 2006). The results of this study support previous findings that actual body weight correlates negatively with general self-esteem in girls as young as 5 years old (Davison & Birch, 2002; O'Dea. 2006). However, the generalizability of these findings may be limited due to several limitations including a small sample size that was limited to girls from a private school and also had limited variability in Body Mass Index (BMI).

A study conducted by Johnson and Wardle (2005) found that body dissatisfaction was a significant predictor of low self-esteem. This study included a sample of 1,177 adolescent girls between the ages of 13 and 15. Participants completed measures on dietary restraint, body satisfaction, abnormal attitudes to eating and weight, bulimic symptoms and emotional eating, depression, self-esteem, and stress. The aim of the study was to examine associations between dietary restraint and eating related outcomes and general psychological outcomes. The results indicated that dietary restraint was not a predictor of stress, depression, or low self-esteem once the effects of body dissatisfaction were taken into account (Johnson & Wardle, 2005). However, body dissatisfaction remained a significant predictor of all three outcomes. The association between dietary restraint, depression, and low self-esteem seemed to be mediated entirely through body weight dissatisfaction (Johnson & Wardle, 2005).

There are several methodological issues in studies that have examined the role of self-esteem in body image dissatisfaction. First, sample sizes in most studies are small. Second, most studies have focused only on female adolescents. Further assessment of the role of self-esteem is needed in samples of males, across various age groups. Third, the authors of many of these studies failed to provide adequate detail regarding socioeconomic background or ethnicity/cultural background of the samples (i.e., O'Dea, 2006). Despite these limitations, findings do point to the importance of further exploring the relationship between body dissatisfaction and self-esteem.

Depression. Many empirical investigations have found a significant relationship between body dissatisfaction and high levels of depressive symptomatology (Rierdan & Koff, 1997; Silberstein, Striegel-Moore, Timko & Rodin, 1988; Stice & Bearman, 2001).

McCarthy (1990) proposed an increased risk for depression, particularly in women, may be related directly to body dissatisfaction itself or to failed attempts at dieting. Specifically McCarthy (1990) theorized that body dissatisfaction or a disparaging view of one's own attractiveness can create negative thoughts about oneself and lower self-esteem.

Rierdan and Koff (1997) examined the negative weight-related body images and depressive symptoms of 175 sixth-grade girls. Each participant was administered the BDI, the weight concerns subscale of the Body Esteem Scale, and asked to categorize their current weight and weight satisfaction. The results showed that although BMI was not significantly related to depressive symptoms, weight concerns and weight satisfaction were significantly associated with increased depressive symptoms. Similarly a study examining the possible risk factors for binge eating found that depressive symptoms along with other psychological and biological factors increased the risk in adolescent girls (Stice, Presnell, Spangler, 2002). Results of this study suggested that elevated depressive symptoms and low self-esteem predicted binge eating onset (Stice, Presnell, Spangler, 2002).

The role of depression in the development of body image among men has not been addressed as extensively as the body image concerns of women. Although depression and body dissatisfaction have been correlated in women, few studies have demonstrated this correlation in men (McCreary & Sasse, 2000; Olivardia, Pope, Mangweth, & Hudson 1995). Some past studies have found that higher drive for muscularity scores in boys were associated with lower self-esteem and greater depression (McCreary & Sasse, 2000). Olivardia, Pope, Borowiecki& Cohane, (2004) examined the

correlation between depression and muscle belittlement in one hundred fifty-four heterosexual male college students. Muscle belittlement is when an individual thinks he is less muscular than he actually is (Olivardia, et. al., 2004). Muscle belittlement is computed by using an objective measure of an individual's degree of muscularity, FFMI (participants' fat-free mass index). The results of the study confirmed the hypothesis that college men exhibited a substantial level of body dissatisfaction, and that depression, as measured by the Beck Depression Inventory (Beck, Ward, Mendelson, & Erbaugh, 1961) was significantly positively correlated with muscle belittlement (Olivardia, et. al., 2004). Similar to previous findings in women, body dissatisfaction in men appears to be closely associated with symptoms of depression and measures of eating pathology (Olivardia, et. al., 2004). The authors concluded that clinicians treating men with body image disorders, depressive disorders, or eating disorders could screen for muscle belittlement as a screening tool for assessing depression or eating pathology in men (Olivardia, et. al., 2004).

These findings suggest the need to further examine the role of depression in the development of body image dissatisfaction. Many of these findings have been limited to focusing on adolescent girls and often from a higher socioeconomic background (Stice, Presnell, Spangler, 2002). Similarly, the study by Olivardia et. al., (2004) noted that their sample consisted of mostly heterosexual, Caucasian males, with little variation in socioeconomic background and age. Further examination is needed in samples including both men and women and in populations other than adolescents with more diverse samples.

Anxiety. As described in the *DSM-IV-TR* (2000) individuals with Bulimia Nervosa often have an increased frequency of depressive symptoms (e.g., low self-esteem) and anxiety symptoms (e.g., fear of social situations). However, Godart, Flament, Perdereau, and Jeammet (2002) suggest that the reported rates of comorbidity of anxiety disorders and eating disorders vary widely. Often studies were conducted to assess comorbidity of eating disorders and mood disorders with anxiety only secondarily included and partially assessed (Godart, et. al., 2002).

Godart, et. al, (2002) suggested that there were many methodological problems in these studies, making it difficult to examine the literature as a whole. These methodological problems include: (a) mixing of data from various sample sources, such as inpatient, outpatient, and community samples; (b) small sample sizes and selection bias; and (c) not accounting for variance in age across subgroups (Godart, et. al., 2002). Although the studies reviewed by Godart, et. al. (2002) concluded that there are elevated rates of anxiety disorders in subjects with eating disorders, they suggested that there is no definite evidence yet. Furthermore, there is a paucity of research examining the correlation between symptoms of anxiety and body image dissatisfaction. Additional research is needed to expand the understanding of the relationship between factors such as body image dissatisfaction, dieting, exercise behavior, and anxiety.

Many correlates of body image dissatisfaction have been examined in the literature. Behaviors such as dieting, and negative affect such as low-self-esteem and depression seem to be consistently related to high levels of body dissatisfaction. Additionally, although results still vary widely, anxiety has also been closely linked with body dissatisfaction. A better understanding of these possible consequences could lead to

more effective interventions aimed at decreasing body dissatisfaction, thereby reducing unhealthy behaviors and negative psychosocial consequences.

Differences in Body Image across Groups

Body image dissatisfaction has been extensively investigated among heterosexual women. However, research is further examining differences in both men and women and across sexual orientation. The following will review the literature on body image including sex differences and findings for the gay and lesbian population.

Sex Differences. Research demonstrates the growing prevalence of a negative body image, especially among women (Cash & Henry, 1995; Garner, 1997). In general, research has found that women are more concerned, distressed, and punished for their weight than men (Ojerholm & Rothblum, 1999). Studies have reported body dissatisfaction prevalence greater than 60 percent for high school aged females (Garner, 1997; Rosen & Gross, 1987) and higher than 80 percent for women in university (Silberstein, et. al., 1998). Many young women internalize the thin-ideal and this internalization is strongly linked to body dissatisfaction (Shaw & Waller, 1995). Given a cultural ideal of hard-to-achieve thinness for women and often a perceived discrepancy between womens' actual weight and this ideal, it is hypothesized that women are more dissatisfied with their bodies than men (McCarthy, 1990).

Researchers have found that disordered eating behaviors and attitudes are prevalent among women, particularly female undergraduates (Klemchuk, Hutchinson, & Frank, 1990). Cash and Henry's (1995) U.S. survey found that 48% of adult women have a negative overall appearance evaluation, 63% are not satisfied with their weight, and 49% are overweight preoccupied. Further, women who endorse the thin ideal and

report significant dissatisfaction with their bodies are particularly at risk of eating disordered behavior (Cook-Cottone & Phelps, 2003; Killen, et al., 1994; Striegel-Moore, Silberstein, & Rodin, 1993).

The incidence of eating-related problems among women is well documented (Cook-Cottone & Phelps, 2003; Killen, et al., 1994; Klemchuk, Hutchinson, & Frank, 1990; Striegel-Moore, Silberstein, & Rodin, 1993). Studies show that many women express concerns about body image, body shape, body size, and weight control (Schwitzer, et. al., 1998). In one study 56% of the sample of college women indicated they had gone on an eating binge, defined as eating more than 12,000 calories at a time (Katzman, Wolchik, Braver, 1984). Klemchuk, Hutchinson, and Frank (1990) state that this high degree of body dissatisfaction among college women is striking and disturbing. Furthermore it seems clear that the extent of body dissatisfaction among women justifies specific attention to this problem in and of itself, even in the absence of specific anorexic or bulimic behaviors (Klemchuk, Hutchinson, & Frank, 1990).

Despite evidence of increasing body image problems among men, the literature has largely ignored men in eating disturbance research. (Olivardia, Pope, Borowiecki, & Cohane, 2004; Tylka & Subich, 2002b). In general, heterosexual men have demonstrated less body image dissatisfaction and a low incidence of eating disorders when compared to women (Carlat, Camargo, & Herzog, 1997). Nonetheless, approximately 10% of individuals who present with anorexia nervosa and bulimia nervosa and 25% of those presenting with binge eating disorder are men (*DSM-IV-TR*, 2000; Fairburn & Beglin, 1990). Additionally, although heterosexual men may be more satisfied with their bodies than women, body satisfaction for men appeared to be decreasing.

A study that examined body image in college aged men, found that 95% of the sample expressed dissatisfaction with some part of their bodies and 70% experienced a discrepancy between their current and ideal body shapes (Mishkind, Rodin, Silberstein, & Striegel-Moore, 1986). In a more recent study, Garner (1997) reported that 43% of men were dissatisfied with their appearance and 52% were dissatisfied with the weight. Additionally, men between the ages of 30-39 and 5-59 were the most dissatisfied with their bodies, while men between the ages of 13-17 were the most satisfied (Garner, 1997). This decrease in body satisfaction may reflect an increasing cultural pressure on men.

Men often report being concerned about changing their body shape without reporting a desire to lose weight (Anderson & DiDomenico, 1992; Gillett & White, 1992) and therefore even if men display disturbed eating behaviors they are less likely to meet the clinical criteria for eating disorders (Ferguson & Spitzer, 1995). Although some studies have found similar percentages between men and women in their studies who are dissatisfied with their bodies, men were more likely to believe they should be more muscular while women believed they should be thinner (Pope, et. al., 1997; Rosen & Gross, 1987). This may suggest that the idea of weight preoccupation and the thin-ideal may not be applicable to men (Tylka & Subich, 2002b). Concern about body shape in the absence of weight loss is not considered when examining eating disorders therefore eating disturbance and body dissatisfaction may be overlooked in men (Tylka & Subich, 2002b). Olivardia, et al, (2004) suggests that studies on male body image has been limited to only one or two aspects of body image and that often focusing on one dimension, thinness versus obesity. Furthermore, Olivardia, et al (2004) suggests that

muscularity is an important dimension that is often missed. Further research is needed to explore body image issues in men and how this differs from body dissatisfaction issues in women.

Differences by Sexual Orientation. Sexual orientation is a factor that may play a part in the development of body image and body satisfaction (Ojerholm & Rothblum, 1999). Recently studies have begun to examine differences in body dissatisfaction in both gay men and lesbian women. Although some studies indicate that lesbian women are more satisfied with their bodies than heterosexual women (French, et al., 1996; Herzog, Newman, Yeh, & Warshaw, 1992), others have found no group differences (Beren, et. al., 1996; Brand, Rothblum, & Solomon, 1992; Striegel-Moore, Tucker, & Hsu, 1990).

Heffernan (1999) proposed that lesbians were typically more critical of traditional social norms regarding the rights and roles of women in general and placed less emphasis on body weight and physical appearance (French et. al., 1996; Lakkis, Ricciardelli, & Williams, 1999; Striegel-Moore, et. al., 1990). Many view lesbian women as abandoning traditional beauty expectations of the dominant culture and even as viewing the stigmatization of fat women as socially unacceptable as an oppressive societal norm (Cogan, 1999; Heffernan, 1999). Additionally, dieting has been noted as socially unacceptable in lesbian communities because it is seen as buying into harmful societal norms of female appearance and behavior (Cogan, 1999; Heffernan, 1994; Striegel-Moore, et. al., 1990. If these ideals and feminist attitudes are truly adopted by lesbian women, one might argue that lesbians should be more accepting of their bodies than heterosexual women (Cogan, 1999; Herzog, et. al., 1992; Striegel-Moore, et. al., 1990).

Some suggest that lesbians tend to downplay the importance of physical attractiveness and challenge culturally prescribed beauty when compared to heterosexual women (Heffernan, 1999; Striegel-Moore, et. al., 1990). These finding support the claim that homosexual women have a different standard ideal weight and body shape (Herzog, et. al., 1992). They also suggest that homosexual females are less likely to perceive themselves as overweight and are more likely to report a positive body image (French, et. al., 1996).

Other explanations for less body image dissatisfaction among lesbians may be associated with the idea that lesbian communities may insulate women from the effects of male-defined beauty standards or that feminism may be more common among lesbians and that a natural extension of feminist ideals would be a greater degree of body size acceptance (Ojerholm & Rothblum, 1999). These and other ideals adopted by lesbian women may serve as protective factors against the internalization of messages regarding thinness and attractiveness and the development of weight concerns, body dissatisfaction, and disordered eating behavior (French et. al., 1996; Heffernan, 1996).

In contrast, others maintain that both lesbians and heterosexual women are socialized to consider appearance a primary aspect of their lives and for the most part adhere to traditional standards for social acceptance (Brand et. al., 1992). Several argue that lesbian women are still bound to the dominant culture's thinness expectations (Cogan, 1999; Striegel-Moore, et. al., 1990), and that although lesbian subcultures may be more tolerant to diverse body sizes and shapes, all women (irrespective of their sexual orientation) are constantly targeted by media and societal messages that promote the thin ideal (Beren et. al., 1996; Lakkis, et. al., 1999; Heffernan, 1994). Several studies have

found that lesbians do struggle with body image and are not immune to the effects of societal pressures for thinness (Cogan, 1999; Heffernan, 1996).

A study of 181 lesbian and bisexual women found that a significant number of the women in the sample were dissatisfied with their current weight and reported wanting to be thinner (Cogan, 1999). Similarly, a study comparing lesbian and heterosexual undergraduates found few group differences based on body esteem and disordered eating (Heffernan, 1994). Finally, a study of 203 lesbian women found no significant differences between lesbian and heterosexual women in attitudes concerning weight, appearance of dieting (Heffernan, 1996).

Although lesbian ideology rejects dominant culture's narrowly defined ideal of female beauty, this may not be enough to overcome already internalized cultural beliefs and values about female beauty (Striegel-Moore, et. al., 1990). Negative evaluation of body image and a desire to weigh less seem to be characteristic of normative female discontent regardless of sexual orientation (Cogan, 1999). Furthermore, even if lesbian women may express a more tolerant attitude and less traditional expectations for attractiveness, this may not reflect satisfaction with their own personal body image.

Although research involving the body image of lesbians often has conflicting results, the findings with homosexual men are more consistent indicating significantly more dissatisfaction with their bodies than compared to heterosexual men (Siever, 1994; Silberstein, et. al., 1989). Research suggests that gay men are at particular risk for body image dissatisfaction (Levesque & Vichesky, 2006).

Gay men typically score higher than heterosexual men on measures of eating disturbance, report being more dissatisfied with their current weight, and are more

dissatisfied with their bodies (Beren, et. al., 1996; Siever, 1994; Williamson & Hartley, 1998). In a sample of 250 college students, gay men had the lowest body esteem scores, showed a much higher concern for physical attractiveness and physical appearance of their partners when compared to lesbians and heterosexual men (Siever, 1994). These findings suggest an increased vulnerability of gay men to eating disturbance and body dissatisfaction (Williamson & Hartley, 1998).

Levesque and Vichesky (2006) assessed body image dissatisfaction in 64 gay men. The results of this study indicated that the participants were concerned with muscularity rather than weight. Higher body mass index was also associated with greater body dissatisfaction. Unlike women, gay men appeared to be more interested in gaining weight by developing greater muscularity. Heavier male participants seemed to desire reducing body fat and gaining muscle mass. Although a small subset of the participants wanted preferred a thinner physique, the results do not support previous findings that gay men also internalize a thin ideal. The study also examined the involvement of self-esteem and depression and found that general body image satisfaction was related to both self-esteem and depression. The associations between these factors suggest that body image concerns are important to gay men's psychological well-being. Researchers need to consider both muscularity and weight concerns and potentially unique behavioral consequences of those different concerns as well as an understanding of motivations for desiring particularly physiques. (Levesque & Vichesky, 2006).

Beren, et. al. (1996) conducted a study looking at two factors among gay and lesbian individuals on body dissatisfaction, affiliation with lesbian and gay communities and self-esteem. 257 participants completed measures of body dissatisfaction, self-

esteem, and an involvement in gay/lesbian community questionnaire. The study found significant univariate differences with gay men, heterosexual women, and lesbian women reporting significantly higher rates of body dissatisfaction than heterosexual men. The level of body dissatisfaction and psychosocial distress of gay men were similar to levels of distress reported by women in these areas (Beren, et. al., 1996). Self-esteem was significantly associated with dissatisfaction in gay men, lesbians, and heterosexual women (Beren, et. al., 1996). Beren et. al. (1996) suggests that these three groups may share a level of cultural pressure to be attractive and physically fit. Lower self-esteem may increase vulnerability to internalizing messages about the importance of appearance (Beren, et. al., 1996).

The study found no significant differences between lesbians and heterosexual women in body dissatisfaction or in related psychosocial factors. This finding suggests that although lesbian culture is thought to have more flexible norms about women's bodies that this may be insufficient to counteract the extreme messages, women experience since childhood. Furthermore, lesbian culture may not be as tolerant to diverse body sizes as it is purported to be (Beren, et. al., 1996).

Given the previous findings in the literature, there appears to be support for the hypothesis that women experience more body dissatisfaction than men and that gay men have more body dissatisfaction compared to heterosexual men. However, studies have found conflicting results comparing gay men, lesbian women, and heterosexual women on body dissatisfaction. Additionally, it is unclear about the interaction among these groups, between body dissatisfaction and possible emotional and behavioral consequences.

There are several limitations in the research examining body image dissatisfaction in gay men and lesbian women. First, sample sizes in most studies were small and homogeneous. Most studies have focused only on a younger, college aged, lesbian population. Few studies have examined lesbians in clinical populations. Further, many studies had a significant difference in mean age between groups of lesbian women, heterosexual women, gay men, and heterosexual men (Brand, et. al, 1992; Beren, et. al, 1996; Siever, 1994). A second limitation is the significant different in weight and BMI between the four comparison groups. Herzog, et. al., (1992) noted that lesbians were significantly heavier than heterosexual women in their sample. Similarly, other studies have also noted that differences in BMI, which may be a limitation when interpreting their results (Brand, et. al, 1992; Beren, et. al, 1996; Siever, 1994). A final limitation, may be the use of terms such as dieting and attractiveness. These terms may need to be redefined, particularly when dealing with lesbian samples. Difference may exist in perceptions of these concepts between lesbians and heterosexual women, for example, lesbians' conception of physical attractiveness may be more functional than that of heterosexual women (Heffernan, 1999).

Purpose and Rationale

Although the consequences of eating disorders are well established in the literature, exploration of body image dissatisfaction and the psychosocial costs of normative body dissatisfaction have been limited. Particularly research has not examined the differences across sex, sexual orientation, and age. Similarly, present body image scales have a limited definition of body image, often focusing on drive for thinness, which may exclude broader concerns for males.

The first purpose of this study is to achieve a greater understanding of the consequences of normative body dissatisfaction among non-clinical adults. The second purpose is to present findings addressing the factor structure, reliability, validity, and correlates of two new measures. Specifically this study attempted to validate two newly developed scales, the Body Image Dissatisfaction Scale and the Consequences of Body Image Dissatisfaction Scale, the latter of which examines various consequences of body dissatisfaction including anxiety, depression, and self-esteem. An exploratory factor analysis is used to examine the underlying structure of the scales. Reliability estimates are presented for the scales and each of their factors. Exploratory analyses are also conducted to examine the relationship of body mass index (BMI), age, and sexual orientation.

Based on the literature reviewed several hypotheses were developed as follows:

1) Scores on the BIDS will be strongly correlated with the scores on the CoBIDS.

2) Scores on the BIDS and scores of the CoBIDS will be strongly negatively correlated with the measure of body esteem.

3) Scores of the BIDS and scores of the CoBIDS will be moderately negatively correlated with measures of self esteem.

4) Scores on the BIDS and CoBIDs will be moderately correlated with measures of depression and anxiety.

5) Based on previous findings in the literature it was hypothesized that heterosexual men would have the least amount of body image dissatisfaction when compared to heterosexual women, lesbian women, and gay men.

CHAPTER III

GENERAL METHOD

Two separate studies were conducted for instrument development and then initial validation for the psychometric properties of the BIDS and CoBIDS. Study 1 outlines the methods and procedures for the administration of the initial items to a development sample. The second study outlines the initial validation and exploration of the psychometric properties of the BIDS and CoBIDS with a separate second sample.

Study 1: Instrument Development: Administered Items to a Development Sample

Participants. One hundred ninety-eight individuals, ranging in age from 18 to 55 years (M = 24.54, SD = 8.09), participated in study 1 (see Table 1). The majority (n = 144, 72.7%) of participants identified themselves as Caucasian/White, 17.7% as Asian/Pacific Islander, 4.5% as Bi-racial/Multiracial, 1.5% as Latino/Hispanic, 1.5% as Native American/American Indian, .5% as Black/African American, and 1.5% as other. 61.1% identified as female (n = 121), 37.4% identified as male (n = 74), and 1.3% identified as another sex (n = 3). A majority (n = 175, 88.4%) of the participants identified as current college students. Body Mass Index, or BMI, was calculated by using the participant's reported weight and height. Typically, a BMI score under 18.5 is considered to be underweight, a score between 18.5 and 24.9 is considered to be normal or healthy, a score between 25.0 and 29.9 is considered to be overweight, and a score over 30.0 is considered to be obese (www.cdc.gov). Most participants reported a BMI considered to be in the normal or healthy range (M = 26.04, SD = 10.78).

Table 1. Study 1 Participant Demographic Characteristics.

	N	%	M	SD	Range
Age	197		24.54	8.09	18-55
Sex					
Male	74	37.4%			
Female	121	61.1%			
Other[1]	3	1.5%			
Student	175	88.4%			
Ethnicity					
Caucasian/White	144	72.7%			
Native American/ American Indian	3	1.5%			
Latino/Hispanic	3	1.5%			
Asian/Pacific Islander	35	17.7%			
Black/African American	1	.5%			
Bi-racial/Multiracial	9	4.5%			
Other	3	1.5%			
Sexual Orientation					
Exclusively Heterosexual	157	79.3%			
Primarily Heterosexual	12	6.1%			
More Heterosexual than Homosexual	5	2.5%			
Bisexual	4	2.0%			
More Homosexual than Heterosexual	4	2.0%			
Primarily Homosexual	4	2.0%			
Exclusively Homosexual	11	5.6%			
Body Mass Index (BMI)	195		26.04	10.78	17-61

Note. All sample sizes and percentages are of those participants who reported for that variable.

Women made up 61.1% (N = 121) of the sample, and men an additional 37.4% (N = 74) of the sample. A small proportion, (1.3%, N = 3) of the sample identified as other. Because of this small number, participants who identified their sex as "other" were included for reliability and correlation analyses but were excluded for group comparisons.

Participants were asked to identify their sexual orientation on an 8-point Kinsey-type scale: from exclusively heterosexual to exclusively homosexual. If participants' attraction to the same sex ranged from "mostly" to "exclusively," they were categorized as homosexual. If participants' attraction to the other sex ranged from "mostly" to "exclusively," they were categorized as homosexual (Beren, et. al., 1996). Individuals who identified as solely "bisexual" were combined based on their reported sex. A majority of the participants identified as exclusively heterosexual (n = 157, 79.3%). The mean BMI for lesbian and bisexual women was 30.69 (SD = 9.59); for gay and bisexual men, 26.73 (SD = 3.95); for heterosexual women, 24.44 (SD = 5.08); and for heterosexual men, 24.75 (SD = 4.30). The mean age for lesbian and bisexual women was 27.35 (SD = 6.51); for gay and bisexual men, 30.90 (SD = 9.20); for heterosexual women, 24.21 (SD = 8.34); and for heterosexual men, 21.95 (SD = 6.21).

Measures

In addition to the BIDS and CoBIDS evaluated in this study, participants completed a demographics form, the Rosenberg Self-Esteem scale (RSE; Rosenberg, 1989) and the Body Esteem Scale for Adolescents and Adults (BESAA, Mendelson, Mendelson, & White, 2001)

Demographics. Each participant was asked to complete a basic demographic questionnaire including age, ethnicity, sexual orientation, socioeconomic status, present weight and height, ideal body weight, and whether or not he or she has been treated for an eating disorder (see Appendix A).

Body Image Dissatisfaction Scale. The Body Image Dissatisfaction Scale (BIDS) is a 50-item scale developed to measure levels of body dissatisfaction among both men

and women. The BIDS was developed using the guidelines for scale development outlined by DeVellis (2003). Fifty original items were developed in an effort to assure at least 25-items in the final form. These 50 items, along with the proposed response scale, and a brief description of what the scale was designed to measure, was reviewed by two experts who were chosen because they were knowledgeable with the content are of body image. The purpose of this review was to maximize the content validity of the scale. The feedback from these two experts was incorporated into the scale, which included slight re-wording of items and the addition of one item, with the preliminary development scale consisting of 51 items. Sixteen items are reverse-scored. Participant answer items on a scale ranging from 1 (Strongly Disagree) to 6 (Strongly Agree). Sample Items include: "I would feel better about myself if I were a different size", "I am satisfied with my weight and body shape" and "Compared to others I am very preoccupied with my weight and body shape." Higher scores indicate a higher level of body dissatisfaction, with a minimum score of 51 and a maximum score of 306 (see Appendix B).

Consequences of Body Dissatisfaction Scale. The Consequences of Body Image Dissatisfaction Scale (CoBIDS) is a 65-item scale measuring various consequences of body dissatisfaction including, anxiety, depression, self-esteem, loneliness, dieting, and exercise behavior. The CoBIDS was developed using the guidelines for scale development outlined by DeVellis (2003). All items are preceded by the following stem "How I feel about my body..." (see Appendix C). Approximately ten items were developed to measure each consequence category, with a total of 63 items originally developed. After incorporating expert feedback from the same two experts who reviewed the Body Image Dissatisfaction Scale, slight wording changes were made, format of the

items were altered, and two additional items were added; with the preliminary scale including 65 items. Three items are reverse-scored, with a minimum score of 65 and a maximum score of 390.

Rosenberg Self-Esteem scale (RSE; Rosenberg, 1989) – is a 10-item measure of global self-esteem (see Appendix D). It is a widely used measure of self -esteem with good reliability (ranging from .88 to .90) and validity studies in a wide range of samples among undergraduate students (Robins, Hendin, & Trzesniewski, 2001; Rosenberg, Schooler, & Schoenbach, 1989; Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995). Items are rated from *strongly agree* (3) to *strongly disagree* (0), with higher score indicating higher self-esteem. The reliability coefficient for the present sample was .88.

Body-Esteem Scale for Adolescents and Adults. (BESAA; Mendelson, Mendelson, & White, 2001; see Appendix E). The 23-item scale is used as a measure of body esteem, specifically measuring a participants evaluation of their weight (e.g., "I am preoccupied with trying to change my body weight"), the degree to which they attribute positive outcomes from their weight (e.g., "My looks help me to get dates"), and their appearance (e.g., "I like what I see when I look in the mirror"). Items are rated from *never* (0) to *always* (4), with higher scores indicated more positive body esteem. Mendelson, et al. (2001) reported acceptable to excellent internal consistency for the three body esteem subscales with Cronbach's alphas ranging from .75 to .96 for a sample of 1,334 participants between the ages of 12 and 25, including 97 college students. Additionally, the test–retest correlations were high: BE–Appearance $r(95) = .89$, $p < .001$; BE–Weight $r(95) = .92$, $p < .001$; and BE–Attribution $r(95) = .83$, $p < .001$, which supports the reliability of the measures (Mendelson, et. al., 2001). The reliability

coefficient for the present sample was .95 for the total scale, .93 for BE-Appearance, .77 for BE-Attribution, and .94 for BE-Weight.

Procedures

In an effort to obtain a diverse sample across age, sex, and sexual orientation, adult participants were recruited from both a mid-sized mid-western university and online through email. A majority of the participants were recruited through email and completed the surveys online through Psychdata. Questionnaires took approximately 20-30 minutes to complete. Online surveys included an introduction letter, a consent form, the questionnaires, and a debriefing statement. Each participant was also given a chance to enter a drawing to win a $50 prize for participation. Participant information (i.e., name, phone/email, and mailing address) were not associated with their questionnaires.

Study 2: Initial Validation and Exploration of the Psychometric Properties of the BIDS and CoBIDS

The purpose of the second study was to examine the initial validity of the scales and general psychometric properties in a second sample after narrowing down the pool of items and constructing the two measures. As part of this study I looked at internal consistency, concurrent validity, and assessed the factor structure.

Participants

Two-hundred eighty-six participants, ranging in age from 18 to 72 years (M = 32.41, SD = 11.22), participated in study 2 (see Table 2). The majority (n = 214, 74.89%) of participants identified themselves as Caucasian/White, 10.1% as Asian/Pacific Islander, 5.9% as Bi-racial/Multiracial, 4.2% as Latino/Hispanic, 2.8% as Black/African American, and 2.1% identified as Native American/American Indian. 69.6% identified as female (n = 199), 29% identified as male (n = 83), and 1.4% identified as another sex (n

= 4). 46.2% (n = 132) of the participants identified as current college students. Body Mass Index, or BMI, was calculated by using the participant's reported weight and height. Most participants reported a BMI considered to be in the normal or healthy range (M = 25.84, SD = 6.6).

Women made up 69.6% (N = 199) of the sample, and men an additional 29% (N = 83) of the sample. A small proportion, (1.4%, N = 4) of the sample identified as other. Because of this small number, participants who identified their sex as "other" were included for reliability and correlation analyses but were excluded for group comparisons.

Participants were asked to identify their sexual orientation on an 8-point Kinsey-type scale: from exclusively heterosexual to exclusively homosexual. If participants' attraction to the same sex ranged from "mostly" to "exclusively," they were categorized as homosexual. If participants' attraction to the other sex ranged from "mostly" to "exclusively," they were categorized as homosexual (Beren, et. al., 1996). Individuals who identified as solely "bisexual" were combined based on their reported sex. Participants who identified their sex as "other" were included for reliability and correlation analyses but were excluded for group comparisons. A majority of the participants identified as exclusively heterosexual (n = 164, 57.3%), 12.2% as primarily heterosexual, 4.5% as more heterosexual than homosexual, 3.8% as bisexual, 1.7% as more homosexual than heterosexual, 10.5% as primarily homosexual, and 9.4% identified as exclusively homosexual. The mean BMI for lesbian and bisexual women was 27.73 (SD = 9.79); for gay and bisexual men, 25.98 (SD = 5.89); for heterosexual women, 24.69 (SD = 5.49); and for heterosexual men, 26.86 (SD = 5.64). The mean age for

lesbian and bisexual women was 31.96 (SD = 8.91); for gay and bisexual men, 32.89 (SD = 11.91); for heterosexual women, 33.73 (SD = 11.63); and for heterosexual men, 27.85 (SD = 10.27).

Table 2. Study 2 Participant Demographic Characteristics (n=286).

	N	%	M	SD	Range
Age	286		32.41	11.22	18-72
Sex					
Male	83	29.0%			
Female	199	69.6%			
Other	4	1.4%			
Student	132	46.2%			
Ethnicity					
Caucasian/White	214	74.8%			
Native American/ American Indian	6	2.1%			
Latino/Hispanic	23	4.2%			
Asian/Pacific Islander	29	10.1%			
Black/African American	8	2.8%			
Bi-racial/Multiracial	17	5.9%			
Sexual Orientation[1]					
Exclusively Heterosexual	164	57.3%			
Primarily Heterosexual	35	12.2%			
More Heterosexual than Homosexual	13	4.5%			
Bisexual	11	3.8%			
More Homosexual than Heterosexual	5	1.7%			
Primarily Homosexual	30	10.5%			
Exclusively Homosexual	27	9.4%			
Body Mass Index (BMI)[2]	281		25.84	6.6	17.22-55.57

[1] One participant (0.3%) identified as asexual and was not included in the analysis of the data.
[2] Five participants did not report their present weight so their BMI was not calculated.

Measures

The BIDS and CoBIDS developed in study 1 along with the RSES and BESAA (also used in study 1) were utilized in the second study. In addition to the previous measures used in study 1, two additional scales were added for concurrent validity, the

Center for Epidemiologic Studies Depression scale 5 item-subset (CES-D; Bohannon, Maljanian & Goethe, 2003), and the State-trait Anxiety Inventory (STAI).

Center for Epidemiologic Studies Depression scale (CES-D; Bohannon, Maljanian & Goethe, 2003) a five item short form of the CES-D was used to measure depression (see Appendix F). The CES-D, a 20-item depression scale, has been widely used for screening for depression. Bohannon, Maljanian & Goethe, (2003) tested a 5-item subset, which demonstrated good sensitivity (>0.84), specificity (≥0.80), and high validity (>0.90) with a reliability coefficient of $\alpha = .76$ among adults ranging from age 18 to 78. These 5 items were rated on a 4-point scale ranging from 0 (Rarely or none of the time, less than 1 day) to 3 (Most or all of the time, 5-7 days). Sample items include: "I feel depressed" and "I could not 'get going'". A higher score indicates increased symptoms of depression. In the current study, Cronbach's alpha was used to assess internal reliability of the 5 CES-D items, which was found to be .73 for the total sample.

State-Trait Anxiety Inventory (STAI; Spielberger, 1983). Anxiety was measured using the trait scale of Spielberger's State-Trait Anxiety Inventory (see Appendix G). The STAI is a forty-item self-report instrument. State anxiety refers to an emotional state at the time of investigation and may be affected by stressful situation. Trait anxiety refers to proneness to anxiety and is a more stable measure. Participants indicated their agreement/disagreement with each item on a 4-point Likert scale ranging from 1 = "not at all" to 4 = "very much so." Responses were summed to produce a total score with higher scores indicating higher levels of anxiety. Spielberger (1983) reported high test-retest reliabilities for the trait scale, ranging from 0.73-0.86. Endler, at al., (1992) reported high internal consistency coefficients for both the S-Anxiety scale and for the T-Anxiety scale

(.91 in men and .93 in women) in a sample of 605 undergraduate students. The Cronbach's alpha for the present sample was .94 for the state anxiety subscale and .93 for the trait anxiety subscale.

Procedures

In an effort to obtain a diverse sample across age, sex, and sexual orientation, adult participants were recruited from both a mid-sized mid-western university and online through email. A majority of the participants were recruited through email and completed the surveys online through Psychdata. Questionnaires took approximately 20-30 minutes to complete. Online surveys included an introduction letter, a consent form, the questionnaires, and a debriefing statement. Each participant was also given a chance to enter a drawing to win a $50 prize for participation. Participant information (i.e., name, phone/email, and mailing address) were not associated with their questionnaires.

CHAPTER IV

RESULTS

Study 1 Results

The total score coefficient alpha was .95 for the BIDS and .98 for the CoBIDS. As hypothesized, scores on the BIDS were strongly correlated with the scores on the CoBIDS (.86, p<01). Results also support the hypotheses that scores on the BIDS and scores of the CoBIDS would be strongly negatively correlated with the measure of body esteem and moderately negatively correlated with measures of self-esteem. The BIDS was significantly correlated with the RSE (-.57, p<.01), and strongly correlated with the BESAA (-.89, p<.01; see Table 3). The CoBIDS was also moderately correlated with the RSE (-.60, p<.01) and strongly correlated the BESAA (-.76, p<.01).

Item analyses (DeVellis, 2003) of the BIDS indicated eleven items had item-total scale correlations of less than .40 or demonstrated too little variance across participants with small standard deviations (<1.0).Those eleven items were dropped and replaced with three new items. Because there was a disproportionate number of items within that 11 that measured positive body satisfaction, three additional items that specifically measured satisfaction with body size were added. The new scale contained a total of 43 items with sixteen items reverse scored (see Appendix H).

Item analyses of the CoBIDS indicated eighteen of the items had item-total scale correlations of less than .40 or demonstrated too little variance across participants with small standard deviations (<1.0). It was expected that after the initial examination of the

items' performance many items would be cut. Therefore no new items were added to replace the deleted items. The 47-item scale version of the COBIDS had one reverse scored item (see Appendix I).

Table 3. Study 1 Correlations between the BIDS, CoBIDS, and Other Measures for Developmental Sample.

	BIDS	CoBIDS	RSE	BESAA	BE-Appearance	BE-Attribution	BE-Weight
BIDS	1	0860(**)	-.571(**)	-.893(**)	-.867**	-.417**	-.903**
CoBIDS		1	-.600(**)	-.762(**)	-.762**	-.348**	-.756**
RSE			1	.552(**)	.605**	.345**	.436**
BESAA				1	.948**	.658**	.928**
BE-Appearance					1	.544**	.810**
BE-Attribution						1	.454**
BE-Weight							1

**Correlation is significant at the 0.01 level (2-tailed).
Note: BIDS = Body Image Dissatisfaction Scale; CoBIDS = Consequences of Body Image Dissatisfaction Scale; RSES = Rosenberg Self-Esteem Scale; BESAA = Body-Esteem Scale for Adolescents and Adults; BE-Appearance = Body esteem appearance subscale; BE-Attribution = Body esteem attribution subscale; BE-Weight = Body esteem weight subscale.

Study 1 Reliability

Internal consistency reliabilities (Cronbach α) were calculated for each new scale after the initial items were deleted. The reliability coefficient for the BIDS was .94. A Cronbach's alpha of .98 was obtained for the complete CoBIDS measure. These results suggest excellent preliminary reliability for both of the measures.

Study 2: Initial Validation and Exploration of the Psychometric Properties of the BIDS and CoBIDS

Using the preliminary versions of the BIDS and CoBIDS developed in study one, the purpose of the second study was to examine the initial validity of the scales and general psychometric properties in a second sample. Additionally, exploratory factor analysis was utilized to examine the factor structure of the two scales.

Factor Structure of the BIDS

Two initial analyses were used to assess the appropriateness of the 43 items for factor analysis using SPSS Version 14.0. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .95, and Bartlett's test of sphericity was statistically significant ($p < .001$), thereby suggesting that the data was appropriate for factor analysis (Tabachnick & Fidell, 2007). An exploratory factor analysis (EFA) was conducted using principal-axis factoring, promax (oblique) rotation, and listwise deletion of missing values. An oblique rotation was chosen instead of an orthogonal rotation, expecting that any emergent factors would be correlated given the scale's creation as a unitary measure of body image dissatisfaction (Reise, Waller, & Comrey, 2000). Multiple criteria were used to evaluate and determine the number of factors to retain: (a) examining the scree plot, (b) interpretability of the factors, and (c) factor loadings of |.50| or higher (Costello & Osborne, 2005; Reise, Waller, & Comrey, 2000). Thus, I ran the EFA for a one, two, and four-factor solution and compared the results.

In the four-factor solution, a total of seven items were deleted from the measure due to weak loadings across factors (no one factor loading of |.40| or higher). However, the four-factor solution was difficult to interpret theoretically. An additional two items were deleted because the additional factor did not meet the criteria of including a minimum of three items. After deletion of these items, I re-ran a 2 factor EFA with the remaining 34 items. Based on the criteria outlined above, the one-factor solution resulted in the most interpretable and clean factor structure. The pattern matrix of this solution is presented in Table 4. This solution accounted for 44.97% of the variance in BIDS scores after extraction. Sample items include: "I feel anxious about my body size" and "My

body size has little effect on my mood." The 34-item version of the BIDS is presented in Appendix J.

Table 4. Item Factor Loadings, Means, and Standard Deviations for the Body Image Dissatisfaction Scale.

	Item	Factor: Body Image Dissatisfaction 1	*M*	*SD*
36.	I am dissatisfied with my body.	.85	3.44	1.58
25.	I am satisfied with my body.	-.84	3.33	1.37
43.	I feel happy about the way I look.	-.84	3.63	1.38
17.	I would feel better about myself if I were a different size.	.84	3.80	1.53
24.	I feel ashamed of how I look.	.83	2.66	1.46
15.	I often judge myself because of my body size	.83	3.31	1.57
4.	When I look in the mirror I am satisfied with my reflection.	-.79	3.21	1.38
7.	I am satisfied with my weight and body shape.	-.78	3.08	1.41
23.	There are lots of things I would change about my looks if I could.	.75	3.62	1.47
2.	When I look at pictures of myself, I am pleased with my body's appearance.	-.73	3.11	1.39
22.	I feel self-conscious about my body.	.73	4.10	1.45
3.	I feel anxious about my body size.	.2	3.01	1.43
37.	I have accepted the way I look.	-.68	3.90	1.27
11.	I feel worse after I weigh myself.	.68	3.26	1.56
5.	My body size has little effect on my mood.	-.65	3.31	1.47
30.	I feel guilty when I overeat.	.65	3.88	1.63
33.	Trying on clothes makes me feel self-conscious about my body.	.65	4.07	1.50
12.	I am in a healthy weight range for my height.	-.63	3.77	1.66
34.	I often feel judged because of my body size	.62	2.86	1.46
1.	Compared to others I am very preoccupied with my weight and body shape.	.61	3.20	1.43
26.	My weight determines how I feel about myself.	.61	2.76	1.30
35.	I try to avoid walking past a full-length mirror.	.61	2.12	1.26
18.	Most of my friends have a better body than I do.	.58	3.12	1.37
6.	Because of my body size I am embarrassed when others see what I eat.	.53	2.12	1.28
29.	My size impacts/influences what I eat.	.53	3.45	1.47
27.	If I am not the ideal body size I am less worthwhile as a person.	.53	1.81	1.07
38.	When I look at magazines (i.e. fashion/fitness) I feel worse about my body.	.53	3.37	1.51
19.	When I describe myself my body size is one of the first things I think of.	.53	2.67	1.42
31.	I am preoccupied with the way that the food I eat influences my body shape.	.51	2.92	1.38
3.	I do not worry about minor (i.e. 5 pounds) changes in my weight.	-.50	3.51	1.48
42.	I feel my body size negatively affects how employers perceive me.	.50	2.17	1.33
41.	My body size impedes me from participating in sports that I would like to.	.50	2.12	1.35

To assess the reliability of the 34-item version of the BIDS, I conducted internal consistency analyses for the measure as a whole. A Cronbach's alpha of .77 was obtained

for the complete measure. These results suggest excellent reliability in this version of the measure. The alpha, mean, and standard deviation of the 34-item scale are reported in Table 5.

Table 5. Means, Standard Deviations for BIDS and CoBIDS.

Scale	α	M	SD
BIDS	.77	100.70	14.47
CoBIDS	.97	93.33	33.98
CoBIDS Factor 1	.96	60.76	24.47
CoBIDS Factor 2	.92	32.56	12.64

Note: BIDS = Body Image Dissatisfaction Scale; CoBIDS = Consequences of Body Image Dissatisfaction Scale

Factor Structure of the CoBIDS

Two initial analyses were used to assess the appropriateness of the 43 items for factor analysis using SPSS Version 14.0. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .95, and Bartlett's test of sphericity was statistically significant ($p < .001$). Both analyses suggested that the data was appropriate for factor analysis (Tabachnick & Fidell, 2007). An exploratory factor analysis (EFA) was conducted using principal-axis factoring, promax (oblique) rotation, and listwise deletion of missing values. An oblique rotation was chosen instead of an orthogonal rotation, expecting that any emergent factors would be correlated given the scale's creation as a unitary measure of body image dissatisfaction (Reise, Waller, & Comrey, 2000). Multiple criteria were used to evaluate and determine the number of factors to retain: (a) examining the scree plot, (b) interpretability of the factors, and (e) factor loadings |.50| or higher (Costello & Osborne, 2005; Reise, Waller, & Comrey, 2000). Thus, I ran the EFA for a one, two, and three-factor solution and compared the results.

Table 6. Item Factor Loadings, Means, and Standard Deviations for the Consequences of Body Dissatisfaction Scale.

		Factor			
	Item	Psychosocial Consequences	Behavior	*M*	*SD*
19.	...makes me feel inferior to others.	.88	-.14	2.19	1.19
37.	...limits me from finding companionship when I want it.	.84	-.12	1.86	1.31
45.	...makes me uncomfortable during sexual activity.	.82	-.13	2.45	1.52
35.	...makes me feel self-conscious in romantic relationships.	.81	-.08	2.78	1.55
42.	...would prevent me from obtaining some of my goals.	.80	-.06	1.77	1.07
16.	...makes me feel sad.	.79	.06	2.51	1.41
29.	...makes me afraid of letting others get close.	.78	-.06	1.83	1.27
9.	...makes me feel isolated from others.	.77	.09	1.95	1.25
47.	...causes me not to exercise.	.75	-.22	1.68	1.04
17.	...has made it difficult for me to go out in public.	.75	-.09	1.53	.85
11.	...makes me feel worthless.	.74	.09	1.70	1.11
36.	...has decreased my level of sexual interest.	.74	-.04	2.24	1.44
23.	...makes it difficult for me to make friends.	.74	-.05	1.50	.90
18.	...makes me self-conscious when I am out on a date.	.74	-.04	2.38	1.26
32.	...makes me feel useless at times.	.73	.09	1.74	1.17
10.	...makes me unlikely to initiate conversation.	.71	-.02	1.79	1.12
1.	...negatively affects my self-confidence.	.69	.13	3.05	1.21
40.	...decreases my energy for getting things done.	.69	.05	2.14	1.31
24.	...has impacted my sleep.	.67	.09	1.64	1.13
14.	...causes me to disrespect myself.	.67	.01	2.04	1.30
13.	...makes me worry about how I look in clothes.	.66	.13	3.30	1.50
30.	...makes me cry.	.66	.09	1.68	1.08
12.	...makes me feel like a failure.	.65	.17	1.79	1.20
39.	...makes me anxious.	.64	.11	1.94	1.18
38.	...has caused me panic.	.60	.14	1.45	.88

Table 6. cont.

	Item	Factor: Psychosocial Consequences	Factor: Behavior	*M*	*SD*
2.	...affects how other people think of me.	.57	-.00	2.46	1.09
26.	...makes me feel proud.	-.58	-.00	2.76	1.28
34.	...influences me to hide or lie about the amount of time I exercise.	.53	.09	1.61	.90
25.	...keeps me from focusing on anything aside from my body.	.50	.35	1.59	.92
43.	...makes me physically experience anxiety (e.g. heart race, sweat, feel hot, fidgeting, rapid breathing).	.47	.18	1.43	.86
6.	...causes me to exercise excessively.	-.22	.85	1.71	.99
20.	...causes me to maintain an overly strict diet.	-.14	.83	1.71	1.07
8.	...causes exercise to interfere with my other obligations.	-.19	.81	1.53	.88
41.	...causes me to exercise more than most people.	-.17	.76	1.6.3	.98
22.	...causes me to push myself beyond my physical limits.	-.01	.73	1.76	1.08
3.	...causes me to eat differently at meal times than I would like to.	.01	.71	2.69	1.27
46.	...causes me to feel anxious when I am not able to exercise.	.09	.63	2.03	1.29
44.	...has caused me to change my eating patterns/habits.	.01	.62	2.78	1.38
5.	...has caused me to use diets that have resulted in nutritional deficits.	.06	.59	1.59	1.03
7.	...causes me to feel guilty when I do not exercise.	.18	.58	3.25	1.49
33.	...causes me to meticulously read nutrition labels.	.03	.56	2.45	1.47
21.	...has made me try dieting.	.18	.55	2.80	1.48
28.	...causes me to feel depressed when I am not able to exercise.	.22	.55	2.05	1.29
4.	...causes me to spend money on diet products.	.11	.54	1.86	1.19
15.	...causes me to refrain from eating out with friends.	.19	.48	1.39	.74
27.	...causes me to use diet pills/steroids.	.10	.41	1.33	.75

Based on the criteria outlined above, the results indicated that the most comprehensive model that met these criteria was a 2-factor solution. The pattern matrix of this solution is presented in Table 6. This solution accounted for 49.9% of the variance in CoBIDS scores after extraction. The variance accounted for by individual factors 1 and 2 was 42.56% and 7.38% respectively. The 47-item version of the CoBIDS is presented in Appendix I.

Factor 1 was labeled Psychosocial Consequences. Its thirty-one items are related to symptoms of anxiety, symptoms of depression, and difficulties in interpersonal and romantic relationships. Sample items include: "How I feel about my body…makes me feel inferior to others," and "How I feel about my body…negatively affects my self-confidence." Factor 2 was labeled Behavior. Its fifteen items are related to behaviors and feelings related to eating and engagement in exercise. Sample items include: "How I feel about my body…has caused me to change my eating patterns/habits," and "How I feel about my body…causes me to exercise more than most people."

To assess the reliability of the 46-item version of the CoBIDS, I conducted internal consistency analyses for the measure as a whole and for each of its two related factors. A Cronbach's alpha of .97 was obtained for the complete measure. Coefficient alpha score for Factor 1 was .96 and .92 for Factor 2. These results suggest excellent reliability in the 46-item version of the measure. The alphas, means, and standard deviation of the 46-item scale are reported in Table 5.

Preliminary Analysis

One-way analyses of variance (ANOVAs), using SPSS Version 14.0, were conducted to determine whether the initial versions of the BIDS and CoBIDS scores

varied on the basis of sex, student status, reported income, race/ethnicity and prior treatment for an eating disorder. There was no significant differences on the basis of sex on the BIDS scores, $F(2, 270) = .83$, $p > .05$, the total CoBIDS scores, $F(2, 270) = 1.96$, $p > .05$, or on either the CoBIDS Factor 1 scores, $F(2, 270) = 2.56$, $p > .05$, and the CoBIDS Factor 2 scores, $F(2, 270) = 1.78$, $p > .05$. There were also no differences for scores on the BIDS or CoBIDS on the basis of student status, reported income, or race/ethnicity. Given the lack of significant differences on the BIDS or CoBIDS scores, these demographic variables were not included in further analysis. A one-way ANOVA was conducted determine whether BIDS and CoBIDS scores varied on the basis of prior treatment for an eating disorder. Prior treatment for an eating disorder was significantly correlated with scores on the BIDS ($r = .02$, $p > .05$), total CoBIDS ($r = .01$, $p > .05$), CoBIDS Factor 1 ($r = .01$, $p > .05$), and CoBIDS Factor 2 ($r = .01$, $p > .05$). Given the small sample of individuals who identified having been treated for an eating disorder ($n = 14$), these significant differences must be interpreted with caution.

Preliminary Group Differences

An analysis of variance (ANOVA) indicated significant differences among the four groups (i.e. heterosexual females, bisexual and lesbian females, bisexual and gay males, and heterosexual males) based on sex and sexual orientation on BMI, $F(3, 275) = 3.21$, $p < .05$, and subsequent multiple comparisons tests indicated that the lesbian and bisexual women had a significantly higher BMI than the heterosexual women. Differences among the four groups on age was also significant $F(3, 280) = 3.38$, $p < .05$, but subsequent multiple comparison tests indicated only heterosexual women were significantly older than heterosexual men. Because the groups differed significantly by

age and body mass, a linear regression analysis was also conducted to evaluate the impact of age and BMI on the BIDS and CoBIDS. No significant differences were found on the basis of age for both of the scales ($p > .05$), however there does appear to be a relationship between BMI and the two measures. This relationship is similar to previous findings which have noted a significant relationship between BMI and body dissatisfaction (Hospers & Jansen, 2005; Markey & Markey, 2002). Overall, as BMI increased, scores on the BIDS and CoBIDS increased.

Further differences among the means for lesbian and bisexual women, gay and bisexual men, heterosexual women, and heterosexual men, were examined using multivariate and univariate analyses. Significant differences in scores were found on the BIDS with Bisexual and gay men scoring significantly higher (m = 106.65, $p < .05$) than heterosexual men (m = 96.22, $p < .05$.) Differences were also found on the CoBIDS for factor 1 between bisexual and gay men (m = 71.53. $p < .05$) and heterosexual women (m = 58.81, $p < .05$), and between bisexual and gay men and heterosexual men (m = 55.11, $p < .05$). No significant score differences were found between heterosexual women and bisexual or lesbian women on either the BIDS or the CoBIDS. No differences were found on CoBIDS factor 2. Mean scores and standard deviations for each group, the F value resulting from univariate ANOVAs, and the results of subsequent multiple comparison tests are presented in Table 7.

Validity

Correlational analyses were performed to examine the relationships between the BIDS and CoBIDS scores and four other measures. The Body Esteem Scale for Adolescents and Adults (BESAA) and the Rosenberg Self-Esteem Scale (RSE) were used

to assess concurrent validity. As predicted the BIDS correlated significantly with the CoBIDS (.79, $p < .01$), the BESAA (-.73, $p < .01$), BE-Appearance (-.73, $p < .01$), and BE-Weight (-.73, $p < .01$). Additic[illegible] the BIDS was moderately correlated with the RSE (-.47, $p < .01$), BE-Attribution (-.36, $p < .01$), the State Anxiety subscale (-.42, $p < .01$), the Trait anxiety scale (.52, $p < .01$), and the CESD (.39, $p < .01$). Similarly the total scores for the CoBIDS was significantly correlated with the RSE (-.53, $p < .01$), the BESAA (-.79, $p < .01$), BE-Appearance (-.78, $p < .01$), BE-Attribution (-.42, $p < .01$), BE-Weight (-.77, $p < .01$), the CESD (.51, $p < .01$), the State Anxiety subscale (.44, $p < .01$), and the Trait anxiety scale (.59, $p < .01$). Factor 1 of the CoBIDS was also significantly correlated with the RSE (-.55, $p < .01$), the CESD (.53, $p < .01$), the BESAA (-.78, $p < .01$), BE-Appearance (-.79, $p < .01$), BE-Attribution (-.43, $p < .01$), BE-Weight (-.75, $p < .01$), the State Anxiety subscale (.46, $p < .01$), and the Trait anxiety scale (.60, $p < .01$). Finally Factor 2 correlated significantly with both the RSE (-.36, $p < .01$), the CESD (.33, $p < .01$), the BESAA (-.59, $p < .01$), BE-Appearance (-.79, $p < .01$), BE-Attribution (-.43, $p < .01$), BE-Weight (-.62, $p < .01$), the State Anxiety subscale (.28, $p < .01$), and the Trait anxiety scale (.41, $p < .01$). Table 8 below includes the correlations between all scales.

Exploratory Analyses

Exploratory analyses were conducted to on the initial versions of the BIDS and CoBIDS. Based on previous literature suggesting that body dissatisfaction decreases with age, increases with BMI, and is a specific risk factor for gay men, I chose to further examine score differences based on three variables. A multiple regression analysis was conducted to predict body image dissatisfaction from age, BMI, and sexual orientation.

The CoBIDS was not included in the following analyses because the distribution of the data was highly positively skewed. Even after attempting to transform the data using square root, log, and negative inverse transformations, all known to reduce positive skewness, the CoBIDS data did not meet the assumption of multivariate normality. Additionally, the Shapiro-Wilkes test ($W = .92$, $p = .00$) was examined along with a Q-Q plot to determine normality of the residuals but the data still had substantial deviation (Howell, 2006, p.504). Therefore the CoBIDS was not included in further exploratory analyses.

This analysis was conducted for the BIDS after excluding simple outliers, defined as scores that fell outside of the range of the ±3SD ($n = 9$) to meet the assumption of a normal distribution (Green & Salkind, 2003). The results of this analysis indicated that the regression equation was significant, $R^2 = .12$, adjusted $R^2 = .11$, $F(3, 268) = 12.12$, $p < .01$. The sample multiple correlation coefficient was .35, indicating that approximately 11% of the variance of body image dissatisfaction in the sample can be accounted for by the linear combination of the predictors. Table 9 presents indices to indicate the relative strength of the individual predictors. The bivariate correlation between the predictor age and body image dissatisfaction was negative, and two of the three indices were statistically significant ($p < .01$). As BMI increases scores on the BIDS also increased ($t = 5.87$, $p < .01$). As age increased, body image dissatisfaction appears to decrease ($t = -2.98$, $p < .01$). Sexual orientation was not predictive of scores on the BIDS ($t = -.16$, $p > .05$).

Table 7. Study 2 Group Differences.

Measure	Bisexual and Lesbian women (n=44)		Bisexual and Gay men (n=31)		Heterosexual women (n=147)		Heterosexual men (n=39)		
	M	SD	M	SD	M	SD	M	SD	F
BIDS	100.84	13.19	106.65_{a}	18.10	100.39	13.55	96.22_{a}	14.60	3.64*
CoBIDS Factor 1	94.00	29.65	104.41	41.67	92.65	31.52	84.91	38.47	2.15
CoBIDS Factor 2	63.33	21.73	$71.53_{a,b}$	31.69	58.81_{b}	21.63	55.11_{a}	27.60	3.57*
RSE	30.66	11.05	32.88	13.75	33.84	12.92	29.80	12.45	1.56
BESAA	46.34	20.84	44.10	19.90	47.45	16.37	52.10	19.54	1.29
BE-Appearance	21.57	9.08	18.84	9.45	22.04	7.70	23.43	9.25	1.83
BE-Attribution	9.93	4.48	10.87	4.18	10.51	3.17	10.38	3.89	.45
BE-Weight	14.84	8.83	14.39	7.79	14.90	7.53	18.30	8.29	2.23
CESD	8.40	3.00	8.76	3.11	7.91	2.75	7.64	2.66	1.40
S-anxiety	39.76	12.48	38.30	13.75	36.85	11.64	34.59	11.83	1.49
T-anxiety	41.16	11.67	41.39	13.24	29.08	10.65	35.93	10.64	2.14

Note: BIDS = Body Image Dissatisfaction Scale; = Consequences of Body Image Dissatisfaction Scale; RSE = Rosenberg Self-Esteem Scale; BESAA =Body-Esteem Scale for Adolescents and Adults; BE-Appearance = Body esteem appearance subscale; BE-Attribution = Body esteem attribution subscale; BE-Weight = Body esteem weight subscale; CoBIDS S-anxiety = State Anxiety subscale; T-anxiety = Trait Anxiety subscale. Bisexual and gay/lesbian categories include all participants endorsing a sexual orientation other than Exclusively or Primarily Heterosexual.

[a] Significant Mean Difference

* $p < .05$

Table 8. Study 2 Correlations between the BIDS, CoBIDS, and Other Measures.

	BIDS	CoBIDS	CoBIDS Factor 1	CoBIDS Factor 2	RSE	BESAA	Appearance	Attribution	Weight	CESD	S-anxiety	T-anxiety
BIDS	1	.785**	.771**	.618**	-.473**	-.732**	-.732**	-.356**	-.727**	.392**	.416**	.521**
CoBIDS		1	.958**	.833**	-.532**	-.787**	-.784**	-.418**	-.770**	.506**	.437**	.587**
CoBIDS Factor 1			1	.640**	-.550**	-.784**	-.792**	-.434**	-.747**	.531**	.461**	.604**
CoBIDS Factor 2				1	-.364**	-.597**	-.571**	-.283**	-.623**	.333**	.282**	.410**
RSE					1	.533**	.564**	.372**	.443**	-.503**	-.532**	-.700**
BESAA						1	.951**	.724**	.937**	-.431**	-.416**	-.544**
BE-Appearance							1	.600**	.829**	-.483**	-.457**	-.583**
BE-Attribution								1	.554**	-.280**	-.248**	-.341**
BE-Weight									1	-.341**	-.348**	-.464**
CESD										1	.600**	.646**
S-anxiety											1	.786**
T-anxiety												1

** Correlation is significant at the 0.01 level (2-tailed).

Note: BIDS = Body Image Dissatisfaction Scale; = Consequences of Body Image Dissatisfaction Scale; RSE = Rosenberg Self-Esteem Scale; BESAA =Body-Esteem Scale for Adolescents and Adults; BE-Appearance = Body esteem appearance subscale; BE-Attribution = Body esteem attribution subscale; BE-Weight = Body esteem weight subscale; CoBIDS S-anxiety = State Anxiety subscale; T-anxiety = Trait Anxiety subscale.

Table 9. The Bivariate and Partial Correlations of the Predictors with Body Image Dissatisfaction Scale.

Predictors	Correlation between each predictor and Body Image Dissatisfaction	Correlation between each predictor and body image dissatisfaction controlling for all other predictors	Beta	T	Sig.
BMI	.30**	.34**	.36	5.87	.000**
Age	-.07	-.18**	-.18	-2.98	.003**
Sexual Orientation	.03	-.01	-.01	-.16	.872

CHAPTER V

DISCUSSION

The purpose of this study was to develop and provide initial validation for two new scales examining the constructs of body image dissatisfaction and the consequences of body image dissatisfaction. A review of the literature found a large number of available measures for assessing body image but no measures specifically examining the possible consequences of normative body image dissatisfaction. Additionally, few measures of body image contained items covering a range of body dissatisfaction issues relevant to both men and women, and most focused on body image as a predictor of clinical eating disorders. Therefore, the findings of the review suggested the need for a robust and validated measure of body image dissatisfaction and a measure of the consequences of body image dissatisfaction that may be used across various groups of non-clinical individuals in future research and clinical settings. This chapter will provide a summary and interpretation of the results and hypotheses. The limitations of the study are then presented. Finally, the chapter ends with possible clinical implications of this study, future research directions, followed by a conclusion.

Summary of findings

Hypothesis 1

As predicted the scores on the BIDS and the CoBIDS were strongly correlated. The construct of body image dissatisfaction has been extensively studied along with different factors that may influence the development of body image dissatisfaction. Although

research has not found a causal relationship between these factors it does seem important that these factors are inevitably linked. Even though there are many measures that specifically focus on body image few have focused on how possible consequences may be related to how one feels about their bodies. The strong correlation between these scales further demonstrates the relationship between body image dissatisfaction and both psychosocial and behavioral consequences.

Hypothesis 2

Construct validity for both the scales was determined by examining the relationship between the two scales and the Body-Esteem Scale for Adolescents and Adults (BESAA; Mendelson, Mendelson, & White 2001). Overall the second hypothesis was also confirmed and scores on the BIDS and scores of the CoBIDS were strongly negatively correlated with the measure of body esteem. The BESAA is a measure of general feelings about appearance, (b) weight satisfaction, and (c) attributions of positive evaluations about one's body and appearance to others. The BIDS and both scales of the CoBIDS were all strongly negatively correlated with both the appearance and the weight scales but only moderately correlated with the attribution scale. This may demonstrate a distinction in the construct being measured by the two new scales, which mainly focused on general feelings and consequences regarding one's body image and weight. As Mendelson, et al. (2001) concluded attributions of positive evaluations to others is separate from self-evaluation of body image, and was not specifically intended to be measured by the BIDS and CoBIDS.

Hypothesis 3

As hypothesized, the scores of the BIDS and scores of the CoBIDS were both moderately negatively correlated with the measure of self-esteem. The Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1989) was administered as a test of convergent validity for the measures. Global self-esteem seems to be highly related to self-evaluations of physical appearance. Individuals with higher body image dissatisfaction and those who endorsed more psychosocial and behavioral consequences related to body image dissatisfaction tended to have lower self-esteem.

This finding supports previous literature that has found self-esteem to be related to body dissatisfaction in both men and women regardless of sexual orientation (Ben-Tovim, Walker, Murray, & Chin 1990; Beren, Hayden, Wilfley, & Grilo, 1996; Forbes, Adams-Curtis, Rade, & Jaberg, 2001), and also supports the importance of understanding the impact of low self-esteem in the development of body image. Since how one feels about themselves as a whole appears to be uniquely linked to how one feels about their body it is important to understand the causes of body image dissatisfaction and the role of self-esteem. Furthermore when developing interventions to address body image dissatisfaction it may be interesting to consider whether interventions aimed at increasing self-esteem would also in turn decrease body image dissatisfaction.

Hypothesis 4

Measures of depression and anxiety were also used to demonstrate convergent validity. It was hypothesized that scores on the BIDS and CoBIDS would be moderately correlated with measures of depression and anxiety. The hypothesis was supported and the BIDS and both subscales of the CoBIDS were moderately correlated with the CESD

and both scales of the State Trait Anxiety scale. The findings of this study are consistent with previous findings and demonstrate the association between anxiety, depressive symptoms, and body image dissatisfaction (Rierdan & Koff, 1997; Silberstein, Streigel-Moore, Timko & Rodin, 1988; Stice & Bearman, 2001). The correlation between the BIDS and the depression scale suggests that body image dissatisfaction accounts for 25% of the variance in depression scores. This finding may have compelling implications for future research and clinical interventions.

Anxiety and depression are viewed as having many overlapping features and negative affect such as distress, irritability, and tension. Various studies have suggested that negative weight-related dimensions of body image are simply negative self-evaluations which would explain the relationship between body image dissatisfaction and depression (Rierdan & Koff, 1997). Similarly, dissatisfaction or feelings of inadequacy about one's own body may lead to more feelings of worry, nervousness, or agitation about one's body.

Hypothesis 5

Based on previous findings in the literature it was hypothesized that heterosexual men would have the least amount of body image dissatisfaction when compared to heterosexual women, bisexual or lesbian women, and bisexual or gay men. This final hypothesis was partially supported. As predicted heterosexual men had significantly lower scores than bisexual and gay men on the BIDS and the Psychosocial subscale of the CoBIDS. While the mean for heterosexual, bisexual and lesbian women on the BIDS was higher than heterosexual men, the difference was not statistically significant.

Bisexual and gay men were also found to endorse significantly higher levels of psychosocial consequences than heterosexual women. However, there appeared to be no differences in behavioral consequences among the four groups. Additionally there were no differences found between heterosexual women, heterosexual men, and bisexual or lesbian women on the BIDS or the CoBIDS. Heterosexual men appeared to indicate a similar amount of body image dissatisfaction and both psychosocial and behavioral consequences as heterosexual and bisexual or lesbian women. Previous findings have suggested that heterosexual women experience the most body image dissatisfaction and psychosocial consequences, however, the findings of this study suggest that this trend may be changing.

Additionally, this study found no significant differences between lesbians and heterosexual women in body image dissatisfaction or psychosocial consequences related to body image dissatisfaction. This lack of significant differences supports previous research that suggests that although there may be more flexible norms within lesbian culture about women's bodies, lesbian culture may not be as tolerant of diverse body sizes as it is professed to be (Beren, et al., 1996).

Limitations

There are several limitations which would be important to address in future revisions of these measures. First the present study has limitations which are inherent in questionnaire-based research as will as limitations associated with convenience samples. Since the questionnaire consisted of self-report instruments, there exists the possibility that respondents misrepresented themselves in some way. The emphasis on anonymity and confidentiality were intended to minimize this effect. Second, because of the

diversity of the sample and small sample sizes of the specific groups, the ability to make strong statements regarding the BIDS and CoBIDS based on sex, sexual orientation, and age many be limited. Similar to previous literature there was a significant difference in BMI and age between some of the groups being compared. The significantly higher BMI of bisexual and lesbian women in the sample may have contributed to a lack of statistically significant differences between this group and heterosexual women on the BIDS and the CoBIDS. Additionally, the significant difference in age between heterosexual men and heterosexual women may have also contributed to a lack of statistical differences. Finally, due to the positive skew in the CoBIDS scores, findings based on this scale must be interpreted with caution. Future examination of this scale must explore other means to account for this skew in data.

Implications

The goal of developing a new body image measure was to assess body image dissatisfaction across various groups to include a more global definition of body image that would not be limited to females and a drive for thinness. The BIDS and CoBIDS appear to be reliable and valid measures of body image dissatisfaction and the consequences of body image dissatisfaction. The findings of this study have notable implications for treatment and prevention.

Body image dissatisfaction is increasingly becoming prevalent among both men and women. Understanding the causes and consequences of body image dissatisfaction could have considerable social and clinical significance. Clinically, the use of these instruments provides several benefits for therapists, particularly on college campuses.

Eating disorders on college campuses comprise a serious mental health issue, however, subclinical eating disorders account for most of the eating pathology seen on college campuses (Hoyt & Ross, 2003). Furthermore, Hoyt and Ross (2003) suggest that many students suffering from disordered eating may be hesitant to share their behaviors with their counselors. More general and common assessment of body image dissatisfaction may be helpful to identify students who may be experiencing consequences related to body image dissatisfaction. Additionally, therapists may need to further assess for body image dissatisfaction when dealing with clients who present with body image concerns but are not clinically diagnosed with an eating disorder. The relationship between body image dissatisfaction and psychosocial consequences could be missed if only focusing on clinical diagnosis of eating disorders. Given that there appears to be a strong relationship and possibly a high overlap between body image dissatisfaction and depression, more clinical emphasis is needed in assessing the psychological impact of body image dissatisfaction.

An important clinical implication of this study is that the BIDS and CoBIDS may help to address body image dissatisfaction earlier in hopes of preventing more serious and dangerous disordered eating. The scales may serve as useful tools that would allow therapists to talk with clients about body image dissatisfaction and possible consequences before actual eating disorders develop, allowing therapists to intervene with subclinical disordered eating which may be difficult to detect or address in therapy. Furthermore, the findings of this study demonstrated a lack of conclusive differences between men and women, particularly in behavioral consequences. However, body image dissatisfaction in men may be commonly overlooked in therapy as it relates to psychological

consequences. Body image dissatisfaction should consistently be explored in therapy with men, especially bisexual and gay men. Therapist should be thorough by assessing for body image dissatisfaction of all their clients, regardless of sex, sexual orientation, age, or body size. Future scale development should aim to shorted the scales further for more clinical applications.

Another clinical implication is that perhaps a method for addressing low self-esteem is through improving feelings about appearance. Addressing body image dissatisfaction in therapy may also improve symptoms of depression and anxiety. Prevention programs should focus on general risk factors and consequences such as anxiety and depression to produce greater overall improvements in mental health. Future studies need to investigate more fully the experiences and causes of body image dissatisfaction. Such an understanding would be valuable in both preventative and therapeutic efforts.

Being attractive is very important in our society and both body image and weight makes up a large component of what is culturally considered attractive. Striving to achieve contemporary beauty ideals often comes at a cost, both psychologically and physically. As suggested in the feminist literature, psychologists must learn to recognize the social, political, and economic forces that constitute the context in which body image dissatisfaction is prevalent (Brown & Jasper, 1993). Although it is important to address individual's struggles with weight and body image, it is equally important to attend to changing the broader social context.

The pressure to look a certain way, emphasized by the media and other societal influences, are often reinforced by psychologists. This may be due to a lack of awareness

on the part of clinicians or struggles with their own biases regarding body image. One example is that many new dieting programs now have featured psychologists giving advice to help individuals to be more successful in their weight loss goals. These conflicting messages promote misunderstandings and confusion about dieting, goals to change one's body shape and size, and psychological consequences related to those goals.

The narrow definitions of a desirable and health body ideal for both men and women is so pervasive in our society that the messages often go unchallenged despite the fact that many negative consequences have been identified as a result of these expectations. Preoccupation with weight, dieting, and exercise has become so pervasive that Brown and Jasper (1993, pg. 16) suggest it is an "accepted, encouraged, and rewarded aspect of social life." Challenging the harmful messages regarding body image directly is an important step in raising the consciousness at a social level (Brown & Jasper, 1993).

Increasing the understanding regarding the causes and consequences of body image dissatisfaction is important both socially and clinically. Furthermore it is important to expand the discussion of societal pressures and body ideals to include men as well as women. Insecurity, anxiety, low self-esteem, low self-confidence etc. as related to body image is not exclusively feminine as some feminist authors may suggest. Continued evaluation of the impact of negative societal messages reinforcing damaging body ideals is crucial. Psychologists should strive to enhance efforts to promote more positive body image and encourage body acceptance.

Future Research

Body image dissatisfaction and its relationship to factors such as depression, anxiety, low self-esteem, and disordered eating and exercise behaviors have been extensively studied, yet the complicated relationship between these factors is still not completely understood. Theoretically attention should focus on the complex relationship between body image dissatisfaction and all of the various psychosocial and behavioral consequences. Advanced examination is needed to appreciate how these and other factors work together to influence the development of body image dissatisfaction.

Useful directions for future research include further examination of sex and sexual orientation differences in scores on the BIDS and CoBIDS, conducting a confirmatory factor analysis to confirm the factor model for each measure, and exploring the instrument's concurrent and discriminant validity with other available measures. An exploratory analysis found that those individuals who identified as having prior treatment for an eating disorder had significantly higher scores on the BIDS, total CoBIDS, CoBIDS Factor 1, and CoBIDS Factor 2. Although this finding should be interpreted with caution due to the small sample size, theoretically it would be expected that those with a prior eating disorder would have significantly more body image dissatisfaction and experience high levels of consequences related to body image dissatisfaction. Further examination of these findings should be conducted with larger samples from clinical populations.

Future research should further explore the validity of the BIDS' and the CoBIDS' along with retest reliability. Since the second study was still exploratory in nature, confirmatory factor analysis should be utilized for further validation of the instruments.

Although more validation of these measures is necessary, results of this study clearly demonstrate that how one feels about their body can negatively effect psychosocial functioning. The BIDS and the CoBIDS expands on typical body image measures by including a broad range of possible consequences including a desire to change one's body whether that includes a drive for thinness or a desire to increase muscularity.

Conclusion

This study looked at both the factor structure and reliability of the BIDS and CoBIDS. It was hypothesized that the BIDS and CoBIDS would provide clinicians and researchers measures that could be used with non clinical adult population to address normative body image dissatisfaction and the possible psychosocial consequences. The findings of this study support the use of two new scales that broaden the examination of the construct and possible consequences. Additionally the limited differences found based on sex and sexual orientation may point to the importance of examining body image dissatisfaction further in a non clinical population to better understand the consequences of high levels of dissatisfaction with one's body.

The 34-item BIDS is an easy-to administer, psychometrically sound instrument that measures body image dissatisfaction. Similarly the 46-item CoBIDS measures two types of consequences: a) psychosocial consequences and b) behavioral consequences. As demonstrated in this study, both scales were valid and reliable over a wide age range and across sex and sexual orientation. Thus, the present results suggest that the BIDS and CoBIDS are promising measures. Both the BIDS and CoBIDS offer a unique and significant addition to the current body image literature examining body image dissatisfaction in both men and women in a non clinical adult population.

APPENDICES

APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT YOURSELF

Age: _____

Gender: □ Male □ Female

Race/Ethnicity: _____

Sexual Orientation:

□ Exclusively heterosexual (attracted to persons of the opposite sex)
□ Primarily heterosexual
□ More heterosexual than homosexual (attracted to same sex)
□ Bisexual (attracted to members of both sexes)
□ More homosexual than heterosexual
□ Primarily homosexual (attracted to persons of the same sex)
□ Exclusively homosexual
□ Asexual (no interest in sex with either the same or opposite sex)

What State/Province do you currently reside

in?_____

Are you currently enrolled as a college student? □ Yes □ No

Name of University/College: _____

What is your current major? _____

Year in School:
□ Freshman
□ Sophomore
□ Junior
□ Senior
□ Graduate/professional student

I currently live:
□ in Residence Halls/Dorms
□ in Sorority/Fraternity Housing
□ in Student Family Housing
□ off campus
□ Other (Please Specify) _____

Current Occupation: _____

Annual Family Income (*if applicable, approximate parent income year prior to entering college*):

□ Less than 10,000
□ 10,000-20,000
□ 20,000-30,000
□ 30,000-40,000
□ 40,000-50,000
□ 50,000-70,000
□ 70,000-100,000
□ Greater than 100,000

Present Body Weight: _____lbs.

Present Height: _____ feet _____ inches

What would you consider to be your ideal body weight? _____lbs.

Do your consider yourself:

□ Significantly underweight
□ Underweight
□ Slightly Underweight
□ Average
□ Slightly overweight
□ Overweight
□ Significantly overweight

Approximately how much time do you spend in an average week on exercise?

□ 0-1 hour
□ 1-2 hours
□ 3-5 hours
□ 5-7 hours
□ 7-10 hours
□ 10+ hours

Have you ever been treated for an eating disorder (e.g., anorexia nervosa or bulimia nervosa)? □ YES □ NO

Has a medical provider ever recommended that you change your weight for health reasons? □ YES □ NO

Are you currently (Select all that apply):

□ Dieting to lose weight

□ Dieting to maintain weight

□ Dieting to gain weight

□ Not currently dieting

□ Other (Please Specify)_____

Are you currently (Select all that apply):

□ Exercising to lose weight

□ Exercising to maintain weight

□ Exercising to gain weight

□ Exercising for rehabilitation (e.g. due to disability or injury)

□ Not currently exercising

□ Other (Please Specify)_____

Have you ever been treated for depression? □ YES □ NO

Have you ever been treated for anxiety? □ YES □ NO

Are you currently in counseling/therapy? □ YES □ NO

APPENDIX B

STUDY 1 PRELIMINARY BODY IMAGE DISSATISFACTION SCALE

PLEASE USE THE FOLLOWING SCALE TO ANSWER THE QUESTIONS BELOW.

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

1. Compared to others I am very preoccupied with my weight and body shape.

   1 2 3 4 5 6

2. I am scared of becoming fat.

   1 2 3 4 5 6

3. When I look at pictures of myself, I am pleased with my body's appearance.

   1 2 3 4 5 6

4. I do not worry about minor (i.e. 5 pounds) changes in my weight.

   1 2 3 4 5 6

5. When I look in the mirror I am satisfied with my reflection.

   1 2 3 4 5 6

6. My body size has little effect on my mood.

   1 2 3 4 5 6

7. Because of my body size I am embarrassed when others see what I eat.

   1 2 3 4 5 6

8. I am satisfied with my weight and body shape.

   1 2 3 4 5 6

9. How I look has little to do with how well I am liked by others.

   1 2 3 4 5 6

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

10. Regarding of my body shape my friends will still like me.

1 2 3 4 5 6

11. Who I am is more important than what I look like.

1 2 3 4 5 6

12. I feel worse after I weigh myself.

1 2 3 4 5 6

13. I am in a healthy weight range for my height.

1 2 3 4 5 6

14. I feel anxious about my body size.

1 2 3 4 5 6

15. When I see fat people I worry about becoming fat.

1 2 3 4 5 6

16. I am anxious about my body image most the time.

1 2 3 4 5 6

17. I do not allow myself to eat what I want when I am hungry.

1 2 3 4 5 6

18. I would feel better about myself if I were a different size.

1 2 3 4 5 6

19. Most of my friends have a better body than I do.

1 2 3 4 5 6

20. When I describe myself my body size is one of the first things I think of.

1 2 3 4 5 6

21. The thought of becoming fat scares me.

1 2 3 4 5 6

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

22. What I do is more important to me than how I look.

1 2 3 4 5 6

23. I feel self-conscious about my body.

1 2 3 4 5 6

24. There are lots of things I would change about my looks if I could.

1 2 3 4 5 6

25. I feel ashamed of how I look.

1 2 3 4 5 6

26. My body shape helps me in romantic pursuits.

1 2 3 4 5 6

27. I am satisfied with my body.

1 2 3 4 5 6

28. My weight determines how I feel about myself.

1 2 3 4 5 6

29. If I am not the ideal body size I am less worthwhile as a person.

1 2 3 4 5 6

30. People with better bodies deserve more out of life.

1 2 3 4 5 6

31. My size impacts/influences what I eat.

1 2 3 4 5 6

32. I feel guilty when I overeat.

1 2 3 4 5 6

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

33. I am preoccupied with the way that the food I eat influences my body shape.

1 2 3 4 5 6

34. I think overweight people are lazy.

1 2 3 4 5 6

35. I think overweight people eat too much.

1 2 3 4 5 6

36. I describe my body in the same way as others describe my body.

1 2 3 4 5 6

37. Trying on clothes makes me feel self-conscious about my body.

1 2 3 4 5 6

38. I weigh myself daily.

1 2 3 4 5 6

39. I try to avoid walking past a full-length mirror.

1 2 3 4 5 6

40. I am dissatisfied with my body.

1 2 3 4 5 6

41. I have accepted the way I look.

1 2 3 4 5 6

42. When I look at magazines (i.e. fashion/fitness) I feel worse about my body.

1 2 3 4 5 6

43. Looking at models motivates me to change my appearance.

1 2 3 4 5 6

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

44. I get compliments for my looks.

1 2 3 4 5 6

45. When I describe myself my body is one of the last things I think of.

1 2 3 4 5 6

46. Compared to athletes my body is inadequate.

1 2 3 4 5 6

47. I'd go to the gym if I looked better.

1 2 3 4 5 6

48. My body size impedes me from participating in sports that I would like to.

1 2 3 4 5 6

49. I feel my body size negatively affects how employers perceive me.

1 2 3 4 5 6

50. I feel happy about the way I look.

1 2 3 4 5 6

51. I get teased for my looks.

1 2 3 4 5 6

APPENDIX C

STUDY 1 PRELIMINARY CONSEQUENCES OF BODY IMAGE DISSATISFACTION SCALE

Consider the phrase "How I feel about my body…" when considering each of the items below. Then use the following scale to rate your response.

Never	Rarely	Occasionally	Often	Frequently	Always
1	2	3	4	5	6

How I feel about my body…

1. …negatively affects my self-confidence.

   1 2 3 4 5 6

2. …makes me feel like a failure as a person.

   1 2 3 4 5 6

3. …affects how other people think of me.

   1 2 3 4 5 6

4. …causes me to eat differently at meal times than I would like to.

   1 2 3 4 5 6

5. …causes me to spend money on diet products.

   1 2 3 4 5 6

6. …has caused me to use diets that have resulted in nutritional deficits.

   1 2 3 4 5 6

7. …causes me to exercise excessively.

   1 2 3 4 5 6

8. …causes me to feel guilty when I do not exercise.

   1 2 3 4 5 6

9. …causes exercise to interfere with my other obligations.

   1 2 3 4 5 6

Never	Rarely	Occasionally	Often	Frequently	Always
1	2	3	4	5	6

How I feel about my body…

10. …makes me feel isolated from others.

1	2	3	4	5	6

11. …makes me unlikely to initiate conversation.

1	2	3	4	5	6

12. …makes me feel depressed.

1	2	3	4	5	6

13. …makes me feel worthless.

1	2	3	4	5	6

14. …makes me feel like a failure.

1	2	3	4	5	6

15. …makes me tense.

1	2	3	4	5	6

16. …makes me worry about how I look in clothes.

1	2	3	4	5	6

17. …makes me confident about my abilities.

1	2	3	4	5	6

18. …causes me to disrespect myself.

1	2	3	4	5	6

19. …affects how I eat.

1	2	3	4	5	6

Never	Rarely	Occasionally	Often	Frequently	Always
1	2	3	4	5	6

How I feel about my body...

20. ...has led me to use addictive substances (e.g. nicotine, methamphetamines, speed)

1	2	3	4	5	6

21. ...causes me to spend more than 8 hours a week working out.

1	2	3	4	5	6

22. ...makes me work out even when I have an injury.

1	2	3	4	5	6

23. ...causes me to refrain from eating out with friends.

1	2	3	4	5	6

24. ...makes my social relationships superficial.

1	2	3	4	5	6

25. ...makes me feel sad.

1	2	3	4	5	6

26. ...makes me feel like life is not worth living.

1	2	3	4	5	6

27. ...has made it difficult for me to go out in public.

1	2	3	4	5	6

28. ...makes me self-conscious when I am out on a date.

1	2	3	4	5	6

29. ...makes me feel inferior to others.

1	2	3	4	5	6

Never	Rarely	Occasionally	Often	Frequently	Always
1	2	3	4	5	6

How I feel about my body…

30. …causes me to maintain an overly strict diet.

1	2	3	4	5	6

31. …has made me try dieting.

1	2	3	4	5	6

32. …causes me to push myself beyond my physical limits.

1	2	3	4	5	6

33. …makes me feel left out.

1	2	3	4	5	6

34. …makes it difficult for me to make friends.

1	2	3	4	5	6

35. …makes me feel hopeless about my future.

1	2	3	4	5	6

36. …has impacted my sleep.

1	2	3	4	5	6

37. …keeps me from focusing on anything aside from my body.

1	2	3	4	5	6

38. …makes me feel proud.

1	2	3	4	5	6

39. …causes me to use diet pills/steroids.

1	2	3	4	5	6

Never	Rarely	Occasionally	Often	Frequently	Always
1	2	3	4	5	6

How I feel about my body…

40. …causes me to feel depressed when I am not able to exercise.

1	2	3	4	5	6

41. …makes me afraid of letting others get close.

1	2	3	4	5	6

42. …makes me cry.

1	2	3	4	5	6

43. …makes me have obsessive thoughts about weight and body size.

1	2	3	4	5	6

44. …makes me feel useless at times.

1	2	3	4	5	6

45. …causes me to meticulously read nutrition labels.

1	2	3	4	5	6

46. …influences me to hide or lie about the amount of time I exercise.

1	2	3	4	5	6

47. …makes me feel self-conscious in romantic relationships.

1	2	3	4	5	6

48. …has decreased my level of sexual interest.

1	2	3	4	5	6

49. …makes me feel good about myself.

1	2	3	4	5	6

Never	Rarely	Occasionally	Often	Frequently	Always
1	2	3	4	5	6

How I feel about my body…

50. …affects how much I exercise.

1	2	3	4	5	6

51. …limits me from finding companionship when I want it.

1	2	3	4	5	6

52. …has caused me panic.

1	2	3	4	5	6

53. …makes me limit the food I eat.

1	2	3	4	5	6

54. …makes me feel alone.

1	2	3	4	5	6

55. …makes me anxious.

1	2	3	4	5	6

56. …makes me exercise until I feel light headed or nauseous.

1	2	3	4	5	6

57. …decreases my energy for getting things done.

1	2	3	4	5	6

58. …causes me to exercise more than most people.

1	2	3	4	5	6

59. …would prevent me from obtaining some of my goals.

1	2	3	4	5	6

Never	Rarely	Occasionally	Often	Frequently	Always
1	2	3	4	5	6

How I feel about my body…

60. …makes me physically experience anxiety (e.g. heart race, sweat, feel hot, fidgeting, rapid breathing).

1 2 3 4 5 6

61. …has caused me to change my eating patterns/habits.

1 2 3 4 5 6

62. …makes me uncomfortable during sexual activity.

1 2 3 4 5 6

63. …makes it hard for me to get out of bed in the morning.

1 2 3 4 5 6

64. …causes me to feel anxious when I am not able to exercise.

1 2 3 4 5 6

65. …causes me not to exercise.

1 2 3 4 5 6

APPENDIX D

ROSENBERG SELF-ESTEEM SCALE (ROSENBERG, 1989)

INSTRUCTIONS: BELOW IS A LIST OF STATEMENTS DEALING WITH YOUR GENERAL FEELINGS ABOUT YOURSELF. IF YOU STRONGLY AGREE, CIRCLE SA. IF YOU AGREE WITH THE STATEMENT, CIRCLE A. IF YOU DISAGREE, CIRCLE D. IF YOU STRONGLY DISAGREE, CIRCLE SD.

		Agree	Strongly Agree	Disagree	Strongly Disagree
1.	On the whole, I am satisfied with myself.	SA	A	D	SD
2.	At times I think I am no good at all.	SA	A	D	SD
3.	I feel that I have a number of good qualities.	SA	A	D	SD
4.	I am able to do things as well as most other people.	SA	A	D	SD
5.	I feel I do not have much to be proud of.	SA	A	D	SD
6.	I certainly feel useless at times.	SA	A	D	SD
7.	I feel that I'm a person of worth, at least on an equal plane with others.	SA	A	D	SD
8.	I wish I could have more respect for myself.	SA	A	D	SD
9.	All in all, I am inclined to feel that I am a failure.	SA	A	D	SD
10.	I take a positive attitude toward myself.	SA	A	D	SD

APPENDIX E

BODY ESTEEM SCALE FOR ADOLESCENTS AND ADULTS

INSTRUCTIONS: Indicate how often you agree with the following statements ranging from "never" (0) to "always" (4). Circle the appropriate number besides each statement.

		Never	Seldom	Sometimes	Often	Always
1.	I like what I look like in pictures.	0	1	2	3	4
2.	Other people consider me good looking.	0	1	2	3	4
3.	I'm proud of my body.	0	1	2	3	4
4.	I am preoccupied with trying to change my body weight.	0	1	2	3	4
5.	I think my appearance would help me get a job.	0	1	2	3	4
6.	I like what I see when I look in the mirror.	0	1	2	3	4
7.	There are lots of things I'd change about my looks if I could.	0	1	2	3	4
8.	I am satisfied with my weight.	0	1	2	3	4
9.	I wish I looked better.	0	1	2	3	4
10.	I really like what I weigh.	0	1	2	3	4
11.	I wish I looked like someone else.	0	1	2	3	4
12.	People my own age like my looks.	0	1	2	3	4
13.	My looks upset me.	0	1	2	3	4
14.	I'm as nice looking as most people.	0	1	2	3	4
15.	I'm pretty happy about the way I look.	0	1	2	3	4
16.	I feel I weight the right amount for my height.	0	1	2	3	4
17.	I feel ashamed of how I look.	0	1	2	3	4
18.	Weighing myself depresses me.	0	1	2	3	4
19.	My weight makes me unhappy.	0	1	2	3	4
20.	My looks help me get dates.	0	1	2	3	4
21.	I worry about the way I look.	0	1	2	3	4
22.	I think I have a good body.	0	1	2	3	4
23.	I'm looking as nice as I'd like to.	0	1	2	3	4

Mendelson, B.K., White, D.R., & Mendelson, M.J., 2001

APPENDIX F

CENTER FOR EPIDEMIOLOGIC STUDIES DEPRESSION SCALE
(Bohannon, Maljanian & Goethe, 2003).

"Below is a list of ways you may have felt or behaved. Please tell me how you have felt during the past week."

1. "I felt depressed"
   0 = Rarely or none of the time (less than 1 day)
   1 = Some or a little of the time (1-2 days)
   2 = Occasionally or moderate amount of time (3-4 days)
   3 = Most or all of the time (5-7 days)
2. "My sleep was restless."
   0 = Rarely or none of the time (less than 1 day)
   1 = Some or a little of the time (1-2 days)
   2 = Occasionally or moderate amount of time (3-4 days)
   3 = Most or all of the time (5-7 days)
3. "I felt lonely."
   0 = Rarely or none of the time (less than 1 day)
   1 = Some or a little of the time (1-2 days)
   2 = Occasionally or moderate amount of time (3-4 days)
   3 = Most or all of the time (5-7 days)
4. "I had crying spells."
   0 = Rarely or none of the time (less than 1 day)
   1 = Some or a little of the time (1-2 days)
   2 = Occasionally or moderate amount of time (3-4 days)
   3 = Most or all of the time (5-7 days)
5. "I could not 'get going'."
   0 = Rarely or none of the time (less than 1 day)
   1 = Some or a little of the time (1-2 days)
   2 = Occasionally or moderate amount of time (3-4 days)
   3 = Most or all of the time (5-7 days)

APPENDIX G

STATE TRAIT ANXIETY INVENTORY (STAI; SPIELBERGER, 1983).

Directions:
A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel ***right now***, that is, ***at this moment.*** There are no right or wrong answers. Do not spend too much time on any one statement but give the answer to which seems to describe your present feelings best.

	Not at all	Somewhat	Moderately So	ery Much So
1. I feel calm	1	2	3	4
2. I feel secure	1	2	3	4
3. I am tense	1	2	3	4
4. I feel strained	1	2	3	4
5. I feel at ease	1	2	3	4
6. I feel upset	1	2	3	4
7. I am presently worrying over possible misfortunes	1	2	3	4
8. I feel satisfied	1	2	3	4
9. I feel frightened	1	2	3	4
10. I feel comfortable	1	2	3	4
11. I feel self-confident	1	2	3	4
12. I feel nervous	1	2	3	4
13. I am jittery	1	2	3	4
14. I feel indecisive	1	2	3	4
15. I am relaxed	1	2	3	4
16. I feel content	1	2	3	4
17. I am worried	1	2	3	4
18. I feel confused	1	2	3	4
20. I feel pleasant	1	2	3	4

A number of statements which people have used to describe themselves are given below. Read each statement and then select the appropriate answer to the right of the statement to indicate how you ***generally*** feel.

	Not at all	Somewhat	Moderately So	Very Much So
21. I feel pleasant	1	2	3	4
22. I feel nervous and restless	1	2	3	4
23. I feel satisfied with myself	1	2	3	4
24. I wish I could be as happy as others seem to be	1	2	3	4
25. I feel like a failure	1	2	3	4
26. I feel rested	1	2	3	4
27. I am "calm, cool, and collected"	1	2	3	4
28. I feel that difficulties are piling up so that I cannot overcome them	1	2	3	4
29. I worry too much over something that really doesn't matter	1	2	3	4
30. I am happy	1	2	3	4
31. I have disturbing thoughts	1	2	3	4
32. I lack self-confidence	1	2	3	4
33. I feel secure	1	2	3	4
34. I make decisions easily	1	2	3	4
35. I feel inadequate	1	2	3	4
36. I am content	1	2	3	4
37. Some unimportant thought runs through my mind and bothers me	1	2	3	4
38. I take disappointments so keenly that I can't put them out of mind	1	2	3	4
39. I am a steady person	1	2	3	4
40. I get in a state of tension or turmoil as I think over my recent concern and interests	1	2	3	4

APPENDIX H

STUDY 1- 43-ITEM BODY IMAGE DISSATISFACTION SCALE

PLEASE USE THE FOLLOWING SCALE TO ANSWER THE QUESTIONS BELOW.

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

1. Compared to others I am very preoccupied with my weight and body shape.

   1 2 3 4 5 6

2. When I look at pictures of myself, I am pleased with my body's appearance.

   1 2 3 4 5 6

3. I do not worry about minor (i.e. 5 pounds) changes in my weight.

   1 2 3 4 5 6

4. When I look in the mirror I am satisfied with my reflection.

   1 2 3 4 5 6

5. My body size has little effect on my mood.

   1 2 3 4 5 6

6. Because of my body size I am embarrassed when others see what I eat.

   1 2 3 4 5 6

7. I am satisfied with my weight and body shape.

   1 2 3 4 5 6

8. How I look has little to do with how well I am liked by others.

   1 2 3 4 5 6

9. Regardless of my body shape my friends will still like me.

   1 2 3 4 5 6

10. Who I am is more important than what I look like.

    1 2 3 4 5 6

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

11. I feel worse after I weight myself.

1 2 3 4 5 6

12. I am in a healthy weight range for my height.

1 2 3 4 5 6

13. I feel anxious about my body size.

1 2 3 4 5 6

14. When I see fat people I worry about becoming fat.

1 2 3 4 5 6

15. I do not allow myself to eat what I want when I am hungry.

1 2 3 4 5 6

16. I would feel better about myself if I were a different size.

1 2 3 4 5 6

17. Most of my friends have a better body than I do.

1 2 3 4 5 6

18. When I describe myself my body size is one of the first things I think of.

1 2 3 4 5 6

19. The thought of becoming fat scares me.

1 2 3 4 5 6

20. What I do is more important to me than how I look.

1 2 3 4 5 6

21. I feel self-conscious about my body.

1 2 3 4 5 6

22. There are lots of things I would change about my looks if I could.

1 2 3 4 5 6

23. I feel ashamed of how I look.

1 2 3 4 5 6

24. I am satisfied with my body.

1 2 3 4 5 6

25. My weight determines how I feel about myself.

1 2 3 4 5 6

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

26. If I am not the ideal body size I am less worthwhile as a person.

1 2 3 4 5 6

27. My size impacts/influences what I eat.

1 2 3 4 5 6

28. I feel guilty when I overeat.

1 2 3 4 5 6

29. I am preoccupied with the way that the food I eat influences my body shape.

1 2 3 4 5 6

30. I describe my body in the same way as others describe my body.

1 2 3 4 5 6

31. Trying on clothes makes me feel self-conscious about my body.

1 2 3 4 5 6

32. I try to avoid walking past a full-length mirror.

1 2 3 4 5 6

33. I am dissatisfied with my body.

1 2 3 4 5 6

34. I have accepted the way I look.

1 2 3 4 5 6

35. When I look at magazines (i.e. fashion/fitness) I feel worse about my body.

1 2 3 4 5 6

36. I get compliments for my looks.

1 2 3 4 5 6

37. I'd go to the gym if I looked better.

1 2 3 4 5 6

38. My body size impedes me from participating in sports that would like to.

1 2 3 4 5 6

39. I feel my body size negatively affects how employers perceive me.

1 2 3 4 5 6

40. I feel happy about the way I look.

1 2 3 4 5 6

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

41. I can be successful regardless of my body size.

1	2	3	4	5	6

42. I often feel judged because of my body size.

1	2	3	4	5	6

43. I often judge myself because of my body size.

1	2	3	4	5	6

APPENDIX I

STUDY 1 - 47-ITEM CONSEQUENCES OF BODY IMAGE DISSATISFACTION SCALE

Consider the phrase "How I feel about my body…" when considering each of the items below. Then use the following scale to rate your response.

Never	Rarely	Occasionally	Often	Frequently	Always
1	2	3	4	5	6

How I feel about my body…

1. …negatively affects my self-confidence.
   1 2 3 4 5 6

2. …affects how other people think of me.
   1 2 3 4 5 6

3. …causes me to eat differently at meal times than I would like to.
   1 2 3 4 5 6

4. …causes me to spend money on diet products.
   1 2 3 4 5 6

5. …has caused me to use diets that have resulted in nutritional deficits.
   1 2 3 4 5 6

6. …causes me to exercise excessively.
   1 2 3 4 5 6

7. …causes me to feel guilty when I do not exercise.
   1 2 3 4 5 6

8. …causes exercise to interfere with my other obligations.
   1 2 3 4 5 6

9. …makes me feel isolated from others.
   1 2 3 4 5 6

Never	Rarely	Occasionally	Often	Frequently	Always
1	2	3	4	5	6

How I feel about my body…

10. …makes me unlikely to initiate conversation.
1 2 3 4 5 6

11. …makes me feel worthless.
1 2 3 4 5 6

12. …makes me feel like a failure.
1 2 3 4 5 6

13. …makes me worry about how I look in clothes.
1 2 3 4 5 6

14. …causes me to disrespect myself.
1 2 3 4 5 6

15. …causes me to refrain from eating out with friends.
1 2 3 4 5 6

16. …makes me feel sad.
1 2 3 4 5 6

17. …has made it difficult for me to go out in public.
1 2 3 4 5 6

18. …makes me self-conscious when I am out on a date.
1 2 3 4 5 6

19. …makes me feel inferior to others.
1 2 3 4 5 6

20. …causes me to maintain an overly strict diet.
1 2 3 4 5 6

21. …has made me try dieting.
1 2 3 4 5 6

22. …causes me to push myself beyond my physical limits.
1 2 3 4 5 6

23. …makes it difficult for me to make friends.
1 2 3 4 5 6

Never	Rarely	Occasionally	Often	Frequently	Always
1	2	3	4	5	6

How I feel about my body…

24. …has impacted my sleep.
1 2 3 4 5 6

25. …keeps me from focusing on anything aside from my body.
1 2 3 4 5 6

26. …makes me feel proud.
1 2 3 4 5 6

27. …causes me to use diet pills/steroids.
1 2 3 4 5 6

28. …causes me to feel depressed when I am not able to exercise.
1 2 3 4 5 6

29. …makes me afraid of letting others get close.
1 2 3 4 5 6

30. …makes me cry.
1 2 3 4 5 6

31. …makes me have obsessive thoughts about weight and body size.
1 2 3 4 5 6

32. …makes me feel useless at times.
1 2 3 4 5 6

33. …causes me to meticulously read nutrition labels.
1 2 3 4 5 6

34. …influences me to hide or lie about the amount of time I exercise.
1 2 3 4 5 6

35. …makes me feel self-conscious in romantic relationships.
1 2 3 4 5 6

36. …has decreased my level of sexual interest.
1 2 3 4 5 6

37. …limits me from finding companionship when I want it.
1 2 3 4 5 6

Never	Rarely	Occasionally	Often	Frequently	Always
1	2	3	4	5	6

How I feel about my body…

38. …has caused me panic.
1 2 3 4 5 6

39. …makes me anxious.
1 2 3 4 5 6

40. …decreases my energy for getting things done.
1 2 3 4 5 6

41. …causes me to exercise more than most people.
1 2 3 4 5 6

42. …would prevent me from obtaining some of my goals.
1 2 3 4 5 6

43. …makes me physically experience anxiety (e.g. heart race, sweat, feel hot, fidgeting, rapid breathing.
1 2 3 4 5 6

44. …has caused me to change my eating patterns/habits.
1 2 3 4 5 6

45. …makes me uncomfortable during sexual activity.
1 2 3 4 5 6

46. …causes me to feel anxious when I am not able to exercise.
1 2 3 4 5 6

47. …causes me not to exercise.
1 2 3 4 5 6

APPENDIX J

STUDY 2- 34-ITEM BODY IMAGE DISSATISFACTION SCALE

PLEASE USE THE FOLLOWING SCALE TO ANSWER THE QUESTIONS BELOW.

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

1. Compared to others I am very preoccupied with my weight and body shape.
   1 2 3 4 5 6

2. When I look at pictures of myself, I am pleased with my body's appearance.
   1 2 3 4 5 6

3. I do not worry about minor (i.e. 5 pounds) changes in my weight.
   1 2 3 4 5 6

4. When I look in the mirror I am satisfied with my reflection.
   1 2 3 4 5 6

5. My body size has little effect on my mood.
   1 2 3 4 5 6

6. Because of my body size I am embarrassed when others see what I eat.
   1 2 3 4 5 6

7. I am satisfied with my weight and body shape.
   1 2 3 4 5 6

8. I feel worse after I weigh myself.
   1 2 3 4 5 6

9. I am in a healthy weight range for my height.
   1 2 3 4 5 6

10. I feel anxious about my body size.
    1 2 3 4 5 6

11. When I see fat people I worry about becoming fat.
    1 2 3 4 5 6

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

12. I would feel better about myself if I were a different size.
1 2 3 4 5 6

13. Most of my friends have a better body than I do.
1 2 3 4 5 6

14. When I describe myself my body size is one of the first things I think of.
1 2 3 4 5 6

15. The thought of becoming fat scares me.
1 2 3 4 5 6

16. I feel self-conscious about my body.
1 2 3 4 5 6

17. There are lots of things I would change about my looks if I could.
1 2 3 4 5 6

18. I feel ashamed of how I look.
1 2 3 4 5 6

19. I am satisfied with my body.
1 2 3 4 5 6

20. My weight determines how I feel about myself.
1 2 3 4 5 6

21. If I am not the ideal body size I am less worthwhile as a person.
1 2 3 4 5 6

22. My size impacts/influences what I eat.
1 2 3 4 5 6

23. I feel guilty when I overeat.
1 2 3 4 5 6

24. I am preoccupied with the way that the food I eat influences my body shape.
1 2 3 4 5 6

25. I describe my body in the same way as others describe my body.
1 2 3 4 5 6

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

26. Trying on clothes makes me feel self-conscious about my body.
1 2 3 4 5 6

27. I try to avoid walking past a full-length mirror.
1 2 3 4 5 6

28. I am dissatisfied with my body.
1 2 3 4 5 6

29. I have accepted the way I look.
1 2 3 4 5 6

30. When I look at magazines (i.e. fashion/fitness) I feel worse about my body.
1 2 3 4 5 6

31. I'd go to the gym if I looked better.
1 2 3 4 5 6

32. My body size impedes me from participating in sports that I would like to.
1 2 3 4 5 6

33. I feel my body size negatively affects how employers perceive me.
1 2 3 4 5 6

34. I feel happy about the way I look.
1 2 3 4 5 6

REFERENCES

Agliata, D. & Tantleff-Dunn, S. (2004). The impact of media exposure on male' body image. *Journal of Social and Clinical* Psychology, 23(1), 7-22.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed. Text revision). Washington, DC: Author.

Anderson, A.E. (1999). Eating disorders in gay males. *Psychiatric Annals*, 29(4), 206-212.

Anderson, A.E., & DiDomenico, L. (1992). Diet vs. shape content of popular male and female magazines: A dose of response relationship to the incidence of eating disorders? *International Journal of Eating Disorders*, 11, 283-287.

Beck, A. T., Ward, C. H., Mendelson, M., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4*, 561–571.

Ben-Tovim, D.I., Walker, M.K., Murray, H., & Chin, G. (1990). Body size estimates: Body image or body attitude measures? *International Journal of Eating Disorders*, 9(1), 57-67.

Beren, S.E., Hayden, H.A., Wilfley, D.E., & Grilo, C.M. (1996). The influence of sexual orientation on body dissatisfaction in adult men and women. *International Journal of Eating Disorders*, 20(2), 135-141.

Bergstrom, R.L. & Neighbors, C. (2006). Body image disturbance and the social norms approach: an integrative review of the literature. *Journal of Social and Clinical Psychology*, 25(9), 975-1000.

Blood, S.K. (1996). The dieting dilemma- Factors influencing women's decision to give up dieting. *Women and Therapy*, 18(1), 109-118.

Bohannon, R.W., Maljanian, R., & Goethe, J. (2003). Screening for depression in clinical practice: Reliability and validity of a five item-subset of the CES-Depression. *Perceptual and Motor Skills*, 97, 855-861.

Brand, P.A., Rothblum, E.D., & Solomon, L.J. (1992). A comparison of lesbians, gay men, and heterosexuals on weight and restrained eating. *International Journal of Eating Disorders*, 11(3), 253-259.

Brown, C. & Jasper, K. (Eds.). (1993). *Consuming passions: Feminist approaches to weight preoccupations and eating disorders.* Toronto, Ontario: Second Story Press.

Brown, T. A., Cash, T. F., & Mikulka, P. J. (1990). Attitudinal body-image assessment: Factor analysis of the Body-Self Relations Questionnaire. *Journal of Personality Assessment, 55,* 135–144.

Brownell, K.D. (1993). Whether obesity should be treated. *Health Psychology*, 12, 339-341.

Brownell, K.D. & Rodin, J. (1994a). The dieting maelstrom: Is it possible and advisable to lose weight? *American Psychologist*, 49(9), 781-791.

Brownell, K.D. & Rodin, J. (1994b). Medical, metabolic, and psychological effects of weight cycling. *Archives of Internal Medicine*, 154, 1325-1330.

Candy, C.M. & Fee, V.E. (1998). Underlying dimensions and psychometric properties of the Eating Behaviors and Body Image Test for Preadolescent Girls. *Journal of Clinical Child Psychology*, 27, 117-127.

Carlat, D.J., Camargo, C.A., & Herzog, D.B. (1997). Eating disorders in males: A report on 135 patients. *American Journal of* Psychiatry, 154, 1127–1132.

Cash, T.F. (1994). Body-image attitudes: evaluation, investment, and affect. *Perceptual and Motor Skills*, 78, 1168-1170.

Cash, T.F. & Deagle, E.A. (1997). The nature and extent of body-image disturbances in anorexia nervosa and bulimia nervosa: A meta-analysis. *International Journal of Eating Disorders*, 22(2), 107-125.

Cash, T.F. & Henry, P.E. (1995). Women's body images: The results of a national survey in the U.S.A. *Sex Roles*, 33, 19-28.

Centers for Disease Control and Prevention (n.d.) About BMI for Adults. Retrieved June, 1, 2006, from http://www.cdc.gov.

Cogan, J.C. (1999). Lesbians walk the tightrope of beauty: Thin is in but femme is out. *Journal of Lesbian Studies*, 3(4), 77-89.

Cook-Cottone, C. & Phelps, L. (2003). Body dissatisfaction in college women: Identification of risk and protective factors to guide college counseling practices. *Journal of College Counseling*, 6(1), 80-89.

Cooley, E. & Toray, T. (2001). Body image and personality predictors of eating disorders symptoms during the college years. *International Journal of Eating Disorders*, 30, 28-36.

Costello, A.B.& Osborne, J.W. (2005). Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis. *Practical Assessment, Research and Evaluation*, 10 (7), 1-9.

Cusumano, D.L., & Thompson, J.K. (1997). Body image and body shape ideals in magazines: Exposure, awareness, and internalization. *Sex Roles*, 37(9/10), 701-721.

Davison, K. K., & Birch, L. L. (2002). Processes linking weight status and self-concept among girls from ages 5 to 7 years. Developmental Psychology, 38(5), 735–748.

DeVellis, R. F. (2003). Applied social research methods: Vol. 26. Scale development: Theory and applications. Thousand Oaks, CA: Sage.

Drewnowski, A., & Yee, D. K. (1987). Men and body image: Are men satisfied with their body weight? *Psychosomatic Medicine*, 49, 626- 634.

Endler, N.S., Cox, B.J., Parker, J.D., & Bagby, R.M. (1992). Self-reports of depression and state-trait anxiety: Evidence for differential assessment. *Journal of Personality and Social Psychology*, 63(5), 832-838.

Edwards-Hewitt, T. & Gray, J.J. (1993). The prevalence of disordered eating attitudes and behaviors in Black-American and White-American college women: Ethnic, regional, class, and media differences. *Eating Disorders Review*, 1(1), 41-54.

Fairburn, C. G., & Beglin, S. J. (1990). Studies of the epidemiology of bulimia nervosa. *American Journal of Psychiatry*, 147, 401-408.

Ferguson, K.J., & Spitzer, R.L. (1995). Binge eating disorder in a community-based sample of successful and unsuccessful dieters. *International Journal of Eating Disorders*, 18, 167-172.

Forbes, G.B., Adams-Curtis, L.E., Rade, B. & Jaberg, P. (2001). Body dissatisfaction in women and men: The role of gender typing and self-esteem. *Sex Roles*, 44(7/8), 461-484.

French, S.A. & Jeffery, R.W. (1994). Consequences of dieting to lost weight: Effects on physical and mental health. *Health Psychology*, 13(3), 195-212.

French, S.A., Story, M., Remafedi, G., Resnick, M.D., & Blum, R.W. (1996). Sexual orientation and prevalence of body image dissatisfaction and eating disordered behaviors: a population- based study of adolescents. *International Journal of Eating Disorders*, 19(2), 119-126.

Garner, D. M. (1997, January/February). The 1997 body image survey results. *Psychology Today,* pp. 30–44, 75–80, 84.

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

Garner, D.M., Olmsted, M.P., Polivy, J. & Garfinkel, P.E. (1984). Comparison between weight-preoccupied women and anorexia nervosa. *Psychosomatic Medicine,* 46, 225-266.

Garner, D.M., & Wooley, S.C. (1991). Confronting the failure behavioural and dietary treatments for obesity. *Clinical Psychology Review*, 11, 729-780.

Gettelman, T.E. & Thompson, J.K. (1993). Actual differences and stereotypical perceptions in body image and eating disturbance: A comparison of male and female heterosexual and homosexual samples. *Sex Roles*, 29(7), 545-453.

Gillett, J. & White, P.G. (1992). Male body building and the reassertion of hegemonic masculinity: A critical feminist perspective. *Play and Culture*, 5, 358-369.

Godart, N.T., Flament, M.F., Perdereau, F. & Jeammet, P. (2002). Comorbidity between eating disorders and anxiety disorders: A review. *International Journal of Eating Disorders,* 32, 253-270.

Green, S.B. & Salkind, N.J. (2003). *Using SPSS for Windows and Macintosh: Analyzing and understanding data,*

Hamilton, K. & Waller, G. (1993). Media influences on body size estimation in anorexia and bulimia: an experimental study. *British Journal of Psychiatry, 162, 837-840.*

Harper-Guiffre, H. & MacKenzie, K.R. (1992). *Group Psychotherapy for Eating Disorders.* Washington, D.C.: American Psychiatric Press, Inc.

Heatherton, T.F, Nichols, P., Mahamedi, F., & Keel, P. (1995). Body weight, dieting, and eating disorder symptoms among college students, 1982 to 1992. *The American Journal of Psychiatry*, 152(11), 1623-1629.

Heffernan, K. (1994). Sexual orientation as a factor in risk for binge eating and bulimia nervosa: A review. *International Journal of Eating Disorders*, 16(4), 335-347.

Heffernan, K. (1996). Eating disorders and weight concern among lesbians. *International Journal of Eating Disorders*, 19(2), 127-138.

Heffernan, K. (1999). Lesbians and the internalization of societal standards of weight and appearance. *Journal of Lesbian Studies,* 3(4), 121-127.

Herzog, D.B., Newman, K.L., Yeh, C.J., & Warshaw, M. (1992). Body image satisfaction in homosexual and heterosexual women. *International Journal of Eating Disorders*, 11(4), 391-396.

Hesse-Biber, S. (1991). Women, weight, and eating disorders: A sociocultural and political-economic analysis. *Women's Studies International Forum*, 14(3), 173-191.

Hospers, H.J. & Jansen, A. (2005).Why homosexuality is a risk factor for eating disorders in makes. *Journal of Social and Clinical Psychology*, 24(8), 1188-1201.

Hoyt, W.D. & Ross, S.D. (2003). Clinical and subclinical eating disorders in counseling center clients: A prevalence study. *Journal of College Student Psychotherapy*, 17(4), 39-54.

Johnson, F. & Wardle, J. (2005). Dietary restraint, body dissatisfaction, and psychological distress: A prospective analysis. *Journal of Abnormal Psychology*, 114(1), 119–125.

Katzman, M.A., Wolchik, S.A., & Braver, S.L. (1984). The prevalence of frequent binge eating and bulimia in a nonclinical sample. *International Journal of Eating Disorders*, 3(3), 53-62.

Keeton, W. P., Cash, T. F., & Brown, T. **A.** (1990). Body image or body images?: Comparative, multidimensional assessment among college students. *Journal of Personality Assessment,* 54, 213-230.

Killen, J.D., Taylor, C.B., Hayward C., Wilson, D.M., Haydel, K.F., Hammer, L.D., Simmonds, B., Robinson, T.N., Litt, I., Varady, A., & Kraemer, H. (1994). Pursuit of Thinness and Onset of Eating Disorder Symptoms in a Community sample of Adolescent Girls: A Three-year Prospective Analysis. *International Journal of Eating Disorders*, 16(3), 227-238.

Klemchuk, H.P. Hutchinson, C.B., & Frank, R.L. (1990). Body dissatisfaction and eating related problems on the college campus: Usefulness of the Eating Disorder Inventory with a nonclinical population. *Journal of Counseling Psychology*, 37(3), 297-305.

Lakkis, J., Ricciardelli, L.A. & Williams, R.J. (1999). Role of sexual orientation and gender related traits in disordered eating. *Sex Roles,* 41(1/2), 1-16.

Levesque, M.J. & Vichesky, D.R. (2006). Raising the bar on the body beautiful: An analysis of the body image concerns of homosexual men. *Body Image*, 3, 45-55.

Levine, M.P., Smolak, L., Hayden, H. (1994). The relation of Sociocultural factors to eating attitudes and behaviors among middle school girls. *Journal of Early Adolescence*, 14(4), 471-490.

Lowe, M.R. (1993). The effects of dieting on eating behavior: A three-factor model. *Psychological Bulletin*, 114, 100-121.

Markey C.N. & Markey, P.M. (2005). Relations between body image and dieting behaviors: An examination of gender differences. *Sex Roles*, 53(7/8), 519-530.

McAllister, R., Caltabiano, M.L. (1994). Self-esteem, body-image, and weight in noneating-disordered women. *Psychological Reports*, 75(3, pt. 1), 1339-1343.

McCabe, M.P. & Ricciardelli, L.A. (2001). Body image and body changes techniques among young adolescent boys. *European Eating Disorders Review*, 9, 335-347.

McCabe, M.P. & Ricciardelli, L.A. (2003). Body image and strategies to lose weight and increase muscle among boys and girls. *Health Psychology*, 22(1), 39-46.

McCarthy, M. (1990). The thin ideal, depression and eating disorders in women. *Behaviour Research and Therapy,* 28, 205-216.

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

Mendelson, B.K., McLaren, L. Gauvin, L. & Steiger, H. (2002). The relationship of self-esteem and body esteem in women with and without eating disorders. *International Journal of Eating Disorders*, 31, 318-323.

Mendelson, B.K., Mendelson, M.J., & White. D.R. (2001). Body-esteem scale for adolescents and adults. *Journal of Personality Assessment*, *76*(1), 90–106

Mishkind, M.E., Rodin, J., Silberstein, L.R., & Striegel-Moore, R.H. (1986). The embodiment of masculinity. *American Behavioral Scientist*, 29(5), 545-562.

O'Dea, J.A. (2006). Self-concept, self-esteem and body weight in adolescent females: A three-year longitudinal study. *Journal of Health Psychology,* 1 11(4), 599–611.

Ojerholm, A.J. & Rothblum, E.D. (1999). The relationship of body image, feminism, sexual orientation in college women. *Feminism and Psychology*, 9(4) 431-448.

Olivardia, R., Pope, H.G., Borowiecki, J.J., & Cohane, G.H. (2004). Biceps and body image: The relationship between muscularity and self-esteem, depression, and eating disorder symptoms. *Psychology of Men & Masculinity* 5(2), 112–120.

Olivardia, R., Pope, H.G., Mangweth, B., & Hudson, J.I. (1995). Eating disorders in college men. *The American Journal of* Psychiatry, 152(9), 1279-1285.

Oliver, K.K. & Thelan, M.H. (1996). Children's perception of peer influence on eating concerns. *Behavior Therapy*, 27, 25-39.

Paxton S.J., Eisenberg, M.E., & Neumark-Sztainer, D. (2006). Prospective predictors of body dissatisfaction in adolescent girls and boys: A five-year longitudinal study. *Developmental* Psychology, 42(5), 888–899.

Polivy, J., Garner, D. M., & Garfinkel, P. E. (1986). Causes and consequences of the current preference for thin female physiques. In C. P. Herman, M. P. Zanna, & E. T. Higgins (Eds.), *Physical appearance, stigma, and social behavior. The Third Ontario Symposium in Personality and Social Psychology* (pp. 89-112). Hillsdale, N J: Erlbaum.

Polivy, J., Heatherton. T.F., & Herman, C.P. (1988). Self-esteem, restraint, and eating behavior. *Journal of Abnormal Psychology*, 97, 354-356.

Polivy, J. & Herman, C.P. (1987). Diagnosis and treatment of normal eating. *Journal of Consulting and Clinical Psychology*, 55, 635-644.

Pope, H.G., Gruber, A.J., Choi, P., Olivardia, R., & Phillips, K.A. (1997). Muscle dysmorphia: An unrecognized form of body dysmorphic disorder. *Psychosomatics*, 38, 548-557.

Pope, H.G., Olivardia, R., Gruber, A.J., & Borowieki, J. (1999). Evolving ideals of male body image as seen through action toys. *International Journal of Eating Disorders*, 26, 65-72.

Pyle, R.L., Mitchell, J.E., Eckert, E.D., Halvorson, P.A., Neuman, P.A. & Goff, G.M. (1983). The incidence of bulimia in freshman college students. *International Journal of Eating Disorders*, 2, 75-85.

Ricciardelli, L.A. & McCabe, M.P. (2003). A longitudinal analysis of the role of biopsychosocial factors in predicting body change strategies among adolescent boys. *Sex roles*, 48(7/8), 349-359.

Reise, S.P., Comrey, A.L., & Waller, N.G. (2000). Factor Analysis and Scale Revision. *Psychological Assessment*, 12(3), 287-297

Rierdan, J. & Koff, E. (1997). Weight, weight-related aspects of body image, and depression in early adolescent girls. *Adolescence*, 32(127) 615-324/

Rodin, J. Silberstein, L. & Striegel-Moore, R.H. (1985). Women and weight: A normative discontent. In T.B. Sonderegger (Ed.) Psychology and Gender: Nebraska Symposium on Motivation, 1984 (pp.267-390), Lincoln, NE: University of Nebraska Press.

Rosen, J.C., & Gross, J. (1987). Prevalence of weight reducing and weight gaining in adolescent girls and boys. *Health Psychology*, 6, 131-147.

Rosen, J.C., Gross, J., & Vara, L. (1987). Psychological adjustment of adolescents attempting to lose or gain weight. *Journal of Consulting and Clinical Psychology*, 55, 742-747.

Rosenberg, M. (1989). *Society and the Adolescent Self-image.* Rev. ed. Middletown, CT: Wesleyan University Press.

Rosenberg, M., Schooler, C., & Schoenbach, C. (1989). Self-esteem and adolescent problems: Modeling reciprocal effects. *American Sociological Review*, 54, 1004-1018.

Rosenberg, M., Schooler, C., Schoenbach, C., & Rosenberg, F. (1995). Global self-esteem: Different concepts, different outcomes. *American Sociological Review*, 60(1), 141-156.

Scarano, G.M. & Kalodner-Martin, C.R. (1994). A description of the continuum of eating disorders: Implications for intervention and research. *Journal of Counseling and Development*, 72, 356-361.

Schwitzer, A.M., Bergholz, K., Dore, T., Salimi, L. (1998). Eating disorders among college women: Prevention, education, and treatment responses. *Journal of American College Health*, 46(5), 199-207.

Schwitzer, A.M., Rodriguez, L.E., Thomas, C., & Salimi, L. (2001). The eating disorders NOS diagnostic profile among college women. *Journal of American College Health*, 49(4), 157-166.

Shaw, J. & Waller, G. (1995). The medusa impact on body image: Implications for prevention and treatment. *Eating Disorders*, 3, 115-123.

Siever, M. (1994). Sexual orientation and gender as factors in socioculturally acquired vulnerability to body dissatisfaction and eating disorder. *Journal of consulting and clinical psychology*, 62(2), 252-260.

Silberstein, L.R., Striegel-Moore, R.H., Timko, C., & Rodin, J. (1988). Behavioral and psychological implications of body dissatisfaction: Do men and women differ? *Sex Roles*, 19(3-4), 219-232.

Silverstein, B., Peterson, B. and Perdue, L. (1986). Some correlates of the thin standard of bodily attractiveness for women. *International Journal of Eating Disorders*, 5, 895-905.

Slade, P.D. (1994). What is body image? *Behaviour research and therapy*. 32(5), 497-502.

Slade, P. D. & Brodie, D. A. (1994). Body image distortion and eating disorder: a reconceptualization based on the recent literature. *European Eating Disorders Review*, 2(1), 32-46.

Spielberger, C. (1983). Manual for the State-Trait Anxiety Inventory. Revised edition. Palo Alto, CA, Consulting Psychologists Press.

Spitzer, B.L., Henderson, K.A., Zivian, M.T. (1999). Gender differences in population versus media body sizes: A comparison over four decades. *Sex Roles*, 40 (7/8), 545-565.

Stice, E. (2002). Risk and maintenance factors for eating pathology: A meta-analytic review. *Psychological Bulletin, 128,* 825–848.

Stice, E. & Agras, W.S. (1998). Predicting onset and cessation bulimic behaviors during adolescence: A longitudinal grouping analysis. *Behavior Therapy,* 29, 257-276.

Stice, E. & Bearman, S.K. (2001). Body-image and eating disturbances prospectively predict increases in depressive symptoms in adolescent girls: A growth curve analysis. *Developmental Psychology,* 37(5), 597-607.

Stice, E. Hayward, C., Cameron, R.P., Killen, J.D., & Taylor, C.B. (2000). Body-image and eating disturbances predict onset of depression among female adolescents: A longitudinal study. *Journal of Abnormal Psychology*, 109(3), 438-444.

Stice, E., Killen, J.D., Hayward, C. & Taylor, C.B. (1998). Support for the continuity hypothesis of bulimic pathology. *Journal of Consulting and Clinical Psychology*, 66(5), 784-790.

Stice, E., Presnell, K., & Spangler, D. (2002). Risk Factors for Binge Eating Onset in Adolescent Girls: A 2-Year Prospective Investigation. *Health Psychology*, 21(2), 131–138.

Stice, E. & Shaw, H.E. (1994). Adverse effects of media portrayed thin-ideal on women and linkages to bulimia symptomatology. *Journal of Social and Clinical Psychology*, 13 (3) 288-308.

Stice, E., Spangler, D. & Agras, W.S. (2001). Exposure to media-portrayed thin-ideal images: adversely affects vulnerable girls: a longitudinal experiment. *Journal of Social and Clinical Psychology,* 20(3), 270-288.

Striegel-Moore, R.H., Silberstein, L.R., & Rodin, J. (1993). The social self in bulimia nervosa: Public self-consciousness, social anxiety, and perceived fraudulence. *Journal of Abnormal Psychology,* 102, 299-303.

Striegel-Moore, R.H., Silberstein, L.R., Frensch, P. & Rodin, J. (1989). A prospective study of disordered eating among college students. *International Journal of Eating Disorders*, 8(5), 499-509.

Striegel-Moore, R.H, Tucker, N., & Hsu, J. (1990). Body image dissatisfaction and disordered eating in lesbian college students. *International Journal of Eating Disorders*, 9(5), 493-500.

Tabachnick, B. G., and Fidell, L. S. (2007). *Using Multivariate Statistics , 5th ed.* Boston: Allyn and Bacon.

Tiggemann, M. (1996). "Thinking" versus "feeling" fat: Correlates of two indices of body image dissatisfaction. Australian Journal of Personality, 48, 21–25.

Tylka, T.L. & Subich, L.M. (1999). Exploring the construct validity of the eating disorder continuum. *Journal of Counseling Psychology*, 46, 268-276.

Tylka, T.L. & Subich, L.M. (2002a). Exploring young women's perceptions of the effectiveness and safety of maladaptive weight control techniques. *Journal of Counseling and Development*, 80, 101-110.

Tylka, T.L. & Subich, L.M. (2002b). A preliminary investigation of the eating disorder continuum with men. *Journal of Counseling Psychology*, 49(2), 273-279.

Wadden, T.A. & Stunkard, A.J. (1985). Social and psychological consequences of obesity. *Annals of Internal Medicine*, 103, 1062-1067.

Williamson, I. (1999). Why are gay men a high risk group for eating disturbance? *European Eating Disorders Review*, 7(1), 1-4.

Williamson, I. & Hartley, P. (1998). British research into the increased vulnerability of young gay men to eating disturbance and body dissatisfaction. *European Eating Disorders Review*, 6(3), 160-170.